ARCHI-TECTURAL DESIGN 2019



SCHOOL OF ART DESIGN AND ARCHITECTURE (SADA) National University Of Sciences & Technology (NUST) Email: info@sada.nust.edu.pk

SCHOOL OF ART, DESIGN AND ARCHITECTURE

School of Art Design and Architecture at National University of Sciences and Technology (Islamabad) opened its doors to prospective architecture students in 2010 and since then has grown from strength of 70 to 300 plus aspiring architects and designers. The ideology behind this School is to provide 'holistic' design education which is encoded within its mission statement 'Prepare creative individuals sensitive to context with a holistic understanding that would encompass intuitive ability, theoretical understanding and process driven solution'. Currently two undergraduate degree programs are being taught at NUST-SADA namely B.Arch. and B.ID. (Industrial Design). Both programs aim to inculcate and sensitize students towards conceptual and context related outcomes.

It has been the primary ambition of the institute to create an environment conducive for creative learning and in this regard facilities in light of contemporary design thinking have been provided to students. These include IT labs - both general and specialized for Building Sciences, a digital Workshop that includes laser cutters and 3-D Printers, Photography Studio, Model Making and Textile workshop, a library with 3000 plus titles along with subscriptions of major national and international design and architectural journals and magazines, an in-house stationary and printing shop for students.

The school also encourages students to be part of co-curricular activities and in this regard is patron to NUST Fine Arts Club, where students can learn and share their skills with other institutes. Also to have a practice oriented approach students at NUST-SADA are encouraged to participate in national and international level competitions. Alongside academic learning, summer training is a compulsory attribute of both the programs, it consents to the real life experience of an architectural/design establishment thus the holistic nature of profession encompassing both academia and link with industry is offered. NUST-SADA aims at producing graduates sensitive towards demands of context, client and industry while preserving their individual identity.

CONTENTS

Rector's message Principal's message Editorial board's message
Architectural Design Thesis
I nank you note
Isra Nasir
Syed Saad Shahid
Syeda Humaira Bukhari
Tooba Zafar
Zainab Sohail
Zobia Tanvir
Attiga Yaqoob
Hadia Iftikhar
Mishal Saleem
Nida Ahmed
Zoha Shafiq
Ahsan Sajjad
Zarmeen Jamal
Karum Naveed Kayani
Kashmala Imtiaz
Mahnoor Malik
Mahnoor Naeem Malik
Maryam Farid Khattak
Maryam Shah

Masooma Inam
Midhat Naeem
Noor Abdul Rehman
Nowera M. Abid
Rabeeya Manzoor
Sadia Masood
Syed Shabab Ali
Shameen Akhter
Syed Hammad Haider
Ramsha Aleem
Muhammad Ammar
Aimen Abbas
Ariba Asad
Asad Nasir Qureshi
Ayesh Nasir
Aymen Aziz
Fatima Ibrahim
Iqra Abbasi
Syed Shajee Haider
Junaid Ahmed Khan
Zala Farooq
Workshops
Guest Lectures
Competitions

CONTENTS

Industrial Design	189
Graduation Projects	
Thank You Note	191
Hiffza Yaqoob	192
Alieha Batool	196
Lyba Naveed	200
Aqsa Ajmal	204
Cybil Mary Braganza	208
Faiqa Naeem	212
Batool Fatima	216
Miqdad Mustafa Hashmi	220
Hira Ejaz	224
Hina Khush	228
Mahnoor Burhan	232
Mehreen Hassan	236
Zerafshan Tariq	240
Muhammad Huzaifa	244

Rabeea M Sabah Zan Muhamma Rida Hassr

Rabeea Mughees Naqvi	248
Sabah Zaman	252
Muhammad Asif	256
Rida Hassnain	260
Saniya Tariq	264
Sikandar Ali	268



Lieutenant General Naweed Zaman, HI (M), (Retired)

RECTOR'S MESSAGE

By the grace of Allah Almighty, NUST has been unceasingly carving out higher ranks for itself among the world's academia with every passing year. The university owes its continuing leap at the global stage to the commitment and perseverance of every member of NUST community, viz. students, faculty or staff. Our improved international reputation entrusts us with bigger responsibility than our contemporaries towards building the national economy. Hence, NUST continues to be effervescently engaged in industry-centric R&D, undertaking initiatives of national significance – such as National Science & Technology Park (NSTP) and transferring the university output to the industry, particularly in the shape of cutting-edge technologies.

In the similar vein, NUST School of Art, Design & Architecture (SADA) has emerged as a catalyst for creative energy and an inspiration for innovation that is looked up to in the Architecture and Design circles nationally. With the growing acceptance of SADA graduates at the world's renowned universities and triumphs in international competitions, the School has not only made its presence felt globally but also brought laurels to the country. It is now also a leading filer of patents within NUST. I would urge the architects and industrial designers from SADA to give further impetus to their endeavours through their innovations and creative dynamism. I hope that the new workshop facilities at SADA will assist the faculty and students in augmenting the basic prototyping processes and create increasingly better work.

Above all, I wish to congratulate and appreciate this year's graduating batch; their constant dedication to studies has eventually paid off. My commendations to the Editorial Board for putting together this excellent publication.

Hope you enjoy the read!



PRINCIPAL'S MESSAGE Ar./Plr. Sikander Ajam Khan

SADA has reached a level of maturity since its establishment of 2010, as institutions take over two or three decades to achieve academic and market acceptability within, the country and externally.

Architecture programe was opened first and followed by the Industrial Design Alumni from both secure admission at advanced programs in well reputed schools, abroad and do exceedingly well.

The direction of the school is consistent with that of other well known schools. while recognizing its own social, and economic context. The schools is context driven, while recognizing potent International influences.

Students do well in local and International Design competitions and secure places of merit and have received wide acclaim for some projects. More than hundred patents have been filed by the students of the Industrial Design Program.

With the new workshop in place, students will not have to leave school premises for getting their designs realized and, it will contribute to greater productivity for the students.

Focus of both programs is on design thinking, school has taken onus of this as it recognizes it as an important element of development of student skills competencies resulting in enabling the student to perform better and become a useful member of society.

In the future SADA will be looking towards Master Program within architecture and Industrial Design, as a sound base has been developed for further consolidating the school as a major Design School in the country.

EDITORIAL BOARD'S MESSAGE

The work produced by final year students every year is a badge of pride bequeathed unto the institute. In compiling these works we have put a lot of hard work to appreciate the efforts made by these students to identify and address very realistic issues. We urge our reader to see this work not as a conclusive remark but as on opening statement by the students, as they carry the curiosity and values they have nurtured during their academic tenures, now into professional life. More than ever, final year students are enabled and encouraged to drive their own investigations and build up their projects to a level of detail that allows them to compete in the market.

We wish our graduates luck in their future endeavors and hope that this catalog will become a reminder of their most challenging and telling year at the School of Art. Design and Architecture. We are grateful to :

HoD's: Ar. Safi Ullah (Bachelor of Architecture). Jawwad Zaidi (Bachelor of Industrial Design).

Editorial Team:

Fowad Igbal, Hasan Daniyal, Manal Abdullah, Mahnoor Khan & Sara Amin.

ARCHI-TECTURAL DESIGN THESIS

THANK YOU

Ar. Murad Jamil

We are grateful to the following architects, whose critique, input and feedback has been instrumental in the completion of the thesis.

Advisors:	
Ar. Mian Muhammad Naseer	Ar. N
Ar./Plr. Sikander Ajam Khan	Ar. P
Ar. Salma Bano.	Ar. F
Dr. Anita Kapadia	Ar. F
	Ar. F
Jurors:	Ar. F
Ar. Ahmed Mukhtar	Ar. S
Ar. Arif Masoud	Ar. S
Ar. Asad Verzgani	Ar. L

Vaveed Minhas Pervaiz Mughal Rashid Makhdoom Rashid Toosy Raza Ali Khan Tareen Raza Zahid Sajid Khan Shahab Ghani Uzma Zain Ar. Zainul Abedin



Isra Nasir isra.nasir-barch14@sada.nust.edu.pk

ENTERPRISING ARCHITECTURE A National Space R&D Facility

Uchali – Sakeser

"To develop a nerve center for the field of space science that is inclusive to a diverse range of users. It seeks to institutionalize the analogous programs as a singular central unit, and thus, stand as a representative of the technological advancement."

This thesis aims to explore the ability architecture to incubate, nurture, and advocate the actuality of a program and reiterate its importance by grounding it in a tangible form. It seeks to take the form and structure of a design and morph it into the program via interactive technologies so as to materialize a reflection of a contemporary narration, while simultaneously speaking of the futuristic aspirations it is impregnated with; allowing it to project the associated technological ideals yet reflect the contemporary context and remain sensitive to it. With Architecture's enterprising ability, the question is to find a path forward that is feasible given the myriad of constraints related to budget, resources and time by ideating a pragmatic approach so as to enlighten scientists and the general mass towards a new understanding of scientific activities and their need in the current time. If the architecture surrounding the idea of science and research becomes more interactive and welcoming rather than alienating, the idea of the program itself becomes warm, interactive, and inclusive.



In the context of Pakistan, the scientific community lacks a necessary aesthetic, inclusiveness, and a singular representation. Thus, the proposal is for integrated space research facility as an interactive scientific research and learning environment, which encompasses an all-inclusive space that allows cultural interactions with the scientific community.















Syed Saad Shahid saad.shahid-barch14@sada.nust.edu.pk

REDEFINING THE EDGE Public Market Place

Al-khobar – Saudi Arabia

"Focusing on public spaces and recreation along the Persian Gulf. The project aims to create representation for the various populations of the Saudi Arabian city of Al-Khobar, the lack of recreational development along the seafront and creating places of interest for the local residents and tourists."

The project aims to identify the disparity that exists between the populations of Saudi Arabian city of Al-Khobar. Al-Khobar, being one of the fastest growing urban centers in the Middle East, results in a very robotic and mundane lifestyle for its dwellers. The Cornish Waterfront development serves as a getaway for the city's inhabitants. A disparity exists between the locals and expats, between work, recreation, the land and sea.

The master plan integrates into existing planning without interfering the pedestrian movement. The programs include a Waterfront Market, an Underwater Awareness Center, an Arts Center and an open-air Fish Market.

An architectural response that places people at its core. Adding places of interest in one of the fastest growing urban centers in the kingdom, the design not only is beneficial to the local community but also the steadily growing tourism industry. This design adds quality to rather monotonous seaside development.



The conceptual underpinning can be dictated by the historical connections and existing social and environmental issues. In terms of design, the profile and volume is largely shaped by the environmental factors.

The site where the land meets the water makes the program highly experiential and interesting with all the possibilities in terms of design.













Syeda Humaira Bukhari saad.shahid-barch14@sada.nust.edu.pk

REFLECTION AND REVELATION Religious recreation center

Sector I-9 – Islamabad

"To design a space which renews the concept of making a mosque the core of a society, helping to make it a social hub and place of reflection to relax after working hours."

Re-Incorporating religion in our daily routine to make it more welcoming Muslim youth. Exploring how can architecture help in achieving this purpose? We can't make a statement to prove that architecture and some specific programs will change society's perspective and will attract the youth towards religion. But by studying specific needs of people in a particular area, we can propose a space which will cater to their requirement of programs and will reintroduce them to basics of religion.

By building communal and public spaces around a mosque and providing programs like Islamic arts exhibitions, spaces for religious seminars and lectures, charity events, theatre performances showing history of Islam, it can be reintroduced to the youth.

The architectural language of mosques and religious spaces usually incorporate prominent elements such as arches, domes, minarets and geometry. Instead the technique being used is repetition, abstraction of geometry and islamic patterns with the merge of modern sleek architecture present in Islamabad.



A space such as this should make a person more aware of his own being, to be able to relax and think. This can be achieved by providing particular elements in the walkthrough which evoke the senses of hearing, touch, smell and sight to provide the particular experience for the place of reflection.









Tooba Zafar Toobazafar21@gmail.com

BEHIND THE WALLS Women's community center

Dhok ratta Muhalla – Rawalpindi

"Creating empowerment for impoverished women by devising a unique architectural experience in the context of the Urban Muhalla."

The thesis aims to recognize the social and cultural discrimination against women in Pakistani society through architectural intervention. Architecture cannot eradicate social injustices; however, it can encourage positive social change by providing accessible utilitarian spaces where positive practices can be easily performed without facing major obstacles.

The thesis design consists of a multi-program complex which is self-sustaining and built from government funds. The complex aims to provide spaces for, learning, facilitation, economic exploration and social practices. It aims to answer the social and cultural need of the context where women can't step out of their houses, despite having strong network linkages with each other. This gives the women a platform to perform other roles than the one's their surroundings have imposed on them.

The space also caters to the social and commercial need of the surrounding family based community by providing a street garden. The complex creates a source of income for itself which can be used in its administration.



The design is solidified and contextualized through the architectural involvement of surroundings. An analysisof architectural vernacular typology identifies space combinations, functional and experiential aspects. It Paves the way for a neo vernacular typology which minimizes the negatives, while being applicable to new and larger scale developments.



















Zainab Sohail zainab.sohail-barch14@sada.nust.edu.pk

REVIVING THE RURAL SOUL The Contemporary retreat

Khabeki lake—Soon Valley

"Reconciling the urban and rural by using design derivatives of rural architecture, building a modern retreat set in the context. The retreat is a blend of modern and vernacular. While the concept lies in rural setup, it follows contemporary design language with local, vernacular passive strategies and material setting in context."

Architecture acts as a reform to reinstate the outdoor culture and a healthier, close-to-nature lifestyle. Proposing architecture, built for pedestrian movement, interaction and passively run indoors, as opposed to cars, mechanized and actively controlled indoor living.

With the lifestyle and infrastructure of cities far advanced from the rural areas, there is a huge gap in both cultures. The cities are the centres of economy, hence the lifestyle of the residents is hectic and tiring, with tourism becoming a popular escape from the daily routine. This thesis targets the urban population, introducing them to the local rural culture in a temporary tranquil abode in a rural context.

he aim is to make the experience a detox from the urban environment and introducing the slow-paced life of the rural areas. The retreat is a modern derivative of the muhalla, with each space having roots in the rural program and designed in modern language, hence localising the foreign language, making it a transition for the tourists and locals.



The major differences in rural and urban architecture is that nature is more dominant in rural spaces with verandahs, open to sky circulation and courtyards forming integral parts of the design. The open spaces are multi-purpose, introducing a program in open spaces reduces the usability and flexibility- targeting certain activities while reducing diversity.



















Zobia Tanvir zobia.tanvir-barch14@sada.nust.edu.pk

CICA Chauburji Interpretation Center of Art

Punjab University Ground near Chauburji—Lahore

"Embodying and utilizing the dialogue between traditional and contemporary art forms as a means of revitalizing local heritage."

A plethora of entities make up the cultural fabric and heritage of Lahore, whether it's the inner core, the androon shehr, or beyond. Chauburji, a Mughal monument left from Shah Jahan's era, is one such entity.

Translating into the "four-towers" Chauburji was previously gateway to a former expansive garden. Through the years it has been subjected to the changing times of both man and nature. Yet it is the current scenario that we see that has perhaps, the most significant and lasting impact: It falls along the route of the Orange Line, as part of the automated rapid transit system in Lahore.

With ever growing functional and social pressures comes the fear of cultural loss or fragmentation of any region rich in traditional arts and crafts. Whether it is the physical process of the Orange Line construction in the locality or the end result in visual hierarchy in the context of Chauburji, we have seen and continue to experience a disparity between these two bodies.

The project aims to explore the dialogue between different art forms, both the traditional, such as the fresco-work of



Chauburji, and the rising contemporary in the region, to enhance the understanding and value of cultural heritage. The concept of "Surreal-Scaping", based on the dystopian loss of local heritage values provides a common ground for both the old and the new.The art of surrealism creates a synergy within such values, leading to the identity of place.





















Attiqa Yaqoob attiqayaqoob@gmail.com

INSTITUTE FOR CHILDREN SUFFERING FROM ADHD An explorative learning facility

Sector D 11 – Islamabad

"The thesis intends to define and design learning spaces for Children with ADHD; through architectural guidelines of space specific to their well-being, creativity and space that caters to individuals benefitting to their healing and learning process."

Attention Deficit Hyperactivity Disorder (ADHD) is the most commonly diagnosed mental disorder of children that goes unnoticed in the majority of the children suffering from it, resulting in disabled learning abilities. This thesis directly tacks the lack of a school for children with ADHD in Pakistan. The thesis is meant to design a guideline of spaces specifically for children suffering from ADHD from scratch due to lack of set of perimeters or standards for ADHD oriented space in the history of architecture. By taking the site as a classroom itself, the school promotes formal and informal experiential learning. The school introduces supporting programs which encourage a child to discover his/her own talents and set of skills without confining them to the tedious school lifestyle. The project tackles the difficulty of balancing controlling a space for a hyperactive child as well as allowing the space to widen their creative horizons.



The school design focuses on ease of movement for the varying set of users and cater to the guidelines of architecture for healing. The elements of design that specifically stand out are the flow of space form the site itself, the rawness of natural materials used, quality of space specific for ADHD and the spatial configuration of the programs.





٠.

Section











Hadia Iftikhar hadia.iftikhar-barch13@sada.nust.edu.pk

SAFE FITNESS SPACES Sports & Community Center for women

Sarghoda – Pakistan

"Utilizing the in-between spaces in a way that it creates a journey, to make sports less intimidating for females who are new to it, by letting them experience it as a spectator first, rather than putting them straight into limelight."

A critical issue faced throughout history when it comes to recreational activities is the lack of opportunities for females due to various stereotypes that society expects them to adopt by fulfilling their gender roles. This thesis project aims to research the specific requirements of all age groups when it comes to sports and recreational activities, and re-establish the importance of these activities in the house-bound lifestyle of a female and design a facility that provides them an opportunity to indulge in such activities. The focus is on utilizing the transition spaces in the design in such a way that it creates a journey that makes sports less intimidating for females who are new to it, by introducing them to it in an informal way first, rather than putting them straight into limelight.

This thesis project is an intent to design an All Women Sports facility in Sargodha that not only acts as a sports facility but also a communal hub for the females of all age groups in the neighborhood. Hence, the programs have been categorized according to the users.



The facility is designed to accommodate maximum 400 users. The building is an introvert design and starts from the periphery of the site and opens up inwards, to keep the privacy of females intact. The in-between spaces fabricated and binding these programs are utilized to introduce new sports to the females.















Mishal Saleem mishal.saleem-barch13@sada.nust.edu.pk

CHOREOGRAPHING ARCHITECTURE

Dance Performance Theatre

D 12/3 – Islamabad

"A Dance performance theatre is designed in a way that it combines with the principles of dance, music, literature to create a symphony. A symphony in which dance, music and literature combines together, to give a new image of dance platform. By understanding of how dance principle can be breakdown into the design elements, used in choreography can be translated into tangible and intangible aspects of architectural design."

Dance is a physical, psychological, cultural and social behavior that has been and always will be integral part of the human existence. Perhaps more direct and essential than verbal communication, dance and the use of body to convey meaning through nonverbal communication was evident in primitive man and is still evident today as the first behavior. Architecture designed via space frees the building from formal considerations. It is though the negative element, the space; the architectonic form becomes meaningful and defined. The spatial experience in architecture is what determines and allows for human interactions. The characteristic of spaces set up the parameters for dynamics in social relationships.



Meaning of space can only be gauged and experienced though human sensibilities of sight, touch, smell, hearing and movement. Dance and Architecture are two disciplines of creativity that share a relationship of design principles. Both disciplines define and use space as a medium for creative interpretation.













Nida Ahmed nida.ahmad-barch13@sada.nust.edu.pk

ARAMESH A Mountain resort

Near Dunga Gali – Abbottabad

"To design a Mountain Resort which acts as an "escape" from the daily mundane and tense lives of the users with the attempt to "encompass" them into the serenity of the surroundings and capturing the essence of the mountains all around."

The Persian word "Aramesh" translates to peace, calm, tranquility and "serenity". The idea of designing a mountain resort originates from the desire to create and design a peaceful space or an escape for people in the shape of a resort which envelopes the beauty and serene nature that surrounds it.

The Northern areas of Pakistan, for the mountain resort "Aramesh" to be designed in Abottabad was a willing inclination towards the fact that the site of Abottabad would be most fit for targeted site seeing visitor's interested in hiking and recreation in such a tranquil environment. The hiking track to Mushkpuri starts where the famous Dunga Gali Bazaar ends and hence the interesting junction creates a desirable spot for travelers, hikers and tourists alike to breakaway and breathe-in all that surrounds. This gives birth to the placement of the Mountain Resort at this junction which also caters to eye opening and extremely pleasant views all around capturing the beauty of the mountains that surround.



The concept is to basically, merge the resort itself with the site in such a way that the aesthetic value of the site is blended with the built structure in a way that it becomes a part of the retreat itself including views, topography, experience and spaces.











Zoha Shafiq zohashafiq28@gmail.com

DEEWAAN An Athenaeum for Urdu Poetry

Shakarparriya – Islamabad

"The intent of this thesis is to facilitate the growth and communication of Urdu poetry, through its collaboration with other art forms, to the general public in order to restore their connectivity to their own culture."

Urdu still serves as our national language and has a strong hold over communication in our society but the celebration of it is what lacks today and requires a revival. The means of this revival have to be the same as they were when the language saw its prime period years after it was borned in the Mughal era; Poetry.

The focus of my thesis was to understand the association of past with Urdu poetry and to create an association of our own era through the exploration of various modes of expression that can be overlapped with poetry and create a meaningful dialogue with the public.

This project is located in Shakarparian Recreational Park, opposite to the Arts & Crafts Village, accessible from the Garden Avenue. In terms of program, it explored the evolution of communication of Urdu poetry; recitation in mushairas, music in form of qawwalis, casual and formal discourse between Sha'uraa and collaboration with modern day modes of digital and visual arts.



In terms of architectonics, the project explored development and morphing of grids, taking inspiration from the 9-sqaure grid from the Mughal era, along with other visual and physical elements of inspiration in their architecture in order to create a link between the traditional and the modern, hence respresenting the concept in visual form.













Ahsan Sajjad ahsansajjad095@gmail.com

PROJECT ACCORD University Campus

Abbottabad – KPK

"This thesis project aims to study the symbiotic relationship between 'built' and 'unbuilt'. This research is then implemented in the proposal for the new campus of University of Engineering and Technology, Abbottabad as research by design to understand and explore the opportunities and better design attributes."

The need for a new campus for UET Abbottabad is fulfilled as a part of this thesis project whilst understanding and exploring the connection of the Built to Unbuilt to reach a mutual understanding amongst the two.

This is achieved in Abbottabad, where a lot of inspiration is taken from the context, it introduces students to the idea of bringing architecture and engineering together during the course of their everyday experience.

The project also proposes a reimagination of the traditional gable and pitched roofing and brings a fusion in structure and native materials and inspire students to broaden their horizons through experience and observation that forms a deeper part of their learning. The connection and mutual understanding that is achieved via site responsive design and site dictated geometry also subconsciously imparts a good precedent for both students and the context where the need for such attitude is very important.



The main focus of design revolves around exploring the symbiotic relation of built and unbuilt, where a combination of Architecture and Engineering are mixed to bring about an idea of such a place where knowledge of building systems and techniques in combination with traditional modern day materials is imparted on the students for their cognitive learning via experiencing the design.

















Zarmeen Jamal zarmeen.jamal-barch14@sada.nust.edu.pk

NOT JUST A SPA Recreational centre

Lahore– Punjab

"Studying and understanding the communal spaces in Lahore's history to lay precedence for the new communal spaces in the contemporary and futuristic times. By studying how the hammams and Baulis have translated into the modern-day spa and their transcendence into the future world."

The quality of a city's life depends not only on infrastructure or the educational and industrial activities, but it also heavily relies upon how society comes together and the avenues provided to them for entertainment and recreation. Lahore is considered to be the cultural and social hub of the country yet when we look closely the absence or lack of recreational facilities specially places serving as a getaways or retreats becomes apparent.

Over time the use of Public hammams and Baulis became nonexistent which used to be a communal hub for people. This project aims to bridge these two missing links i.e. the lack of communal spaces for the public and a space for them to unwind and relax in, by going back to the original communal spaces in the area's history (the baulis and the hammams). This project aims to capture the essence of community which the hammams and baulis offered and integrate them into a



modern contemporary spa with the help of a few value-added functions to increase the quality of the space and make it inclusive.

In conclusion the project offers a contemporary take on the traditional hammams and baulis The Spa would be catering to the need of retreat and unwind by the people of Lahore.



Master Plan













Karum Naveed Kayani karum kayani@hotmail.com

ASHIANA Retreat for Mindful Healing

Thandiani – Galyat Region

"To help mitigate the negative perception against mental health in society by designing a nature integrative retreat, geared towards helping visitors heal from their mental stresses, utilizing architecture's ability to heal and rejuvenate."

My final year thesis project is located in the hills of Thandiani and is designed to be a sanctuary in nature for those who are stressed and exhausted from the tedium of daily life and are unable to manage their stress properly, for them to rest, recuperate and heal.

The facility is meant to operate as a retreat that focuses on the visitor's mental and spiritual state and equips them with tools and techniques to be able to properly manage and improve their selves through the use of various activities.

The final facility created focuses on the use of traditional materiality and emphasizes the humble design of the form which relies on its ability to merge with its surrounding nature. This is done to enable the character of the spaces focus on having the user be able to relax, unwind, reset their internal clock to a slower, more peaceful pace of living and focus on the phenomenon of healing, their mental well-being with the



guided support of the in-house instructors and guidance counsellors.

You come here to heal, to learn how to manage your stresses, and focus on self-improvement for a healthier, happier life.









Kashmala Imtiaz kashmala.imtiaz-barch14@sada.nust.edu.pk

THE BLURRED EDGE Cross Border Visitor Center

Line of Control – Kashmir

"Exploring how the concept of a "border" could be dedifferentiated in a disputed territory. Proposal involves employment of architecture as a mediating tool to provide solution to the major reunion ordeals within Kashmir through regional integration on borderland."

This project is centered on the Line of Control (LOC) between Indian and Pakistan Administered Kashmir. Declared a "ceasefire line" in 1948, the LOC is purely virtual in nature, its demarcation did not consider local demographics and led to the faulty division of families and locals. The aim of the thesis is to present a proposal to United Nations that emphasizes on the needs of the local population of both states; reimagine the physical rigidity of this border, going beyond the elements of war and conflict that has mired the region till now. It involves reinterpretation of the Line of Control in Kashmir, turning it into a mutual space for locals of both territories.

This thesis includes a detailed exploration of morphing the physical state of the border; a wall, into various social spaces that could instigate feeling of nostalgia amongst its users. The logic behind creating a mutual space on border is to provide locals a sense of belonging without any divisions or barriers holding them apart.



Border de-differentiated into a space where the locals of either side would come, reunite, eat, learn and celebrate together. Catering to their communal needs, this will be a platform where they can express their collective identity.








Mahnoor Malik mahnoor.malik-barch14@sada.nust.edu.pk

HYDRA Sports Training Academy

Pasu Gojal – Hunza

"Translating the Antifragile principle of sports into space and program by responding to constraints so that they create elements of focus."

Antifragility is described as something that gains from disorder, as something that thrives on stress. As in sports, how the constraint of the presence of a defender pushes the sportsmen to come up with creative responses to create space: Sport is architecture on the field. Dynamic responses of attacking and defending in the field, the players expand and constrict the space, their movements and tactics activate the spaces far beyond the arena itself.

The sports training academy for the highlanders aims to take into focus all of its weaknesses and constraints, and enables them to become the very feature in the project. These kind of responses have become important given the extreme environmental conditions of the region of Hunza, where the site is located, and how they have adapted to it, giving them a physical edge. The people of the region are fanatic about sports and have a great number of unexplored talent that has not been made use of because of lack of infrastructure present within Pakistan. The academy focuses on another psychology elements, which is a derivative of the antifragility concept: Synergy. The main sporting activities within academy flow



linearly through the building, the wings of the buildings contain supporting activities that support not only the athletes through recovery but also the sustenance of the operations and improvement of the building. The academy encompasses sporting, educational, medical and recreational facilities that make use of the scenic views of Hunza.



















Mahnoor Naeem Malik mahnoor33971@hotmail.com

PERFORMING ARTS INSTITUTE Institutional building

Shakarparriyan – Islamabad

"Designing a performing arts institute in Islamabad by studying the relationship between performing arts and architecture via the exploration of how performing arts creates a journey through the different layers of human consciousness."

The aim of this thesis is to study the relationship between performing arts and architecture via exploring how performing arts affects the human mind. This lead me to discover that this form of art helps a person to reach their innermost core of consciousness. The human brain has a conscious and unconscious part, the conscious part is further divided into three layers, the outer layer, the inner layer and the innermost layer. During performance arts an individual travels around the different layers of consciousness, during this the person understand their own crisis in life cycle, underlying reasons and sets own coping strategies. It helps an individual to find meaning in life, to realize one's own self and develop high efficacy in cognitive, emotional, psychomotor coordination and overall health efficacy.

Dance is a form of performing arts that I have personally experienced and Practiced. Therefore dance is what I used in order to travel through these layers and achieve the desired



results, exploring how my concept that is defined through my performance can be physically executed via architecture.

The performance describes how the dance routine transitions through these three phases of consciousness. These are then translated and abstracted into elements of design.

















Maryam Farid Khattak maryam.khattak-barch14@sada.nust.edu.pk

HOME AWAY FROM HOME Home for the Elderly People

H 8/1– Islamabad

"Framing nostalgia for home targeting the elderly homeless population to instill in them a sense of belonging."

Architecture is not only just a thing to "see" but also a thing to be "felt". It is much more than just the aesthetics of a space or formal beauty. The experiences one

has when he is in a space and what those experiences cause should also be one of the design intentions. Every space induces a different experience, evokes a certain emotion, and recalls a particular memory. Among other design objectives, an architect also tries to design spaces which hold a positive impact on the user's mind. This can be made possible if a four sided room with a window on one wall opens to a courtyard, that, reminds one of the golden time he spent with his family twenty or thirty years ago. One yearns for the places in which he felt secure, comfortable and at home. The desire for such homely spaces is natural in every human being but it is a little more in those who are deprived of these spaces and long to return back to that time. These are the people who are homeless and are in search of a place that instills in them a sense of belonging and a feeling of ownership.

Old age people realize the importance of these places more as they experience major part of their life over there. Designing a facility that makes the elderly homeless people of our society, relive the moments which they spent with their



families and providing them a space which frames nostalgic moments for them can help improve their mental health. It can also inculcate in them a sense of security, social acceptability and a feeling of belonging. When they feel comfortable in a space, they can practice their lifelong skills and become a productive member of the society. This also helps in negating the fact that the elderly are mere passive recipients of care.





Section









Maryam Shah maryam.shah-barch14@sada.nust.edu.pk

GAREE 'TZE- (BY THE HEARTH) Eco-Tourist Village in Hunza Valley

Gulkin Village – Upper Hunza

"Using architecture to heal a site where it stands to strengthen and compliment the ecosystem of the site. Such a setting which highlights the sudden gap between old and new customs by respecting old tangible and intangible traditions."

This project aims to promote sustainable tourism in the region by being an example of sustainable habitat itself in terms of social, environmental and economic sustainability. Vernacular architectural techniques are used to design this tourist village which caters to rapidly increasing tourism. Hunza is a place with rich cultural diversity and heritage. With the rapid increase in tourism in recent years, new space typologies are provided only serve the basic requirements for housing tourists every year, and emphasize more on the utilitarian aspects which overpower the few cultural elements that remain.

The proposed architecture acts as a "healing" agency for these issues and analyzes the current conditions by offering an alternative setting where it stands to strengthen the ecosystem of the site and respecting the old tangible and intangible traditions.

"Garee Tze – Eco-Tourist Village" is intended to be the appropriate architectural response where natural, existing qualities of landscape, vernacular elements and environment



shape up the architecture into a series of educational, cultural and

managerial functions all working towards a common cause- revitalization of the disturbed environment and education of the public to evoke sensitivity.

The project is limited to sustainable economic growth, abstraction of elements in design to establish a link between old and present.











Masooma Inam masooma.inam-barch14@sada.nust.edu.pk

HOME OF EAGLES Socio-Academic Centre

Risalpur — Pakistan

"Developing a context sensitive program that allows its users to fully utilize spaces to rejuvenate themselves in an environment that demands utmost physical and mental strength. Providing a pioneering platform to a one of a kind institution of the country to allow not only the residents of the Academy but also become the face of the military institution."

Military education and training is a process which intends to establish and improve the capabilities of military personnel in their respective roles. Architecture plays a vital role in developing the context and environment for any human to dwell in. The main focus of the project is to facilitate these young cadets and provide them with a need based program, a space, a piece of architecture that would impact on their lives, mental fitness and also mark the most iconic activity and become the face of the 'eagles.'

This thesis includes the design and planning of the Socio-Academic center for the cadets of the Academy. The focus of the center is to provide cadets with the opportunity to have a space just designed for them which allows them to interact with their peers and their fellow mates and to explore themselves at such an age where they have the opportunity to develop their personalities of being a military personal.



The facility will also allow them to experience the new technology of the current times. Iconism plays a vital role in this project as the PAF Academy is one of a kind institution in all over Pakistan. Marking of such a military facility and to have a face that general public can only see on rarest of occasions, graduation parades etc., further encourages the sentiment of patriotism.

















Midhat Naeem midhat.naeem-barch14@sada.nust.edu.pk

THE TEMPORAL SPACES Boutique hotel

Club Road — Shakkar Parriyan

"To explore the contrast of experiences through temporality in a space of comfort and luxury."

This thesis explores temporary living spaces in terms of temporality incorporated into the architecture, that can offer varying experiences to the users, in a way that every encounter with the space breeds a new experience. To create spaces, both in the public and private realms of the hotel, that could manipulate the sense of time in a way that the mundanity experiences of the outside world are disconnected from, and the experience inside the hotel becomes enhanced. The project targets an aspect of luxury based on the user experience that is temporalized in the architectural space and programs of the private and public realms of the hotel.

The 4 star hotel has been envisioned to cater to the aspect of luxury set in a boutique hotel.

Stdying the idea of spaces interact with the user is what would give the sense of a stretched out or abbreviated time set in space, thereby making it the aspect of luxury that one might look for in a space of habitation when removed from the typical scenario of the average life.

This aims to give a dynamicity to the hotel space in the sense



that it would become a vacation away from the typicalities of life and thus becomes a world in itself. It is to shift from any rigidity that one may encounter in an average life and should give the experience of a smooth flow into and through the spaces so as to subtly influence the experiences.















Noor Abdul Rehman noor.rehman-barch14@sada.nust.edu.pk

BAAB-E-BAHAWALPUR Railway Station

Bahawalpur – Pakistan

"The Placemaking of a Railway station that forms a transitional analogy with the state of mind of the user and performs the narrative of the Princely State of Bahawalpur."

Space is shaped by elements of history and nature, and cities are a product of the stories of the past. Today, buildings aim to achieve agelessness with no respect for the dimension of time. In this era of urbanization, it is a human need to recognize and celebrate our roots; hence, the idea of belonging needs to be anchored. It has become a function of architecture to facilitate this need.

Bahawalpur itself is a city of celebrated heritage and forms a distinct identity in the region. The Princely state of Bahawalpur hosts wonders of architecture existing as an amalgamation of Roman, Italian and Islamic elements that become native to the city of Bahawalpur. This thesis aims towards creating a gateway to the city that responds to identities with time.

A traveller realizes time as a realm of transition in its deeper sense, travelling from one place to another involves transition and arriving or departing creates thresholds. The idea is to create analogies with these transitions and thresholds to form a dialog with identities. This dialog is achieved through placemaking in tangible and intangible perception.



The circulation of the station acts as a path that performs the narrative of the city through the use of design elements like repetition, contrast, visual connectivities and scale. The typology of the Railway Station conforms to the Narrative of the Princely State of Bahawalpur through the idea of placemaking. The placemaking of the station is inspired by the city itself.

















Nowera M. Abid nowera.abid-barch14@sada.nust.edu.pk

MARINE RESEARCH CENTRE Research Centre and Aquarium

Do Darya (Waterfront) — Karachi

"The articulation of immersive spaces that connects the people of Karachi to the marine life along its coast which will serve as a center for awareness and conservation of the marine ecosystems achieved through a research center and aquarium."

In this agriculture-based country, our marine life has been severely neglected until recently. In light of the growing importance that is attached to this division of life, there is a need to focus on the reason for its significance. The new development should be aimed towards creating a place that bridges the people of Karachi to its marine inhabitants and ecosystems. There has been no initiative for the creation of a space that will serve this purpose of both enlightenment and recreation in the past two decades.

The master plan is aimed to bring in the people from the land to the sea after taking the visitor through a journey that immerse one into the submerged world and brings them out to the tranquil of the sea to reflect and understand the importance of these lives.

The thesis aims to create a space which not only exhibits and celebrates the biodiversity of our waters, but also adds to it a research fragment which can further help in the betterment of these ecosystems.



Provision of an interactive space between the marine life, people and information is the ultimate goal. It will serve as a platform to spread awareness of the deteriorating environment of the coastal waters and its habitats, and hopefully drive people towards a better attitude. It will also serve as an icon in reimagining the coast line.







Creation of an immersive space to serve as an educational platform for marine and aquatic life.





Rabeeya Manzoor rabiya.noor96@gmail.com

THE CIRCUS OF DREAMS **Recreational Park**

Rawalpindi — Pakistan

"The circus of dreams is a recreational space grounded in the traditions and cultures around Pakistan which straddles the line of reality and imagination, which transports visitors from their mundane lives to a whole new reality, while also providing a safe haven for the "rejects" of our society, using the circus as an underlining concept."

The Circus of Dreams is a recreational zone that caters to people of all ages, from all walks of life. It aims to offer a fantastical experience to the users which can disconnect them from their daily lives and offer a reprieve. Furthermore, it aims to provide a safe haven and a platform to the performers that have been working under harsh conditions and have not been provided with the necessary facilities and opportunities. As an added bonus, the zone intends to increase international relations and allow troops from different countries a platform to engage the people of this nation as well as give our own performers a chance to interact with them and perform in other countries too.

The recreational space houses multiple and varied attractions that cater to every age and people from all walks of life.



Comprised of gardens, eateries, entertainment zones, the circus has been broken down into little spaces which aim to encourage people to explore it while also giving homage to the multi-talented people that perform and run the place.











Sadia Masood sadiamasood890@gmail.com

4 ELEMENT CREATIVE THERAPY Creative Therapy Centre

Satra Meel — 23 Km from Islamabad

"Use of 4 environmental elements (Earth, Light, Water and Wind) to affect the sensory experience of a space that is both creative and therapeutic in order to help mental health patients express themselves eloquently."

The project focuses on the artistic and creative use of four (4) natural Elements: Light, Earth, Water and wind to create such an aesthetic experience for mental health patients that it helps them revise their memories and express them in the form of art and personally grow.

The primary objective of this project is to bridge a gap between therapy and arts so that it can help one personally grow and self-express. The project explores how natural elements in our surrounding can prove to be helpful in creating an experience that it ultimately helps the user of the space to re think, reflect, and explore themselves subjectively through arts. Thus the goal is to use arts and creativity as a medium of expression and natural elements a means to self-explore; collectively to be used in architecture.

The typology of this program is both healthcare and educational. Since natural elements play a vital role for this



project so the site attributes that matter the most are the presence of Light, earth, water and wind in a way that they can be moulded along with the architecture itself.















Porous Space



Syed Shabab Ali shabab.naqvi-barch14@sada.nust.edu.pk

EPICENTER Cricket stadium

Katarian, New Airport — Islamabad

"The thesis aims at the return of cricket and the promotion of the sport. An epicenter to its revival is long due in Pakistan."

Cricket is a sport that runs through the veins of the Pakistani population, and this passion has been suppressed for far too long. If we consider the international platform, sports is a bonding opportunity like no other. Also, cricket is a sport where Pakistan shines bright, so compromising on such a platform can prove detrimental to a country's international relations.

To host the game in Pakistan the renovation of existing playgrounds and the development of new ones, keeping in mind the new trends in the sport, and its culture is required. Therefore, this project is designed to be a Cricket stadium incorporating the parameters like security, openess, sense of community and welcoming form. A platform like no other in the country, hosting the largest number of cricket enthusiasts in a safe and interactive environment.

I aimed for a building that is self-sustaining with capability to generate funds for its maintenance and expansion. The building is composed of innovative structures that it presents a blend of old and new ways to the international community.



The aim was to make more than just a structure, an execution of dialogue between the spectator and the space. It's an illicit conversation about the achievements in the sport and what they really mean. An experience that mentally prepares the spectator for what he is getting into when he/she reaches the stands.













The Circulation space



Shameen Akhter shameen.akhtar-barch14@sada.nust.edu.pk

FLEXIBILITY OF MEMORY IN A RIGID ENCLOSURE Resort Cum Army Mess

Ghariyal— Pakistan

" This thesis explores the spaces where including the social elements generates a site specific form, a design that not only triggers your senses by play of nature and memory, but also makes sure the true essence of site remains intact."

This thesis is a fusion of tectonics with contextual features, a balance between natural and man-made. Its percieved to be an enclosure where privacy is present along with dynamism and spirituality to offer a temporary escape from routine. Flexibility in a socially rigid environment which demands for spaces where peace and serenity finds a tangible form.

This thesis intends to create a dynamic form with spaces that provide communal essence to military families with their colleagues. The context selected highlights the thick green belt of Ghariyal with contours on its either side capturing the views of the beautiful Pir Panjal ranges.

By creating dominant voids between solid lines as a means of highlighting the temporal escape, the idea of confinement in a compound or enclosure becomes less rigid than perceived.



The progression from one space to another is marked important highlighting the adjacent landscape. The form tries to mimic the landscape, acting as an extension to the site it is built on. Form that emerge out from ground, bridging the gap between manmade and nature. The basic program is to provide suites, café and play area for children.















Syed Hammad Haider hammadhaider1996@gmail.com

MADRASAH **Boarding School**

Islamabad — Pakistan

"Reimagining the Madrasa to provide religious and modern education in a manner which is compatible with contemporary times and integrate diverse disciplines."

Madrasas during the Muslim golden age were major hubs for knowledge. Both science and religious knowledge was taught, even European students would come to study in these institutions. This was because of the high reputation it held, the best and brightest students would aim to get into them and producing great scientist like Jabir ibn Hayyan, Al-Khawarizmi, Abu al-Qasim al-Zahrawi etc.

In this contemporary world -and specifically in Pakistan- the Madrasahs have lost their value as the centers of knowledge they were once venerated for. These madrasas have now become something which are looked down upon by the well-off in the society while for the poor parents mired in poverty and forced to work long hours with limited breaks, madrasas serve a vital role in ensuring their children are being supervised, fed and taught to read and write. This is because madrasas have lagged behind in the society, as in this modern age science and technology has been overlooked. This thesis will aim to redesign the madrassa where both contemporary and religious education systems will meet.



Thus they aren't able to produce competent scholars or even intellectuals, journalists, diplomats, lawyers, engineers, doctors etc. The purpose of madrasahs is beyond training Imams and Khateebs for local mosques. Rather it's to produce individuals who are to lead and nurture the society materially, spiritually and morally.

















Ramsha Aleem ramsha.aleem-barch14@sada.nust.edu.pk

SPECULO A rehabilitation center

Islamabad — Pakistan

"The thesis statement is to design a substance addiction rehabilitation centre for the youth of Islamabad, and to create awareness for other non-substance addictions."

The aim of this thesis is to provide a substance abuse rehabilitation centre for the youth of Islamabad, the capital city of Pakistan. Substance abuse reached unprecedented levels in Pakistan after the Afghan War. And at this current point in time, the number of the youth of Pakistan is almost half of the total population.

In these formative years, a great many experiences lead you into adulthood. The idea of belonging is crucial to that development. In a transitional, beta-world city like Islamabad, this stability may be lacking. This often leads to the attempt to regain some semblance of control, and often might lead to self-destructive obsessive tendencies used as a coping mechanism.

The aim of this thesis is to use architecture to provide a space that makes the reformation easy, but allows it to occur with dignity and sensitivity. It is also a speculation, a reflection on what causes addiction, and the necessity for human connection and association in order to heal.



Spatial qualities and architecture can assist with this greatly, since the psychological effect of space is evident. It should be a space that makes it clear that addiction is not insurmountable, nor does it require the mental barricade that most institutions treat it with. It should be a space that affords both dignity and care to the user.



Master Plan













Communal Zone



Muhammad Ammar muhammad.ammar@sada.nust.edu.pk

THE NEW AGE SCHOOL An educational facility

Kathar Village — Islamabad

"To understand the psychological perception of children towards built and natural environments and then designing spaces for them that will positively impact their education, character, emotional wellbeing and cognitive growth."

There is a need for a quality boarding school in Islamabad for the expat families living abroad who want their children to have their education in pakistan. Also Pakistani people living north of islamabad have only a few options for boarding schools unlike in Punjab where there are multiple renowned boarding schools.

This thesis aims to integrating the learnings of childhood psychology, cognitive and emotional development, architecture and landscape architecture to design a boarding school.The provision of spaces that would stimulate a child's curiosity and urge to explore and provides opportunity for a child to transform fantasy and ideas into physical activity and exploration without putting themselves in physical danger but also without the fear of frequent adult intervention.

This integration of Architecture and its outdoor spaces for research based learning and development of early/middle aged children would help them develop skills to tackle social



problems. The problems that arise as a result of bullying and lack of empathy in architecture. Simultaneously designing space for accommodating research based cutting edge practices in education would provide extraordinary freedom to children to operate without significant danger in outdoor environment.

















Aimen Abbas aimen.abbas-barch14@sada.nust.edu.pk

CARAVANSERAI

Travelers' Inn / Musafir Khaana

G.T Road – Rawalpindi

"Redefining the typology of a traveler's lodge to cater to a specific user group, by combining rest and relaxation with meaningful social interaction."

The capacity of architecture to induce a "sense of community" through social interaction is explored through a design process which relies heavily on the ability to understand the needs of both people and place, in order to recognize the nature of intervention needed. Resulting in a typology which uses the built environment as a setting for cross cultural linkages through social interaction.

The project proposes an architectural intervention in the form of an inn along the G.T. Road on the outskirts of Rawalpindi. The inn explores the concept of a caravanserai as an allegory for a successful platform of exchange and communication. Where previously it was used as a stop for traders and merchants along trade routes in the olden days, here it serves as a temporary abode for the travelers coming to the hospitals near the site. This acknowledges the need of the attendants for a place to stay. Especially those who come along with patients from distant areas. Set adjacent to the S.O.S Village, the proposed caravanserai sits on a sunken site near the ending edge of the Soan Bridge overlooking the Soan River.



The aim of the design is to achieve places where the people can find spaces of relaxation and calm as well as open spaces acting as activators for social interaction. The design seeks to study the elements of a traditional caravanserai and morph them according to the site in the proposed inn.















Ariba Asad ariba.asad-barch14@sada.nust.edu.pk

A NICHE ON CAMPUS Student Centre

Quaid-e-Azam University - Islamabad

"The project involves developing a student dedicated spot in a university campus that acts as a 3D social network to generate a dynamic journey, to stimulate interactive learning and to offer students with multiple choices in terms of spatial experiences, in order to ameliorate the campus life."

The project involves developing a student dedicated spot in a university campus with the major focus on creating a creative learning and interacting environment. The aim is to propose a built structure that acts as a 3D social network i.e. a platform that allows vast connections, with a potential to attract students in order to create connections among themselves, as the relationships a student fosters while on-campus helps them develop a professional network that can follow them beyond graduation. It needs to be a network to innovate and a platform to create. It is important to consider that it is not only a building that offers varied amenities to the student body but is in fact a community gathering platform housing a multitude activities that serves the recreation interests of the campus while showcasing campus's traditions and way of life.



The project is in a campus where the student social life lacks the colorful palette of a campus life due to the absence of interactive built spaces and effective connections. Additionally the diversity of the student body leads to the emergence of eventbased activities and becomes a source of healthy competition.













Asad Nasir Qureshi asad.nasir95@gmail.com

PAKISTAN NATIONAL YOUTH FOOTBALL ACADEMY

Football Training Centre

Shakarparian - Islamabad

"Providing a platform to internationally launch Pakistan's footballing youth and aid domestic popularity of the sport."

The Complex is designed to groom the young players in an Academy which aims to use Architecture as a tool to improve not only the Physical Skills but the Psychological and Mental Aspects of the game in the players. The Design tries to tap into instinctual attributes developed in a player and tries to translate that into Architectural concepts and Architectonics. Using the basics of Architecture Design –Form, space and order, the Design Intent was achieved. The Order followed the Tactical Plan in Football, set-playing moves, locating nodes, effective circulation, and balanced distribution and location of zones, for example Recreational or Training Zones. The Spaces allow players to experience real match time situations, using architecture as an aid in the training process. The design is as such that it creates inter-spatial neighbouring views, allowing for players to have visual connection from across the building. The Form is derived from speed and agility as well as the motion of the ball, the design language used was of Speed Forms, as they best display the needed attributes, this allows the form to be a physical manifestation of the Sport,



by having apertures making vistas, and a dynamic form insinuating the nature of the program. The design hence empowers the students to perform better and hands them the upper edge by using Architecture as a means of game comprehension and learning.










Ayesh Nasir ayeshri599@gmail.com

COMING OF AGE ACADEMY Grooming School

Lalazar - Rawalpindi

"The Coming-of-Age Academy is an institute dedicated to the training and grooming of our male adolescents in the fields of skill-based education (vocational training/ craftsmanship) while simultaneously providing them with the utmost important coming-of-age experience"

This academy aims to provide a solution to the burgeoning problem of "permanent adolescence" which has over the years become increasingly manifest within our societies. After the emergence of the youth culture in the 1950s, this illness jumped to the top of the list of social problems in the West (Cosgrove). In Pakistan, the youth culture did not manifest itself till the late 1990's, when the worldwide web became available (Haque). Today permanent adolescence is as much an epidemic in Pakistan as it is in the West.

Permanent adolescence, also referred to as AED (arrested emotional development), can be understood as the tendency in some adults to never show any inclination to mature or to take responsibility. One of the underlying causes of AED as identified by Joe Carmichael (author/teacher/social researcher) in his book Permanent Adolescence: Why Boys Don't Grow Up, is the "almost complete disappearance of the coming-of-age ceremonies of old, which not only allowed the society to identify someone as an adult but inculcated within the minds of the adolescents the realization that the season



for responsibility had come."

Hence this school, through its program and its design, intends to make the adolescents realize that they have not only physically but also emotionally transcended childhood and entered adulthood. This is done architecturally by taking the coming-of-age triad as the guiding principle for design.













Aymen Aziz aymenaziz84@gmail.com

HETEROTOPIC COMPLEX FOR YOUTH DEVELOPMENT Socio-Cultural Center

Haro River Bank - Taxila

"The aim of the thesis is to create a heterotopic space of learning, a platform which allows for dialogue between the users and their surroundings and enhance their skills by providing stimuli for growth."

The aim of the thesis is to create a heterotopic space of learning: an environment which allows dialogue between the user and their surroundings, encourages interaction and acts as stimulus for its occupants. Historically the Taxila region has been the educational hub across numerous empires and the design proposal takes cues from the evolution of the learning system and the way in which people adopted these spaces into their daily lives

To explore the concept of interactive spaces the boundaries and edges have been requalified to become less restrictive whilst maintaining their intention to dissect spaces. Boundaries have been manipulated to become more blurred, allowing for mitigated linkages between spaces which encourages flexibility and instigates exploratory tendencies amongst the users. With regard for the history of the site, the journey articulated through these spaces encompass



spaces of communal interaction as well as those of more individual reflection. A strong connection to nature is maintained to allow the occupant to find moments of serenity. The dichotomy of an assertive yet forgiving boundary nurtures a sense of thrill and excitement for the user, allowing him to break away from his routine to interact with the spaces and people around.















Fatima Ibrahim fatimaibrahim.996@gmail.com

THE REVIVAL OF GOR KHATRI Socio-Cultural Complex

Old City of Peshawar

"The thesis intends to rejuvenate Gor Khatri as a social complex by the exploration of interlaced and warped spaces in architecture."

Gor Khatri in old Peshawar city was once a scene of vibrant urban life. However, as Peshawar urbanized over the years, people sought out better opportunities for themselves in the newer parts of the city and so a disjuncture was created between the old and the new city of Peshawar. Amidst this situation, Gor Khatri too has suffered from neglect and a lack of ownership exercised by the citizens.

The revival of this area as a social complex takes inspiration from its rich social and cultural fabric as it accumulated architectural remnants from diverse civilizations over the ages. The proposal attempts to interlace and overlay the current fabric with new event spaces and programmatic interventions that reinstate an influx of people into this area.

The proposal intervenes with the current fabric by virtue of sequentially designed spaces that articulate a journey. The amphitheater, the socio-cultural center, and galleries altogether revitalize the area by introducing events that invite people back into the area in hopes of reviving the site's longlost ethos as a social hub.



The proposal makes room for art events, digital art installations and communal activities that reinvites users into the area. The contemporary and art-oriented nature of these programs encourages involvement of the locals from all parts of society, helping to abridge and address the disjuncture between old and new Peshawar city.













Iqra Abbasi iqrra@outlook.com

INORGANIC REBIRTH Plastic Recycling Factory and Design Studio

G.T Road – Rawalpindi

"Waste plastic fill is degrading the space. Therefore, the aim of this thesis is to rearrange this waste clutter into a celebration of materials and life, and utilizing this revival by welcoming an audience to a journey of learning and creation; where the man and the earth celebrate each other."

Waste plastic has been creating a lot of clutter on our lands and in our waters. Not only is it a threat to all life, it has also been degrading our space. Production of man-made entities, like plastics themselves is inevitable, but it is our responsibility to acknowledge the environmental degradation that is happening and to highlight the sense of social responsibility among the people. It is necessary to find the balance where they both survive together and celebrate each other. Where the inorganic must respect the organic, the organic must also accept the inorganic. Therefore, this thesis tries to rearrange this waste clutter into a celebration of materials and life, and utilizes this revival by welcoming an audience to a journey of learning and creating.

This thesis challenges the preconceived notions of what a recycling factory is about; turning it from a shunned, garbage disposal, industrial facility into a welcoming and fun place,



making the factory feel more like a friend and less like a foe. It does that by adopting a tectonically sculptural form that attracts visitors, which addresses the social aspects of sustainability while performing its primary function by allowing people to come together and recreate from their own plastic waste; a place where they can then turn waste into whatever their imagination entails.









Sustainable Design





Syed Shajee Haider shajee.taqvi-barch14@sada.nust.edu.pk

THE MODERN-DAY ATHENAEUM Antheneum

Islamabad— Pakistan

"The thesis, as an architectural project, aims to revitalize the National Library of Pakistan through the introduction of the Athenaeum, that in turn revisits the library culture and attempted to reintegrate it among the people in the contemporary times."

The library is a house of knowledge, a place of learning and exploration, and yet it seems as though the people have taken for granted what it means to acquire knowledge. The core reason behind the decline of the library culture once analyzed can be divided into various categories that range from the digitization of knowledge to shortening of attention spans as a people, the lack of awareness that people have also contributes majorly to the problem.

As such in context provision of meditative spaces that cater to the spiritual growth of person, focusing on people to people interaction as well as people to architecture relationship. The Athenaeum will nurture its users towards an appreciation of knowledge overall. Thus, the building would not only bridge the people to the existing library physically but also act as a bridge itself, metaphorically, conditioning them along the process. Establishing a symbiotic relationship between both the buildings as they promote the innate quest for knowledge that humans have.



Thus, the Athenaeum as a structure, in contemporary scenarios is aimed at providing an interactive, inclusive and invigorating environment to promote book reading, learning and the acquisition of new skills.















Junaid Ahmed Khan junaid.khan-barch14@sada.nust.edu.pk

GWADAR EAST BAY CRUISE TERMINAL Cruise Ship Terminal

Gwadar - Pakistan

"Promoting Gwadar as a major economic and tourism hub by providing access to inter-regional connectivity using its port, benefitting the local as well as the national economy."

Gwadar with its rapid economic development, huge foreign investments and access to the 800 KM long coastline spread across the length of Baluchistan, is regarded as having an immense potential for a huge number of tourists and tourist destinations.

Presently, there is no inter-regional connectivity in terms of tourism between the coasts of Pakistan and its neighboring coasts of UAE, Iran, India, Sri-Lanka and the Far-Eastern ports of Hong Kong and Bangkok. This implies that there is currently no Port-of-call for cruise tourism in the country. Provided the infrastructure, it is expected that cruise tourism in the country would witness rapid growth. This would lead to the development of a major cruise corridor in the region that would link tourism to the China Pakistan Economic Corridor (CPEC) and further boost its economic viability. With Gwadar being the only Port-of-call for cruise tourism once developed, it would also greatly improve the economic conditions of Baluchistan as a province.

The cruise ship terminal with a focus on the commercial aspect



of the program opens up to the various classes of people who would not have previously been able to experience the exclusivity that the program entails in general. Not only does the terminal with a commercially active business center acts as a hub of economic growth but it also tends to reach into the cultural bed establishing a direction for the future.











Zala Farooq zala-barch13@sada.nust.edu.pk

PARWAAZ-E-ZAN A retreat for women

Walled City - Peshawar

"Designing a retreat for women in Peshawar, where they can spend time with themselves, as well as interact with each other."

This thesis aims to design a retreat for women where they can Rest, Rejuvenate and Engage with each other as a community.

The surrounding built environment in city does not carry a particular style of design, I chose to look towards the Walled City of Peshawar for Design inspiration. I am therefore focusing on Regional Architecture, not just for aesthetic purposes, but also for materials and structures since they have adapted to the city's context over a prolonged period of time. We are now talking architectural features such as jaalis, courtyards, spaces beneath overhangs (cloth/tree) acting as communal spaces, high ceilings, narrow bridges connecting. I believe the design manages to achieve this in terms of the programs provided in the center, as well as the spatial qualities within the building.

The primary aim of the project would be for the local women to rejuvenate and engage. Secondary aims of empowering these women through economic means are hoped to be achieved by providing them with skills and platforms for



display of these skills. It is hoped that because of a domino effect, the tertiary aims of improving the mental and physical health of the women can be achieved.

Such a space would enrich the lives of local community of women, enabling them with a platform for the skills.

















WORKSHOPS

FACULTY DEVELOPMENT WORKSHOP

A Collaboration between PCATP and SADA-NUST

From the 25th to the 28th of April, 2019, the NUST School of Art, Design & Architecture - SADA, in association with the Pakistan Council of Architects and Town Planners -PCATP, hosted the Studio Faculty Development Workshop. This workshop; the first of a series of three, was dedicated to dissecting the issues associated with curriculum development, licensing procedures, the preparation of studio scripts, studio assessment methods and the B.Arch thesis. In addition, there was an investigation into the newer technologies that are now appearing to drive architectural production and the induction of these formats into the architectural education system. The objective of the workshop was to engage both the in house faculty at SADA and that of architectural schools ambitiously opened in far-flung areas to build a discourse around the expertise and knowledge necessary to successfully mediate designcentric, studio-based learning.

The participants in addition to those from SADA NUST, included faculty members from CEAD – Jamshoro, UET – Abbottabad, University of Hazara - Mansehra, BUITEMS-Quetta, University of Guirat and CECOS University -Peshawar. One of the biggest opportunities with this workshop was the fact that it included faculty members from diverse architectural schools around Pakistan. Architectural education is greatly affected by the kind of socio-cultural environment and context it is being offered in, for these factors significantly impact the school of thought nurtured at these institutions. In bringing together faculty members from different Architecture schools that are the product of incredibly diverse conditions and circumstances, workshop helped induce a level of richness in discussion that ensued around the topics addressed. In order to facilitate this process of collaboration between architecture schools and the PCATP, a series of lectures and panel discussions were held over a period of four days.



The panelists included Ar. Kaleem Siddigui – chairman PCATP, Ar./PI, Tahira Fazli - registrar PCATP, Ar./PI, Sikander Ajam Khan – principal SADA, Ar. Azhar Swalihi, Ar. Rashid Toosy, Ar. Qurat-ul-Ain, Ar. Saad Mahmood, Ar. Shama Usman Ar. Saima Gulzar and Ar. Abaid-ur-Rehman The discussions with the panelists deliberated on a way forward informing as to how we can come up with solutions that can become an integral part of the architectural education and that improve cooperation, and bridge the gap between the respective fields of academia and practice.

The four days of the workshop were strategically structured as following:

Day 1: Curriculum building and licensing procedures Day 2: Curriculum building and studio scripts

Day 3: Assessment methods, new technologies and jury selection procedures

Day 4: The B.Arch thesis and its ramifications

The workshop was essentially designed to provide a comprehensive overview of studio based, nonlinear learning in architectural schools. So the first two days focused on curriculum development, licensing procedures and studio scripts. The workshop started off with an introduction to the workshop and its core aims and objectives given by Ar. Sikander Ajam Khan. He spoke about the challenges faced by architecture schools all across Pakistan, especially those in far- flung areas away from urban centers and the need to work on the subsequent resolution collectively with due help from the Council.





The first day of the workshop also deliberated upon the B.Arch and M.Arch curriculums in Pakistan, the respective outlines issued by HEC and their individual expectations and merits. The presentation concluded that both curriculum outlines offer viable standards to build upon, however, it is important to see these outlines as only a framework that is further developed as per the vision of each school and the level of skills and competencies exhibited by the students of a region. The participants were than issued an exercise where they were expected to formulate proposals for potential curriculums taking cues from HEC's curriculum outline. The groups went on to present these proposals with direct feedback from the senior panelists which proved to be a massive learning opportunity.

While discussing the future of the profession of architecture and architectural education in Pakistan. Ar./PI Tahira Fazli - the PCATP registrar presented an overview of the accreditation process and the licensing exam, and its effect on the taught curriculum. Questions were raised as to how the architecture schools would prepare its graduates for the professional licensing exam and if it would push the curriculum of undergraduate schools towards being conceptual or more technical.

The third day focused on assessment techniques, jury selection procedures and new technologies in architectural education. An emphasis was placed on the assessment methodology and the selection of jurors as they defines the quality of education being provided. New technologies and their impact on architectural education and practice also came into question, and how there is a need to explore digital design pedagogy. A hands on session provided an opportunity to explore new digital design tools such as Autodesk Revit.

The focus of the fourth and final day was on the problems faced by final year students and the studio faculty during the B.Arch thesis and a concluding panel discussion. Following the closing ceremony, floor was opened up to the participants and panelists, encouraging them to share their feedback and general comments about the workshop and what ought to be deemed of importance when preparing for the workshops to follow.

During his closing remarks, Ar. Kaleem Siddigui the chairman PCATP talked about the need for a holistic teaching methodology by grounding architectural practice through literature review and a technical understanding of the built form. The response from all the participants and the panelists was generally positive as they looked forward to more workshops organized by PCATP on a regular basis that focused on studio curriculum development. licensing procedures, professional ethics, juror and faculty trainings etc. The workshop ended on a positive note with the general consensus being that it had provided a much needed platform that encouraged interaction between academics and practitioners, with hopes of continued efforts to organize such events and workshops. The panel discussions were lively and the participation level from the attendees and panelists was high.

The input of the PCATP Council and the presence of their high-tier representatives helped make the workshop a success because of instant clarification of deep-seated doubts and questions that we recognize as being common across all studio faculty members, no matter how diverse





their backgrounds. Addressing these issues and constraints collectively with the help of the PCATP instead of design schools working in isolation, can help a great deal to improve the quality of architectural education across Pakistan.



GUEST LECTURES

LECTURE BY YASMEEN LARI



VENUE: SEMINAR HALL - SCHOOL OF ART, DESIGN AND ARCHITECTURE (SADA), MIMAR SINAN BUILDING, NUST, H-12, ISLAMABAD. DATE: TUESDAY, 13TH NOVEMBER 2018

YASMEEN LARE IS THE FIRST WOMAN ARCHITECT OF PROSTAN, AS PRESIDENT OF INSTITUTE OF ARCHITECTS PROSTAN DAYI AND FIRST CHARPERSON OF PROSTAN COUNCIL OF ARCHITECTS AND TORN PLANNERS, LAR INS INSTRUMENTAL IN BRINGING ABOUT RECOGNITION FOR THE PROFESSIONS OF ARCHITECTURE AND TOWN PLANNING THROUGH PCATP DRONANCE 1983 IN 2006. IN RECOONTION OF HER SERVICES TO THE ARCHITECTURAL PROFESSION AND HERITARE CONSERVATION, SHE WAS AWARDED STARA - MITAZ, ONE OF THE HOREST CIVIL AWARDS, BY GOVERNMENT OF PROSTAN SHE ESTABLISHED LARE ASSOCIATES, ARCHITECTS, URBAN DESCREPS IN 1864 AND TOOK ON THE CHALLENGES AS AN ARCHITECT DEALING WITH ISSUES IN AN INDUSTRIALLY LESS DEVELOPED COUNTRY - FROM MUD BUILDINGS LOW INCOME HOUSING AND IMPROVEMENTS IN SPONTANEOUS SETTLEMENTS TO STATE. OF THE ART BUILDINGS SHE RETIRED FROM ARCHITECTURAL PRACTICE IN 2000 TO DEVOTE FULL TIME TO WRITING AND HERITAGE-RELATED WORK. SINCE OCTOBER 2005 SHE HAS LEAD THE RELEF AND REHABLISHION WORK AMONG COMMUNTES. INSTITULARLY WOMEN AND CHLIDREN AFFECTED BY THE GREAT EARTHOLAKE 2005 IN DISTRICT MANSERIA. PROFESSION SHE IS THE AUTHOR AND CO-AUTHOR OF SEVERAL BOOKS INCLUDING A PUBLICATION ON THE HISTORIC CONFIRMING HOUSE LAHORE.



FOR QUERES/REDISTRATION: 051-90855407 051-90855401 SADA.



ANDRE C. WEYERRAND





ANDRE C MEYERHANS HAS BEEN NOMINATED AS THE TWENTY FOURTH MOST INFLUENTIAL APOLITECT OF THE REGION IN 2015 BY THE MODULE EAST APOLITECTS MAGAZINE. ANDRE IS A MEMORY OF THE SWISS SOCIETY OF ENCINEERS AND ARDITECTS ISJAI AND HOLDS A MASTERS IN ARCHITECTURE FROM THE SWISS FEDERAL INSTITUTE OF TECHNILOGY (ETHZ) AS WELL AS AN MEA FROM LONDON BUSINESS SCHOOL, HIS ARCHTECTURAL WORK STRETCHES FROM URBAN PLANNING. TO RESIDENTIAL, HOSPITALITY, COMMERCIAL, EDUCATIONAL AND CULTURAL PROJECTS HIS WOST PROMINENT EXECUTED PROJECTS INCLUDE AL MADI TOWER IN ABUIDHABI AND NEW GARROUD BRODE IN DUBAL



A LECTURE BY ANDRE C. MEYERHANS

VENUE: SEMINAR HALL - SCHOOL OF ART, DESIGN AND ARCHITECTURE (SADA) MIMAR SINAN BUILDING, NUST, H-12. ISLAMABAD DATE: TUESDAY, 23th OCTOBER 2018 AT 11:00 AM

> FOR QUERES/RESTRATION 051-90855407 NABA 051-90855401



COMPETITIONS

WOMEN SEERAT CENTER DESIGN COMPETITION

Instructor — Ar Seema Andleeb Nasir Students — Iqra Imtiaz, Khadijah Zohair, Muhd. Naqi Ijaz

Design brief

Veil is considered a significant element in Islamic Architecture which emphasises on the interior spaces, suggesting that beauty lies within these spaces; the courtyard and the rooms, which are concealed from outside.

Our design for Women Seerat Center takes inspiration from the very concept of traditional veil of women. The idea is implanted in spatial planning, focusing on introverted spaces.

The latticework of the veil is also taken in to account to explore the geometry and form of the centre. To narrow down a specific pattern, the 'Girah', knot was taken as base point. The knot not only allows spaces to flow into each other with overlapping elements, but also encourages communal spaces to develop and promote interaction. This expands the sense of community within the centre. Overlapping Hexagons in the Knot allows for more efficient

and modular planning of the spaces and the units. The sitting arrangement of the classrooms also encourages the researchers to share and interact with each other. The housing units are arranged with shared and personal courtyards with a dense vertical circulation where residents are encouraged to be more aware of each others's presence and connect. A transitional staircase connects the two blocks with small communal spaces in between for outsiders and the residents, while also displaying the sculptures and artwork that promotes women empowerment.







NDUST -RA DESIGN GRADUATION PROJECTS



THANK YOU

We are grateful to the following designers, whose critique, input and feedback has been instrumental in the completion of the projects.

Jawwad Zaidi Shahzaib Rao

Jurors: Abbas Saleem Adil Aftab Ali Murtaza Aqeel Israr

Saba Talat

Kashif Imran Kashif Malik Khuraim J Iqbal Mazhar Abbas Shahzad Khan Umer Qureshi



Hiffza Yaqoob hiffza.yaqoob-id15@sada.nust.edu.pk

MEHWAR Tile-Grouting made Easy

Efficiency in Construction

Mehwar is an electrically powered ergonomic tool that minimizes time and material usage in tile grouting and completes the process accurately.

The product is created for masons and workers in the construction industry, who experience extreme ergonomic issues, time constraints alongside material wastage in tile grouting.

Construction is one of the many industries important to developing country like Pakistan. According to studies, a major percentage of the labour in Pakistan is unskilled, due to which the industry faces many challenges.

Nowadays the use of tiles has increased because tiles are most preferred for creating the desired atmosphere. Tile flooring will always be a smart choice because of its timeless appeal and durable nature.

Tiles installation and grouting is difficult process and requires a lot of time, attention and precision but adds value and aesthetics. Floor tile laying process is a finishing job usually done manually in Pakistan which takes a lot of time because of tools available. Spaces are filled with specific cementitious material called GROUT. Tiling grout is often used to fill the spaces between tiles or mosaics, and to secure tile to its base and seal it. The solution to the problem being addressed is to come up with compact, portable, a simple and easy to use product or tool to promote time and material efficiency in



tile grouting. Grouting process starts after 24 hours of tile application. Mehwar combines the grouting process into one step which includes grout application in gaps, collection and cleaning of excess material. The tool consists of a handle which is detachable from the main body for use on both floor and wall tiles. Other features include consistent material application, adjustable speed and a tube that can be refilled with grout.





Design Ideation Process





TIME EFFICIENCY ACCURACY MATERIAL ERGONOMICS





Alieha Batool aliehabatool1995@gmail.com

LE VAI CHAUNSA A Packaging design for mangoes

Packaging Design

"Mango is a major fruit crop of Pakistan, which represents Pakistan in the world and holds a great cultural value within the country."

Mango is the second largest fruit crop and Pakistan is ranked as fourth largest producer of mangoes in the world. As Pakistan has an agriculture based economy, hence is directly affected by the sale of major crops. The sale is affected by quality of fruit which impacts the economy directly. The export of mangoes and sale of mangoes in local market generates high revenue. This revenue is not only plays part in state's economy but is also source of income for multiple people with different professions which involved in the production of mangoes from its transport, treatments, packaging and till sales in the market.

By improving different touch points the quality of mangoes can be improved significantly in international market. Hence it will help to increase export itself and increase revenue. The post-harvest cycle of mango there is no provision of appropriate packaging to protect the fruit from damage in different conditions. The main concept is to provide mangoes a durable packaging which is designed to maintain the organoleptic qualities of mango and protect them from multiple external conditions.

The proposed solution will reduce the damage caused to mangoes due to mishandling, lack of packaging or unavailability of designed packaging during post-harvest cycle from farms to the shelves. The proposed solution intends to increase the shelf life of mangoes and will keep the mangoes fresh. The introduction of the project "Le Vai Chaunsa" can bring great improvement in export of mangoes.



Exlpoded view









Lvba Naveed lybanaveed1@gmail.com

MERIDIAN **Interactive Device for Designers**

Ease in Designing through Softwares

When it comes to human computer interaction we are forced to forget all the interactions that our body has with objects on a daily basis, and instead learn everything anew. There has been a technological advancement in computing systems, but not very much so when it comes to computer input and output devices.

The problem arises when designers use these devices for 3d modelling and rendering softwares. Most of these existing devices are restricted to a planar surface which causes hindrance in the workflow and also leads to workspace disorders. The already existing generation in the offices is the millennial generation and they want collaborative workspaces; tech companies new and old are obliging them with colorful and imaginative workspaces, and these existing devices will not be up to date with these workspaces when they come into the market.

The primary stakeholders of the product are the direct users of the product i.e the 3d modellers, draftsmen and graphic designers. The design challenge is to provide young designers with an interactive platform that involves the use of hand gestures and tangible mediums to manipulate digital information while enhancing human computer interaction. The first goal is to provide the user with a guicker access of commands that aim to be standardized with all the Computer Softwares that will insure in reducing the delay time between



choosing tools.

The second goal is to not restrict the device to an x-y surface, provide six degrees of freedom along with multi-touch gestures and rotations. The third goal of the project is to provide the user with a customizable interface. The solution; A computer Input/output device that focuses on being an interactive product which provides a quicker access of 3d and graphic softwares commands.



GYROSCOPE:

Hold the device in your

hand and tilt it for the

rotation of 3d model.

DIAL ROTATION:

Rotate the dial for

manipulation of

commands.

SHIFT BETWEEN SOFTWARES: Slide from right to left to shift between softwares.



POWER BUTTON: Double-tap the screen for power button

Product Details

CUSTOMIZABLE SCREEN: Provides the user with the option to set tools on the interface according to their own oreference



WIRELESS CONNECTIVITY: Wireless Charging and Bluetooth Connectivity









Aqsa Ajmal aqsaajmal19@gmail.com

PURSEWIT A machine for Visually Impaired

Income-Generating Product.

A product that incorporates the sewing skill for income generation. The Pursewit has a sleek new design that just invites you to sew!

By simplifying sewing machine use for the Visually Impaired, making operation more intuitive and tactile, enhancing the cumbersome process of sewing. People suffering from visual impairment do not have an identified source of income. They live from hand to mouth and have no opportunity to fully realize their full potential. A product that incorporates sewing skill for income generation. How tactility and other senses can enhance the cumbersome process of sewing. It connects the communication gap between the visually impaired people and others, facilitating the visually impaired to learn an income generating skill and become productive members of society. It differentiates between the life of a person who earns for the family and the one who's dependent, a real scenario of unemployment and dependence measured with employment. How tactility and other senses can enhance the cumbersome process of sewing. Allowing the visually impaired an opportunity for an experience they might have never thought to have. Thread path is much simplified and streamlined; the user follows a straight, outlined path from the spool pin to the machine's arm and through a loop, then down to the needle.

Pursewit tends to assist in three main fundamental areas, Understanding the parts of the sewing machine, setting up a machine and then working with a machine. This product would thus be able to be developed with further approval from a bigger category to completely assess the product's adequacy.











Cybil Mary Braganza braganzacybil@gmail.com

SECURE A women's safety device

Saftey Product

Pakistan is ranked as the 6th most dangerous country in the world for women. Even with the steady growth of female independence in Pakistan there is still a sense of fear that has instilled itself into every woman in Pakistan, especially when travelling alone.

Therefore, secure was designed. Secure is a women's safety device aimed at creating a safe method of transit, safe communication and female safety education in Pakistan. The two part product comprises of a security device paired with a product that contains an in built self defense mechanism which aids women in dangerous situations. The product has been designed to supernormal itself into your daily wear. An app is linked to the products, through which messages, pins and help me alerts are sent out.

The product is a social innovation which will focus on educating women about their rights, teaching those flight or fright measures and protecting their independence. This product will define itself as not only a method of self-defense but also a tool in which information can be shared to various people to aid women in their safety and make Pakistan a safer place for everyone. For this I researched on wearable technology for women in particular and DIY solutions for selfdefense in order to find a cheap solution to the problem at hand. Ranging from various design iterations the final one was the most simplest of forms and technologies.

This is a two piece product, one is the module that incases the working mechanism and one is the bracelet holder. The module fits into the bracelet with a magnetic O-ring mechanism. This module consists of a GSM tracker, with a GPRS system, a button, a battery and an LED. Tapping once on the inset button, the user shares their pin location with their loved ones. Tapping the button once more sends out a distress signal to the authorities.











Faiqa Naeem Faiqa.naeem-id14@sada.nust.edu.pk

LOOP CAST Fractured Bone Exoskeleton Cast

Health Product

Bone fracture is one of the most common injury people face during daily life incident. According to American bone health, there is one bone fracture in every 3 second in the world. Annually 8.9 plus million fracture happened in world. 80% of people around the world complained a negative impact on their quality of life after fracture and treatment.

The orthopedics professional and physicians agreed in safer, more efficient and better recovery method to replace the existing orthopedic cast. They also believe that orthopedic process has much more room for design based improvement especially in local context of underdeveloped country. Loop cast has several benefits. First, it is a complete exoskeleton cast that changes with change in phase of recovery. Second, it enhances the application and removal procedure .Finally it decrease the need of therapy for restoring the body part. Using the traditional orthopedic cast patient feel compartmentalization of effected part itching bacterial

compartmentalization of effected part itching, bacterial infection, using a cast removal saw it creates burns and skin infections. After removal it creates numbness, local pain, difference in size, length and semi mobility of joints. People are reluctant to go to therapist for restoration of the size and length of body part that decrease in bone strength that eventually one of the reason of osteoporosis. Loop cast is simple solution that uses a locally readily available material that is suitable for local climate and working condition .It is waterproof and radiolucent. It is divided into three layers that highlight and help to recover at each phase of recovery, from healing of skin to ligament and muscles restoration. It helps to restore muscles ligament and soft tissues. It also provide easy application process and very easy removing.







A three layered cast, that can removed with each phase of recovery to speed up

Leveled surfaces cast inspired by shark skin provide unfavourable conditions for bacterial

Easy application and peeled off mechanism that remove power equipment


Batool Fatima starfirestorm1996@gmail.com

HIKARI Sustainable Lighting Device

Sustainable product design

"Energy is central to nearly every major challenge and opportunity the world faces today. Be it for jobs, security, climate change, food production or increasing incomes, access to energy for all is essential."

According to the Sustainable Development Goal number 7 of the UN, solving the energy crisis is the key to resolving a lot of problems faced by the world. Pakistan in particular, is faced with a severe energy crisis, where people are suffering from unscheduled power outages, despite the source of electricity being a renewable resource: Hydroelectricity. Therefore, the aim of the project is to design a sustainable lighting, product or system, which can be implemented in the homes as an alternative solution to the current electrical and power grid system, as well as garner awareness among the people about the value of conserving renewable resources. Sustainable energy is an opportunity with the capability to transform lives, economies and thus, the entire planet.

Pakistan is faced with a severe energy crisis, where people are suffering from unscheduled power outages, despite the source of electricity being a renewable resource. This results in disruption of the common man's daily life. Therefore, the aim of the project is to design a sustainable lighting, product or system, which can be implemented in the homes as an alternative solution to the current electrical and power grid system, as well as garner awareness among the people about the value of conserving renewable resources. Pakistan is faced with a severe energy crisis. where people are suffering from unscheduled power outages, despite the source of electricity being a renewable resource. Which results in disruption of the common man's daily life? Sustainable energy is an opportunity with the capability to transform lives, economies and thus, the entire planet.







Product Ideation





Miqdad Mustafa Hashmi miqdadmustafa@gmail.com

UNITY Theory of Optimization

Simplicity in Electronic Devices

Throughout history man has striven to understand his own nature and that of his surroundings, how everything works and how well it is connected with each other. He developed the sciences, breaking valuable ground in fields of medicine, yet for all his accomplishments he still has never been able to quantify his own emotions.

Language and culture, scripture and divine verses he dissects, dismantles, yet man's greatest failure lies in his own nature. He explains his inner thoughts with something as crude as language. Where language fails, neologism, reigns. Neologism is in its essence a paradoxical entity: emotions that do not have descriptive terms. How one can't explain what he wants to. These are scripts that are engrave in our minds and hence we associate things which we like and are easy to use.

The contemporary form of this check and balance is blockchain. A system of encrypted verification without the need of human bias. Systems of course are designed by humans but this is the age of artificial intelligence.

The proposed idea focuses on the optimization in electronics via gaining the emotions of the people, how to act and react, the way it interacts with humans in a way which allows them to develop attachments. The aim is, hence, to provide the users a more comfortable service system based on their actions. Hence my research question is; Is the value of the



product diminishing?

Are we not spending too much on electronics? in return we don't get the price one is paying. Is connectivity a good thing? Buying one gadget and getting the use ability of three devices? Making a product (Electronics) to its fully optimize state, where user gets the value of the product which they are paying for, a service system which make product more efficient and sustainable.











Hira Ejaz hiraejaz709@gmail.com

SPHYG-MO Sphygmomanometer

Blood-Pressure measuring Device

According to the study conducted in 2018, 50% of the Pakistani population suffers from hypertension and 50% of those people are not even diagnosed. The prevalence of hypertension has increased from 18% in 2010 to 50% in 2018. It is a serious problem which can lead to kidney disease, coronary heart disease, stroke, complication of diabetes or even a heart attack. As a result, it requires frequent checks and monitoring on the person's blood pressure.

Digital and manual sphygmomanometers are not accurate and require clinical skill respectively. Most people either do not know how to operate it or use it incorrectly. These days' people are encouraged more and more to lead a healthier lifestyle. For this we need to keep check on our health constantly.

More experts are now recommending that people with high blood pressure should regularly check their blood pressure at home. Developing this habit can give them an idea of where their blood pressure readings stand throughout their busy day and can subsequently encourage and motivate them to care more about their health.

People need accurate and reliable sphygmomanometers, which they can use to monitor their blood pressure levels at the comfort of their own home without any medical or human assistance. This can also help the doctors to keep track of the



patients health and change the patients medicines accordingly to keep blood pressure levels normal. Digital blood pressure monitors are not accurate as they are supposed to be.

People are encouraged to lead a healthier lifestyle. My project focuses on designing a device which combines the experience of both digital and manual sphygmomanometers, on a personal level, for more accurate and reliable results.



Product Details

The cuff is fitted with a stethoscope (attached with a microphone to detect sounds with lower frequencies) which helps detect pulse sounds and deflate the cuff accordingly.



Charging port allows the user to recharge the device's batteries.





The LED strip will represent the battery levels and prompt the user to re-charge the battery.











Hina Khush Hina.khush-id15@sada.nust.edu.pk

AEGIS Security Guard Kiosk

Cabins designed for security and comfort

Aegis is aesthetically designed sentry hutch for security guards, equipped with all basic amenities with reasonable cost and at affordable price at Islamabad, Pakistan. Which is designed to be parallel with the given environment and provides the safe working environment in extreme weather conditions. A guard corps or a security cabin is a place or area which provides space to security personals and safety equipment.

According to a research conducted in recent time, security guards in Pakistan suffer from various physical problems to many mental problems due to lack of sufficient resources and the environment of cabin or hutch they work in and results in different issues like absenteeism, work stress and job dissatisfaction. The two types of works that includes physical or mental work is done by security guards, due to which they face physical and mental stress due to the nature or type of work they do and the non-friendly environment where they are supposed to work for hours without a break. The idea of considering the State of physical and mental health, which plays a role in the ability to work. In this context, the study of the ability to work on the security guards may contribute to improve their working conditions, as well as their health, which ultimately impact on their quality of life. The objective is to meet the needs of target market using sustainable material.



The worker's health affect the productive capabilities of a worker. The physical and mental health status is vital. This cabin is design with insulating material and a detachable bullet proof shield which is attached in the door that can be easily access in emergency. Cabin provides maximum window view from the inside. Additional features of the cabin provides storage space for personal and security equipment's.











Mahnoor Burhan mahnoor.burhan-id15@sada.nust.edu.pk

FADE Resting Pod for the Workplace

Anti-stress/Comfort Product

10% of the world's population currently suffers from clinical depression. And around 30% of the people around the globe have suffer from anxiety and depression. However, another 55% suffer from stress. It is estimated that by the time we young adults reach the age of 60 years, more than half of the world's population would be suffering from clinical depression and everyone else would be suffering from stress.

One cannot really take into account the vast majority of the reasons to why stress exits or originates in the first place and thus the purpose of this project is to take into account only workplace stress and help resolve it as much as possible. The aim of the project is to give the provision of comfort to the user, where the from takes inspiration from natures optimum zero gravity design experience, the egg.

Meditation is a simple technique, which if practiced regularly for a few minutes daily, can help you calm down and significantly reduce stress levels. It can help you relax. Not only this but a few minutes uninterrupted sleep can help rejuvenate the body and mind, significantly reducing stress levels. Isolation and meditation help calm down the body and mind. Incorporating hem into a product that allows an instant escape from the office environment as well as a few other therapies that will not only help relieve stress but eventually eradicate stress.



Isolation and meditation help calm down the body and mind. Incorporating them into this product allows an instant escape from the office environment. The curvilinear geometry lend itself to comfort, and the reclined space occupied also enhances the perception of being "relaxed". It can be considered natures comfort disposition, allowing the user to feel at ease automatically because of the familiar prenatal position.











Mehreen Hassan mehreen.hasan96@gmail.com

LINK-SEATING SYSTEMS Modular Seating for Airports

Furniture Design for Airports

Understanding the passenger's needs a modular seating system designed that ensures passenger comfort, privacy alongside transforming the terminal environment into an interactive space inclusive for solo travelers, families and groups for an enhanced terminal experience at the initial step of the passenger's journey.

Airlines accommodates every ethnic background who have different standards as to their living hence they require vast variety of facilities when they travel.

Usually people need a comfortable seat so as to feel relaxed, some are hesitant in sitting among strangers or sitting next to a stranger. Therefore wastage of seating space is frequently observed at the airport lounges. Some

people require a place to nap, some are often looking for a charging spot for their cellular devices or laptops. As the number of passengers carrying multiple electronic devices grows, airports are offering more solutions to keep them charged but still are unable to match the passenger requirements. When it comes to electronic devices in airports, 82 percent of travelers use smartphones before boarding a flight, while 38 percent use laptops and 26 percent use tablets, according to a survey done by Swiss travel consultancy M1nd Set.The seating systems in Pakistan's airports need to take account of the diverse needs of the passenger and provide comfort while they wait for their flights.



Considering the design objectives the criteria was to design something modular so that it can be reconfigured for multiple sitting arrangements which accommodate both who prefer sitting in isolation, or like to socialize. Comfort, privacy and luggage security are also factors that dictate the design. How can we fulfill the myriad needs of passengers and transform airport terminal lounge into an interactive space to create a meaningful experience?









Zerafshan Tariq Zerafshantarig96@gmail.com

Aqu-As Water filtration system

Health Care Product

The availability of clean drinking water in the time and an era that we are living in has become something rare. because of unprecedented urbanization, population and industrial growth, Pakistan is facing a drastic decline in per capita water availability.

In Pakistan, bacterial contamination, turbidity and the presence of various metallic and non-metallic contaminants and sewage, industrial waste and agricultural runoff have limited natural freshwater resources.

In 2014, WHO declared that 200 million people around the world were consuming water with an arsenic content well above the permissible limit i.e. 10 micrograms per liter with most of this population concentrated in Bangladesh, India, Vietnam, and Nepal. Water samples from 1200 wells throughout Pakistan at depths of 3 to 70 meters were collected by Podgorski's team. Nearly two-third of the samples contained extremely high content of Arsenic, exceeding the WHO limit threshold. Above 200 micrograms per liter were found in the water beds along the Indus River valley.

In this design there are 3 functional chambers; the coagulation chamber, reverse osmosis chamber and filtered water storage chamber. Aqu-As is a water filtration system that reduces arsenic content in water thus making water safe for drinking and cooking purposes. It follows two mechanisms for filtration: Coagulation and Reverse Osmosis.



The basic ideation of Agu-As started with identifying the features that were to be included in the form. One of the first step was to incorporate the coagulation process. In the next step a minimum of 2 filters were required that would carry out the process of reverse osmosis. The next step was to incorporate a large storage chamber for storing at least 20 LT of water.













Muhammad Huzaifa muhammadhuzaifanoor@gmail.com

GYRE **Innovative Weaving System**

Home Appliances

Clothing is essential for humans and a part of our daily life. The main purpose of clothing is to provide protection but with affording, clothing became the symbol of modesty and attraction giving rise to a fashion industry for which nothing is ever enough.

Today's clothing industry is worth over 1.3 Trillion USD, using over 300 Million workers and is the second-largest polluter in the world after oil and gas. The textile industry works in a linear fashion.

It's TAKE, MAKE, USE AND DISPOSE which is unnatural, wasteful and polluting. It has given rise to a throwaway society, influenced by consumerism that has dropped the utilization of clothing drastically.We throw away about 80% of our end of use clothing into landfills which can be used as raw materials for the textile industry. This is where the circular Approach comes in. In a circular approach, it's about maximizing the utility of a resource while producing minimum waste. In contrast with the linear approach, it is regenerative and distributive. Circular Approach involves using the final product as raw material Reducing stress on virgin raw materials and economics of this industry. GYRE uses solvent based technology for recycling in which successive solvents dissolves fiber in the form of pulp. This pulp is then extruded into the fiber which can be used for weaving.



GYRE is a tangible representation of a circular economy that uses innovative mechanisms and technologies to support a circular economy that can be implemented in textile units. The project uses new solvent based technology along with innovative weaving system which is well aligned with innovative materials.



SOLVENT BASED TECHNOLOGY

- 1. Screen
- 2. Lid
- 3. Open Button
- 4. Solvent Container
- 5. Rollar
- 6. Weaving Mechanism
- 7. Circuits
- 8. Stand
- 9. Recycling module
- 10. Reels
- 11. Extruder
- 12. Main Container
- 13. Secondary Rollar
- 14. Primary Rollar
- 15. Weaving Module
- 16. Stand







Rabeea Mughees Naqvi rabeea biya@yahoo.com

Aqua Vive Portable Reservoir

Health Care Product

Coming across the water scarcity leading to shortage of water and driven by over population by all the passing vears we enter the realm of acknowledging the fact that water problem has been stigmatized and dealt with less importance than it should have been understood as.

Dwelling deeper into the problem and searching the existing case studies we can see that only the surface level of water saving is reached through them.We are running out of time to aware the society so the initial steps have to be on the individual basis.

This project provides an introduction to waste-waterreusability. The water in the kitchen sink usage is taken and purified to the extent that it can be used again for the household purposes.Water storage is portable and ergonomically easy to handle for all age groups so that no hindrance is present.

This portable reservoir also has a water-volume-sensor that enables you to detect how much volume is available for usable or if the container is running low or high on the liquid. Purpose of the project is to cater to the problem we are facing with the water wastage leading to water scarcity. Putting forward a sustainable waste water treatment and re-use as a solution for coming future.



The proposal hylights the public concerns for the ongoing daily domestic use of the energy resource with the help of advance technology and historical concepts. Agua Vive will be placed prospectively under the sink and there the whole process would take place generating water for use and transfer it through the pump to the areas of the house where needed.

PROJECT GOALS

Upgrading the Nature of Human life Upgrade User Experience/Comfort Improve Maintainability Improve Ergonomics Minimize Water Wastage 1. Holder Stand 7. Outlet 2. Upper Storage 8. Wheels 3. LCD 9. Handle 4. Water Pump- Module 10. Galvanized Mesh 5. Wheel Locking Mecha- 11. Storage Body 12. Storage Support nism 6. Base 6

Product Details

Reservoir on wheels Modular units Easy Replacement Water Storage Space Filteration Water Volume Display











Sabah Zaman sabahzaman54@gmail.com

VERSAT Health and Safety Gear Saftey Product

The health and safety issues of coal miners are increasing day by day in Pakistan. The main cause of the issue is lack of awareness for the mining industry. Poorly designed locally available safety gears are not comfortable to wear and do not help much in protecting them.

Versat is an economically viable and versatile vest that caters to the health and safety of the Coal Miners of Pakistan by rising awareness taking into accounts the traditional practices. We cannot stop a natural disaster from happening but we can find the cause of it to save lives. A common cause of incidents happening in coal mines of Pakistan is the release of Carbon Monoxide and Methane gas and the health issues are caused majorly due to high intensity of coal dust in depths. Versat helps to alert miners about the presence of gases and intensity of coal dust around through smart sensors. Taking into account the climate of Pakistan, as the major coal ranges are located in Sindh and deserted area of Baluchistan and the temperature in depths is usually high.

The idea is to provide safety by considering the cultural and atmospheric aspects and without invading the comfort zone of workers and giving them a room to take a decision for themselves. The main objectives involve awareness for coal miner about the coal dust intensity along with the dangerous gases around and to prevent them from coal dust.



Taking into account the basic problems faced by the coal miners such as high temperature under depths, health problems due to coal dust and incidents happening due to gas release and no alarming system.

Versat contains a vest made up of hyperkewl polymer the keeps the temperature of body lower for more than 6 hours.









Product Ideation



Muhammad Asif muhammad.asif-id15@sada.nust.edu.pk

DIGIBIT PRO Smart Glove

Health Care Product

Hand arthritis causes pain and usually inflammation.One might also lose the functions of hand muscles if moved excessively. This can not only be a barrier to independence but can hinder the performance of the simplest of tasks.

About 1.97 million people altogether in a third world country have little or no means of assistive medical or therapeutic devices.The risks are increasing day by day because of the lack of proper disease management and treatment. The proposal will aim at providing therapy and digital connectivity which aims at pain relieving and replacing the need for handheld devices altogether.

The goal of the project is to create a therapeutic gear which will not only make the lives easier of the patients who have arthritis but will also digitize their personal data including ID's, passports, social media platforms, entertainment and interactions in a single interface.

Digibit Pro will focus on the efficiency, durability, significance, and comfort level of this smart gear for people with arthritis, with a certain proposition of advancement in the future for enhanced user experience.

Hand arthritis causes pain and usually inflammation. These signs can have more intense results with time.



This assistive device is a smart glove which comprises all the attributes a modern day cell phone has with a customized interface, which provides wrist support and compression to help ease the pain of patients with rheumatoid arthritis or to any person at risk of developing a chronic hand condition.













Rida Hassnain hassnainrida@gmail.com

Tranquil-Breathe Easy Air Purification System

Around 2 million premature deaths occur every year because of air pollution.8 out of 10 people are breathing polluted air. According to a research conducted, people travelling by public transport, are more affected by air pollution as compared to those travelling by their own transport.

Tranquil is an air quality monitoring and purification system for public transport that works to keep the passengers aware of the quality of air around them and also to make sure that the air that they breathe is safe and pollutant free.

The people who suffer from Asthma or other medical conditions take precautionary measures and take care of themselves but a common man is unaware of the air that he breathes and how harmful it can be.

The aim is to create an air quality monitoring and purification system for public transport that works to keep the passengers aware of the quality of air around them and take measures for healthy lifestyle.

This project is an indicator that warns if the air quality in the vehicle is not suitable for passengers.

It indicates the functionality of the air purifier in accordance to the data collected by the air quality monitor.

There are three levels in the purifier that solely depends on the speed of the fan. You can increase the speed of the fan, because of which it will suck in more air hence purifying air in a larger quantity.



The mechanism is inspired by Manta ray fish, that cleans the surrounding water it inhales afterwards. The fins and gills are made in such a way that helps in cleaning water efficiently. The air purifier also works in a similar fashion, cleaning the air around it and lowering the amount of impurities present in the atmosphere. This air purifiers works on one button technology.













Saniya Tariq Saniya.tarriq-id14@sada.nust.edu.pk

WAYFAR Mobile Travelling Pod

WAYFAR is a lightweight, compact and mobile travelling pod for tourists travelling in craggy and inflexible areas. The pod is packed up in a backpack. It composes of a siliconecoated nylon fabric tent and an aluminum frame working on telescopic joints and scissor mechanism. Telescopic joints allow changing length of the structure, whereas the scissor mechanism allows compression and expansion of the structure.

The frame makes it easy for a single or two people to set the pod. This reduces the time taken for constructing a travelling tent otherwise as one can set it up without help anywhere and anytime.

Setting up the pod involves 3 steps:

Step 1: unzip the backpack and unfold the tent

Step 2: pull out the aluminum frame and expand the structure. Clipping it to the joints at the base of the tent, pull the -frame up to attain the maximum length

Step 3: clip the hooks along the length of the frame to the loops on the tent fabric while pulling it up along the length of the frame The pod accommodates additional features like the provision of a small pouch inside for storing valuables or using it to hold a small light source, transparent roofing allows to view the skyline, padded base for rocky ground, double layered stitching at the seams to avoid rain from penetrating, a curved roof to avoid rain from cluttering on top of the pod, and mosquito net.



The design is modular. Various pod modules can be combined (zipped) together into forming larger family units. Materials used in the pod are light weight and easily replaceable against wear and tear. As tourism is a growing industry in Pakistan, executing the WAYFAR project can contribute to the national andthe domestic economy. **Combining Modules** Removable flaps allows modular settina. Pouch Provided space for accessories. Layered Stitching polvester laver is stitched at the seams for water proofing. Product Details

Transparent Roofing

Waterproof transparent PVC coated polyester allows the tourists to view outside.





Inner mosquito Net Mosquito net is lined on the inside of the tent which can be rolled up.











Sikandar Ali S.skndar.ali@gmailcom

Cure-y **Electronic Tableware System**

Food is an essential part of our lives, it liberates life and incarnates as well. Consuming food in a healthy manner and adopting clean eating habits ensures a sound mind and body.

Awareness and education is key to being healthy and promotes healthy eating habits and because we are unaware of our eating habits, lack of education in health care, lifestyle diseases (obesity, poor indigestion,

acidity etc.) are rising as a common man's disease. Prevention is better than cure.

Where Slower consumption is approved for better and healthier life, it still requires training to develop muscle memory.

Quantity of meals and rate of consumption are essential steps to buy beneficial eating habits and healthcare goodness.

Cure-y is an electronic tableware system (plates, glasses and cutlery) with a monitoring system.

Its purpose is to identify bad eating habits and train for clean , healthy eating habits.

By monitoring habits, it allows for a user to rectify and consciously decide per day basis. Where calorie count is a second part of nutrition, strengthening first and foremost identity is core to a function of slower consumption.



CURE-Y is a slower consumption training tableware system focusing on health care value (social innovation) and nutritional awareness. The proposal helps us to monitor portions of food we eat by involving 7 principles of healthy eating.









NATIONAL UNIVERSITY OF SCIENCES AND TECHNOLOGY

Website: www.nust.edu.pk Email: info@sada.nust.edu.pk Tel no: (+92) 051-90855401

Contact Address: H-12, Islamabad, Pakistan