

ISSUE: 001. 2021

# KU ARCHIVE

KATHMANDU UNIVERSITY ARCHITECTURE STUDENTS CLUB



# Editorial

As they say, "Late is worth more than never", with all the preparations that took 2 long years, we are finally here. I feel this immense wave of joy as I present you the first-ever annual magazine 'KU ARChive'. We managed to reform a team and worked hard enough to assure you, you are in for a ride. We, as the pioneers have created a milestone that the fore-coming batches could look up to.

We have all been going through these testing times with tremendous uncertainty but this is not the end; rather, a new beginning. It has opened doors to fresher opportunities just like how we have come up with our first magazine. Maybe a little slower, a little steadier, but the most crucial thing is that we're moving and like always, life goes on.

I hope this magazine helps to leap higher, inspires a lot of creative minds who have been in the field of architecture and designing. The annual is designed to engender a passion among aspiring architects assisting them to unravel and embrace their creative minds.

I am highly indebted to the KUARC committee, fellow editorial members, and everyone associated, who have graced our magazines with their exemplary contribution. It was a pleasure to work with such a hardworking and dedicated team without whom this magazine would not be possible.

I am optimistic that KU ARChive will pave the way to set up a creative environment in the department. I expect to see KU ARChive as the mirror of all the innovations at the Department of Civil Engineering, Kathmandu University.

Kijalk Neupane  
Editor- In- Chief  
The Editorial Board 2021  
KU Archive'21

## Meet the team, Archive 2021



**Nandita Shrestha**  
**Editor**

4th year, works on editing text, writing briefs, reviewing and revising content for the magazine.



**Kanchan Bastola**  
**Designer**

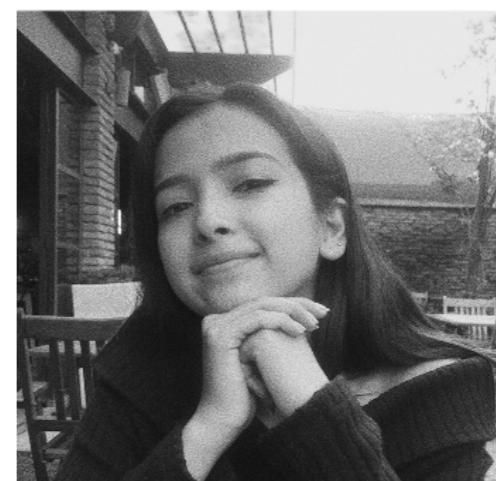
4th year, In charge of the layout of a part of the projects included in the magazine.



**Pratima Basyal**  
**Designer**

3rd year, In charge of the layout and design of projects included in the magazine.

Meet the people who have worked day and night to make this magazine come to life. This project has been months in the making and every member has done the best of their part to make it possible. With the help of everyone here, we have been able to showcase the creativity, diligence of the students of architecture in KU. This has been an incredible opportunity and learning experience for everyone in the archive team.



**Kinjalk Neupane**  
**Chief Editor**

4th year, Responsible for overseeing everything that goes on in the archive committee. In charge of editing text, writing briefs, reviewing and weighing up the work of the designers and editors. Her work also includes planning important dates, setting up meetings and interviews and dividing the workload into parts for each individual member. She calls all the shots.



**Aagya KC**  
**Documentation Head/Designer**

3rd year, Takes care of the collection and documentation, layout and design of the projects displayed in the magazine.



**Nisha Rana**  
**Designer**

4th year, Oversees the entire look and aesthetics of the magazine.



**Aashraya Rajkarnikar**  
**Editor**

3rd year, In charge of editing pictures and text for the contents of the magazine.



**Priyanka Shakya**  
**Representative**

2nd year, Responsible for the layout of projects and interviewing architects.



**Anubhav Thapa**  
**Representative**

1st year, Responsible for collecting and editing articles for the magazine.

# Message from

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**Prof. Dr. Bhola Thapa**

Vice Chancellor  
Kathmandu University



**Dr. Shyam Sundar Khadka**

Assistant Professor and Acting HOD  
Department of Civil Engineering  
Kathmandu University

I am extremely delighted to note that the students of the Architecture program have successfully published the first issue of their annual magazine, KU ARChive, via Kathmandu University Architecture Club (KUARC), Department of Civil Engineering and Architecture Program. It is indeed a great pleasure for me to extend my sincere greetings and congratulations to the students of the Architecture program for their collective efforts and admirable team spirit. Always, evolution has been driven by the needs of our students and community. In a very short time of establishment, the Architecture program has shown tremendous growth and development. Kathmandu University is immensely proud and fortunate to have a team of outstanding faculty members, brilliant students, and dedicated staff, and I believe that the faculty have helped students find their passions, opened doors to opportunities and served as a mentor, as well as students who have pushed each other to be better, to endeavor higher. The magazine compiles individual projects, group works, major accomplishments of our faculty and students as well as various articles related to architecture. This publication of KU ARChive reflects the hard work and commitment of the department and students towards achieving quality education. I am confident that in the coming days, KUARC will be equally successful in connecting academic worlds with different people and communities. With admiration, I would like to congratulate the archive team as well as the executive board of KUARC, and everyone involved, in publishing the first issue of this annual magazine. Thank you!

It gives me immense pleasure to know that the students of the Architecture program at KU have successfully been able to launch their first issue of an annual magazine with the help from their club Kathmandu University Architecture Club (KUARC). I appreciate their noble initiation and dedication in publishing the magazine despite the current situations.

I am certain that the magazine will provide a great platform for students and faculty to express their creativity and showcase their talents. I am thankful to all the contributing authors and well-wishers for the successful publication of the magazine. I would also like to extend my congratulations to the Editorial Board for their tireless efforts in shaping the magazine. I wish every success in their endeavors on this auspicious occasion. Thank you!

# Message from

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Ar. Buddha Shrestha

Program Coordinator B. Arch  
Club Advisor  
Kathmandu University



Anup Poudel

President  
Kathmandu University Architecture  
Club  
(KUARC)

It is my great pleasure to express a few notes on the successful publication of the first issue of Architecture magazine of Kathmandu University Architecture Club (KUARC)

I believe this magazine is not just the compilation of the projects works of our students but also a brief showcase of the Architecture program at Kathmandu University. It reflects the hard work of our students and will be a reference for fellow students.

Archiving projects is very important and indeed a difficult job. I appreciate the effort and perseverance shown by the KUARC team for the publication. Moreover, I congratulate all of them and wish them all the best to achieve other goals as well.”

Dear faculties, friends and colleagues,

We made it. Although a truism, it is nonetheless important to note that the previous year was a particularly difficult one, one marked by uncertainty, challenges, and change. With all of the challenges, from the pandemic to virtual learning, we are overjoyed to finally publish our own magazine: A R C H I V E. It is truly an honor and a privilege to serve as the President of KUARC, and on behalf of The executive committee, I would like to thank and congratulate the Editorial Board for their unwavering commitment to making this goal a reality. At the same time, this publication would not have been possible without the untiring engagement and passion of students from all years, who have proudly displayed their efforts in the pages that follow. KUARC is also highly indebted to the faculties and all of the contributing authors for their continuous encouragement and assistance in the publication of this periodical. I hope that the significance of these events will continue to grow in the coming years and that they will reach even greater heights. Thank you!

# Message from

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Aabhusan Man Singh Tuladhar

Secretary  
Kathmandu University Architecture Club (KUARC)



Dear faculties, friends and colleagues,

First and foremost, on behalf of KUARC, I would like to express my gratitude towards the executive members, fellow editorial members, KUARC members, faculties and everyone associated, who helped us directly or indirectly to publish this magazine. I'd also like to convey my heartfelt appreciation to all of the contributing authors for timely submissions of their papers to this magazine. I am confident that the articles presented will be extremely beneficial to undergraduate students, faculty members, and professionals in the department. I am proud of KUARC's successes over the last year, particularly in providing more opportunities for meaningful engagement of all the members through the virtual talk series and online architectural workshops despite the challenges of the pandemic. I am hopeful that Archive will be insightful to a myriad of readers and will further even reach national and international avenues in the further days to come. Thank you!

## THE ARCHIVE COMMITTEE

The Archive Committee 2020/21 is elated to have published the first issue of the annual magazine "ARChive" via Kathmandu University Architecture Club (KUARC), Department of Civil Engineering, Kathmandu University.

ARChive started as a conversation between the founding KUARC team and the Archive team when we inaugurated our club in 2019. By early 2020, works for the magazine were commenced. Due to the pandemic, works were halted and restarted under a reformed committee in May 2021.

ARChive is a collection of art, articles and projects by students of B.Arch of Kathmandu University. Our first issue is a look into some works by batch 2017-2020.

Giant thanks to all the people who helped us through our year-long efforts. Special thanks to our club advisors and executive members of KUARC 2019-20 and KUARC 2021. And above all, thanks to everyone who sent in articles, and projects—and to you, our first readers, for making it all real.

The Archive Committee is open to receive constructive criticism and suggestions, Any queries or feedback can be emailed at archive.kuarsa@gmail.com.

Archive Committee 2020-21  
ARChive

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Magazine cover art by Aashraya Rajkarnikar and Sabal Shrestha  
Description- The cover page is a symbolic depiction of the rapid urbanization that has taken Banepa city by storm, overrunning the city with concrete buildings and overshadowing its traditional architecture.

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## SAFEGUARDING CULTURAL LANDSCAPES IN THE PRESENT CONTEXT OF NEPAL

Rural landscapes around the world provide abundant opportunities for the study of cultural landscapes. They are mostly agrarian societies with different resource utilization patterns and practices, shaping and adapting their landscapes as the uses, resources, patterns and practices change. Due to the strategic location of Nepal between the two bigger and more influential countries, India and Tibet (China), the towns along the historic trade routes between these countries had prospered as a blend of the two different cultures, the Mongoloid/Buddhist north and the Aryan/Hindu south. This milieu evolved a unique cultural landscape that has withstood centuries of history but is now transforming at an alarming speed, harming both the natural environment and the people in an irreversible process.

Little effort has been made to consider rural landscapes as cultural landscapes or heritage worthy of conservation. The Department of Archaeology has the mandate to protect, conserve, manage and maintain the vast cultural heritage of Nepal and the prevailing legal instrument, the Ancient Monument Preservation Act 2013 (1956 AD) as the title suggests, is focused on "monuments" and has not been able to incorporate the diverse, dynamic and changing aspects of cultural landscapes. The Act includes human settlements as monuments

but disregards the landscapes that unite the physical manifestations to traditional knowledge systems, narratives, culture and the surrounding universe. This isolates cultural sites from their natural surroundings, excluding the possibility of cultural landscapes, which the Operational Guidelines for the Implementation of the World Heritage Convention define as, "combined works of nature and of man." At present, all sites listed in the World Heritage (WH) list or the WH Tentative List from Nepal are either categorised as "cultural" or "natural" raising concerns that one attribute may be compromised to safeguard the other. The natural World Heritage Sites are protected and managed by the Department of National Parks and Wildlife Conservation with the objective to "conserve wildlife and outstanding landscapes of ecological importance for the well-being of the people." The emphasis is on the protection of biodiversity and ecosystems with two flagship sites, Sagarmatha and Chitwan National Parks in the WH list. The considerations to cultural heritage under the legislation protecting natural resources are limited to the economic benefits such as local community access in buffer zones to support their livelihood and ecotourism. In addition, although Nepal is an

agriculture-based country with this sector contributing about 30% to the national GDP and 80% of the total population depending on it, there are no specific laws that protect agricultural land. Historically land-related laws in Nepal focused on tenancy rights, land acquisition, new settlement planning and land tax revenue collection. The recent National Land Use Policy 2069 (2012 AD) is the first comprehensive policy that addresses the different categories of land, including agricultural land. This policy aims to preserve forty per cent of the nation's total land as forests. However, the policy document is mostly guided by the need for planned settlements and appropriate land use with no legal protection status for agricultural land other than prohibiting fertile land to be left barren with the possibility of repossession by the government. This policy states "geographically, culturally, religiously, historically, tourists and other areas of special importance will be preserved," however, there are no clear directions and the mandate of protection and utilisation is handed over to the local authorities. This provision does not allow for agricultural lands or settlements to be protected and adds that the protection status may be reconsidered in the case of development and construction projects that have significant values for the country.

This provision may have dire consequences to historic settlements and routes with either under-resourced local authorities or central government undertaking projects such as road construction and expansion

along historic corridors and towns. For example, the various projects such as the Bagmati Corridor, the Outer Ring Road and the Hetauda-Kulekhani-Siuchatar high voltage power line in Kathmandu valley are threatening the historic settlement of Khokana, a vernacular village with its mustard-oil industry as a living heritage, which is in the WH Tentative List since 1996. Khokana is an example that settlements are not isolated islands but testaments of interdependence between people and the landscape. Their cultural heritage is inextricably linked to their landscape as evident from the mustard fields that surround the historic settlement of Khokana and change colours with the seasons. These settlements, if isolated from their context, would lose their intrinsic values that are products of the distinct settings, the mustard fields or the arid landscape and the ancient routes. However, the pressures of expanding development and changing lifestyles are exerting tremendous pressure on the cultural processes that have shaped these landscapes.

In addition to the lack of clear operational legislations, the changes taking place and difficulties in the safeguarding of cultural landscapes are directly related to the socio-economic well-being of the local people as well as demographic, cultural, structural and environmental issues. In the case of rural landscapes, subsistence farming and land fragmentation are decreasing the value of land resulting in abandonment of farming practices and migration to nearby cities or abroad for work. Political upheavals such as the recent Maoists' conflict also

forced many young people and families to leave the villages for the cities and the process has not reverted. In addition, globalization, climate change and availability of alternative less strenuous employment such as tourism have also contributed to the loss of traditional farming practices and degradation of the natural landscapes with an increase in landslides and loss of biodiversity. While the proposed roads are threatening the heritage of Khokana, these roads would also increase the land prices tempting the locals to sell and relocate, displacing their heritage and identity.

This example indicates the need to expand and revisit the conservation policies and the limiting definition of heritage as stated in the Ancient Monuments Act to incorporate the changing context of the country. The cultural landscape of Nepal is more than the physical geography and incorporates history, faith and culture and has been evolving and changing through the centuries. In communities such as Khokana, where local people have continued to live through centuries preserving and maintaining their culture and heritage, it is important to consider the continuation of life as a key aspect of conservation. Their cultural landscape encompasses the process of making the landscapes as well as living in them. It is also necessary to bridge the gulf between the mainstream official policies that are designed to be applicable to the entire country and the uniqueness of the diverse cultural landscapes that are manifestations of the dramatic geography and history of Nepal. The new approach defining cultural

landscapes should also include the changing social and economic structures and the vision of the people for a harmonious and comfortable life in their historic settings. Cultural landscapes are both environmental products and cultural processes that are intrinsically related and distinct in each region with their particular cultural traits, behaviours and belief systems. At the same time, they are in continuous flux, influenced by contemporary political, religious and social values, evolving with available technologies and developments, which should be facilitated in the regulations for their sustainable preservation. The concept of cultural landscapes in Nepal needs to incorporate the holistic systems of natural landscapes and settings, living histories, intangible values, vernacular architecture and belief systems that can be flexible to facilitate the local communities that live and give life to the heritage. In addition, a dialogue between the different national agencies that are responsible for different aspects of cultural landscapes is needed for deeper understanding and sustainable preservation policies. Economic viability is equally important, however, the objective should be safeguarding the core values, authenticity and integrity of the unique heritage with the participation of the supporting communities, especially where the associative values reside with the communities.

In the absence of legal frameworks, the pressures of contemporary development will negatively impact the fragile heritage endangering both the land and the people. As spatial

entities that may include structures, intangible cultural heritage and natural resources, cultural landscapes in Nepal come under various jurisdictions, such as different ministries and local or the newly established federal states, adding another layer of complexity in coordination and management of the sites. A complex and comprehensive interface with conservation, planning and development approach is required to address the multi-dimensions of cultural landscapes. Without a strong and clear legal protection and management framework, the threats to the cultural landscape will continue.

-Jharna Joshi, PhD  
Visiting Faculty,  
Kathmandu University

## RELEVANCE OF THE COURSE ON MOUNTAIN ARCHITECTURE

### *Background*

For thousands of years, people have been inhabiting the mountains and developing knowledge and skills in building design and construction to suit the climate and human needs. Human settlements in mountains face both opportunities and challenges. They have continuously suffered from natural disasters, hostile climatic conditions, and socio-political upheavals for many centuries. Despite all the hardship and challenges mountains have provided a haven for millions of people in the world. Mountain areas are rich in natural resources, culture, and spirituality but poor in technology, geology, and livelihood. All these factors contribute to the evolution of vernacular architecture and settlement patterns. Space is a constraint in mountain regions because of the topography. The settlements follow the contour lines of the sloping hills resulting in narrower widths and longer lengths of the buildings. The choice of building materials is very limited to stone, earth, timber, and bamboo. It is very expensive to transport industrial products to remote villages. There is often a shortage of a variety of craftsmen and trained technical personnel. There is a shortage of water during the winter season when most of the construction work takes place. So, water-intensive construction technology is not suitable. In the higher altitude settlements, there is a traditional practice of constructing houses with drywalls. With the construction of highways and rural roads, mountain areas, nowadays, have been connected to the cities and towns and a variety of building

materials have reached those far-off places. However, without trained craftsmen, such materials cannot be used properly. Nepal is a mountainous country with 83 percent of its land covered by hills, mountains, and the Himalayan range. Historically, most of the settlements in Nepal were located in this region due to pleasant weather, abundant natural resources for humans as well as cattle, and security from external aggression. The major part of the terai region of Nepal was covered with dense forest and prone to deadly malaria disease. Hence it was not favorable for human habitation except for native people who had immunity against deadly diseases. Being located in the trade route of India and Tibet, many rural and market centers flourished in the hilly areas along the trade route.

### *Mountain architecture*

The architecture reflected in buildings and monuments in mountain areas can be termed mountain architecture. The concept of mountain architecture can be extended to site selection, design of houses, selection of building materials, provision of community facilities, and building construction practices and culture. Irrespective of political boundaries, mountain architecture is a function of the climate, culture, and technology of a particular place. The architecture of mountain regions has a lot of similarities in form, function, texture, color, and layout. Lack of adequate space, limitation in building materials and technology, shortage of water, shortage of craftsmen, disaster vulnerability are the common parameters of mountain architecture. Settlements are planned and buildings are constructed not only to suit the geographical setting but also to comply with farming, animal husbandry, or tourism activities which are the main source of livelihood of mountain regions.

### *Current courses on architecture*

Most of the courses on Bachelor's of Architecture (B. Arch.) in Nepalese universities have been framed in line with the courses in Indian universities. These courses are more urban-centric and produce architects who enjoy designing large and modern buildings like housing complexes, museums, office complexes, supermarkets, airports, bus terminal auditoriums, etc. Generally, architects are trained to be imaginative and creative without worrying about climate, topography, building materials, and craftsmanship. Architects who complete such courses prefer to work in urban settings and build their careers in metropolitan cities. As in other neighboring countries, Nepalese architects are concentrated in larger cities. The question arises: Is the profession of architecture for urban centers and plain areas only? Who should be responsible for design-

ing and constructing buildings of varying uses in rural and mountain areas? Should it be left to rural craftsmen and mid-level technicians? Is there no role of architects in mountainous rural areas of Nepal?

### *Architect's role in mountainous regions*

Buildings of different uses are being constructed in rural areas in mountainous regions of Nepal. These include hospitals, health centers, schools, colleges, government offices, training centers, museums, hotels, resorts, shops, and private residences. Many of those buildings have been poorly designed without respecting the local climate, landscape, and culture. The existing practice of replicating 'type designs' all over the country has created an 'eyesore' rather than a 'good example' of architecture. Instead of motivating and educating the local community for better design and creating a model of building construction, they undermine the local vernacular architecture and construction practices. It has been observed that some of the iconic examples of mountain architecture in Nepal have been produced by foreign architects. So far, Nepali architects have not given serious attention to rural and mountain architecture.

### *KU's Architecture Program*

In order to fulfill the need for qualified and trained architects in rural and mountain regions, Kathmandu University has started a five-year course on Bachelors of Architecture with a special focus on mountain architecture. The course has been designed in such a way that the graduates shall develop a deep insight into the principles of building design in rugged topography that is prone to natural disasters. They shall face the challenges posed by the harsh climatic condition and technological limitations. They shall be familiar with the needs and expectations of the local community. The creativity and imaginative instincts of the

students shall be focused on solving the small-scale problems in building design and construction rather than 'utopian projects'.

Some people in academic circles have questioned the logic behind focusing on mountain architecture. They argue that architects should be able to work in any situation—mountains or plain, urban or rural areas. My observation is that generally aspiring young architects like to work in large metropolitan cities where they get bigger projects and lucrative fees. They do not like to go to rural and mountain regions and build smaller and complicated buildings. They do not like to face the harsh weather and difficult situations in mountain regions. Furthermore, they like to limit their role to design and drawing by leaving the construction part to engineers and technicians.

Although architects like to stay in the comfort zone of larger metropolitan cities, it is high time that Nepalese architects start exploring opportunities in rural and mountain areas. For them, a built-up environment created in mountain settings can be much more satisfying and rewarding. They need to be more than 'designers' and consider themselves as 'master builders'. They should learn from the local people who have inherited knowledge and skills from one generation to the other and modified them to suit their immediate needs.

#### *The focus of Kathmandu University's course on mountain architecture*

The course at Kathmandu University should not be limited to teaching and learning architecture in the classrooms. The local community shall be engaged in design studios and assignments where students and faculty get the opportunity to learn traditional knowledge from the people. Students shall analyze the problems and issues in building construction technology by conducting

research at the community level and relating to the theoretical framework. The outcome of the assignments and research shall be useful for both the students and the community. At the end of the assignments, the community shall find answers to their questions related to housing conditions and building construction technology. They shall get new ideas for future buildings, sketches, and drawings of their existing houses. Similarly, it shall be an opportunity for the university to document existing knowledge and skills and archive it for the benefit of the community at large. Kathmandu University shall adopt a particular village in mountain areas for academic and research purposes.

The architecture program started in KU in 2017 and the first batch of students shall graduate in 2022. The interests shown by students and their guardians in the program are very encouraging. It has been observed that the program is very attractive among female students from different parts of the country. The inclusiveness of students in terms of geographical origin, ethnicity, gender, and economic status is the hallmark of the program. It is expected that hard work done by students in the classroom and studios will pay off in the due course of time.

#### *The way forward*

The university shall focus on research projects on mountain architecture and engage faculty, students, and professional architects. Similarly, it should organize seminars and workshops on various issues related to mountain architecture, building technology, disaster risk reduction, climate resilience, and landscape design. For this, a separate Department of Mountain Architecture shall be created that will boost the morale of faculty and students. The course on Mountain Architecture shall be promoted in other countries by establishing contacts with foreign universities. The networking

with foreign universities shall be strengthened through joint studio programs, international workshops, joint research works, student and faculty exchange programs, etc.

-Ar. Kishore Thapa

## DEFINING THE FUTURE

Design changes, so does architecture. Trends don't emerge as rapidly here as they do in say, food or fashion, but the economy, the environment, and demographics all spur shifts in the choices of materials, designs, layouts, and construction methods for single and multifamily dwellings.

Have you ever imagined what the future homes would be like? In this 21st century IT world, will they be packed with electronic controls and highly efficient gadgets, will they rapidly grow into strange and abstracted structures that bear little resemblance to our current houses? The 'green movement' has swept the world and architecture is at the forefront of this new revolution – buildings being by far the biggest energy-sappers in the world. Many contemporary architects are limited by the confines of budgets, time tables and constricting clients. Some industrious innovators, however, are breaking convention and collaborating to launch the imaginations into the future of green design.

Honda's smart house is an innovative eco-friendly, energy efficient lab that is able to generate its own power as a solution to living off the grid. It is created in partnership with the University of California at Davis. Honda's zero-net energy home is comfortable and packed with high-efficiency appliances. The house is warmed and cooled by a radiant system under the floors and generates enough power from solar energy to also run a car and feed energy back into the grid. One can control the lighting and tem-

perature with three iPads stationed around the residence and an app on smartphone.

"When you open the door, the lights come on," says O'Hara, executive director of the university's School of Education. "There's a lot about the house that's very different, in a positive way. The house responds to you."

How smartly can a house tackle natural calamities, especially earthquakes in Nepal? Natural disasters such as earthquakes, tsunamis, and floods can often come at the least expected time. Almost every year, a large earthquake occurs somewhere in the world and captures the public's attention. Meanwhile, every day, thousands of smaller tremors often go unnoticed. Some movies show scenes with the ground suddenly opening up and people falling into fiery pits, but that doesn't happen in real life. As Wdowinski said, "Earthquakes don't kill, buildings kill."

Even without such forecasts, there are some basic things that can be done to prepare for an earthquake i.e. by building earthquake resistant houses. Japanese builders have developed many anti-earthquake techniques over the years, from the free-moving components of the nation's pagodas to the reinforced concrete of its modern skyscrapers. One rarer earthquake-resistant design, however, is the dome house.

Dome-shaped houses tend to look either really good or really bad. Most dome homes are constructed with a single, large dome, which is then divided into many different

rooms inside. That makes the most optimal use of the materials, encompassing the most square feet for the least amount of materials. Modern dome houses actually use expanded polystyrene, a so-called "fourth generation" construction material (after wood, iron and concrete) that's both strong and light, adding to the structure's earthquake resistance.

What if someone doesn't like the dome structure and wants a different form? Instead of building super-strong yet flexible structures to withstand earthquakes, what if you built your house by making it levitate on a cushion of air? This is already being employed in Japan, a little less than a year after the massive earthquake and tsunami that devastated the country. As fantastic as a home levitation system may seem, Air Danshin claims that the technology is not only effective, but also 1/3 cheaper than many other earthquake-proofing systems out there and requires little maintenance.

Apparently, 88 homes in Japan already have this home-airbag system. But, this system can only be possible with Leak Free Piping System where water, electrical, gas, sewage lines are flexible. While the earthquake-resistant levitation system is presently being installed in houses, we hear the Japanese firm hopes to expand to install the system in larger, potentially more critical structures. The whole thing seems like a good idea, if slightly impractical, it would not be easy to lift a home off the ground and install this second artificial foundation. But then again, it would be better to install this rather than let the earth violently move your house.

We can't solve the problems with the same thinking that we used in the past. Good decisions may lead to thousands of lives being saved. So the numerous innovative ideas that have been introduced to combat such catastrophes should be appraised at both consumer and commercial level. We believe the

future houses will establish clear standards with digital contents and mitigate the threat of calamities prevailing all around the world.

-Ar. Aakash Bhochhibhoya

DESIGN STUDIO I, B.ARCH-20

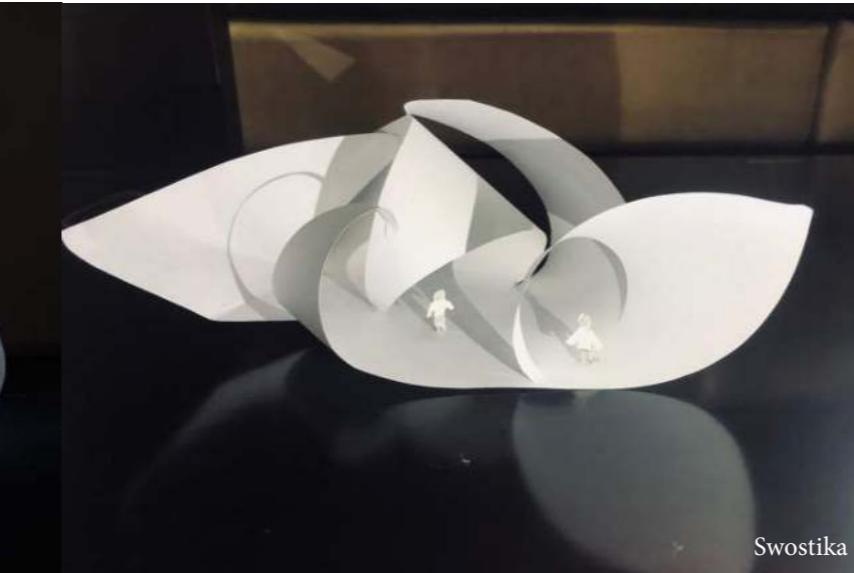
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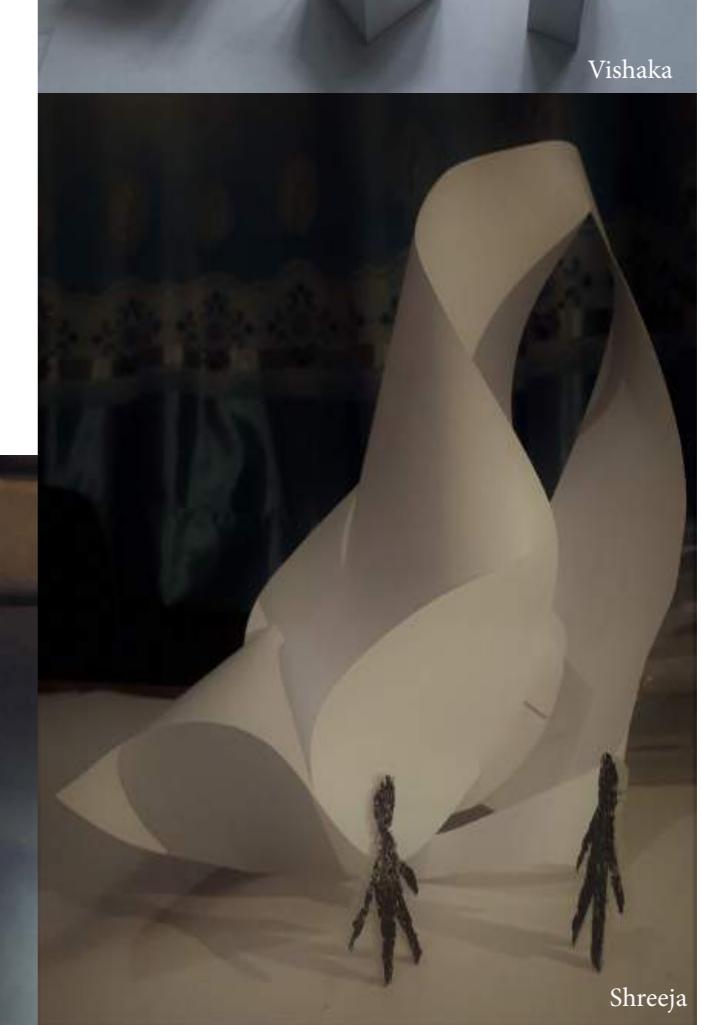
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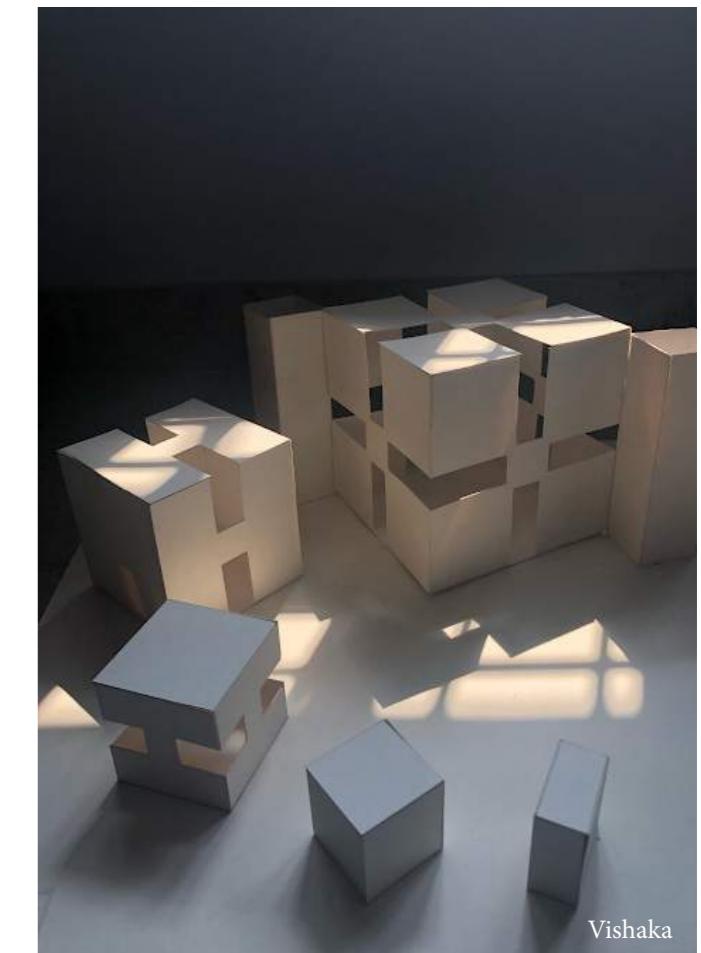


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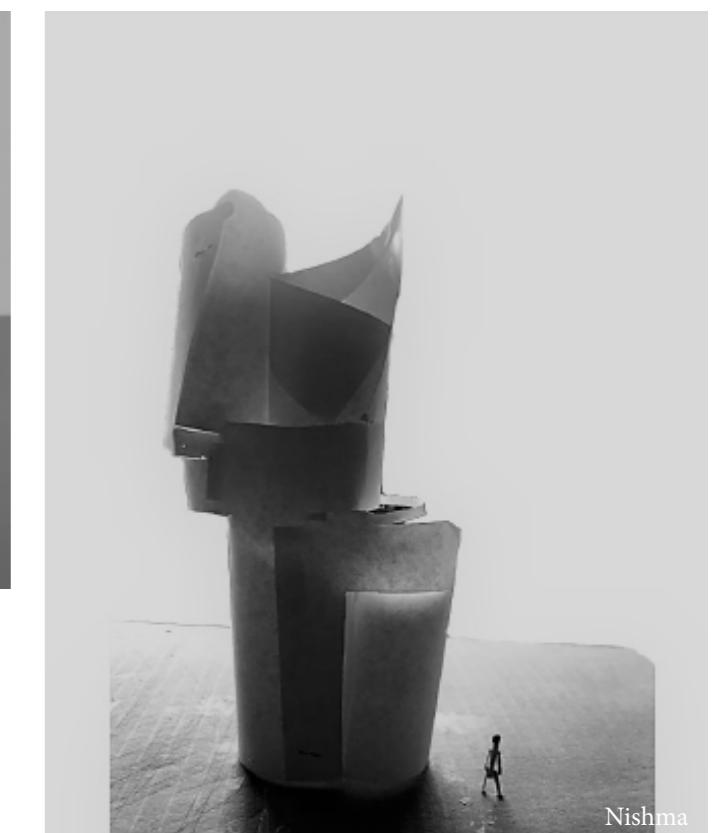
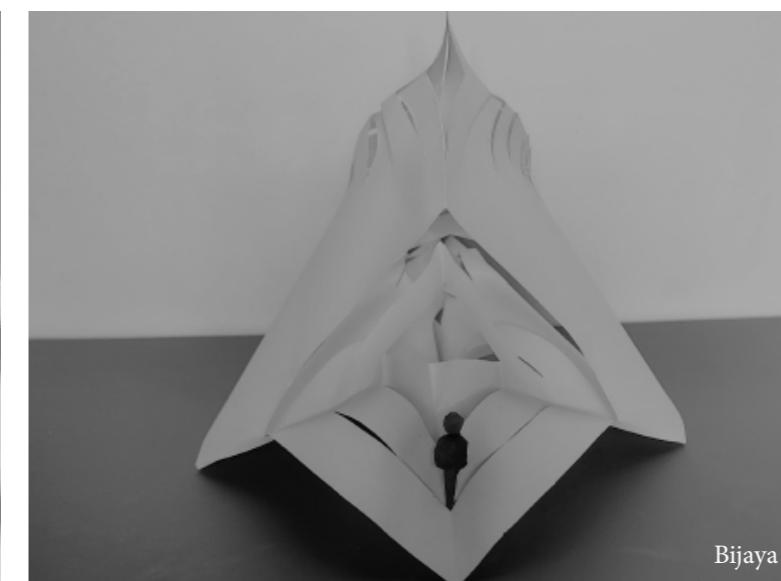
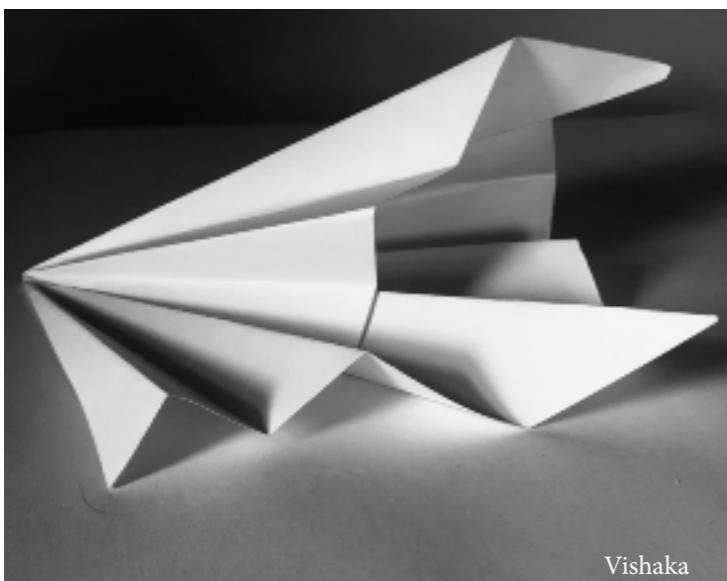
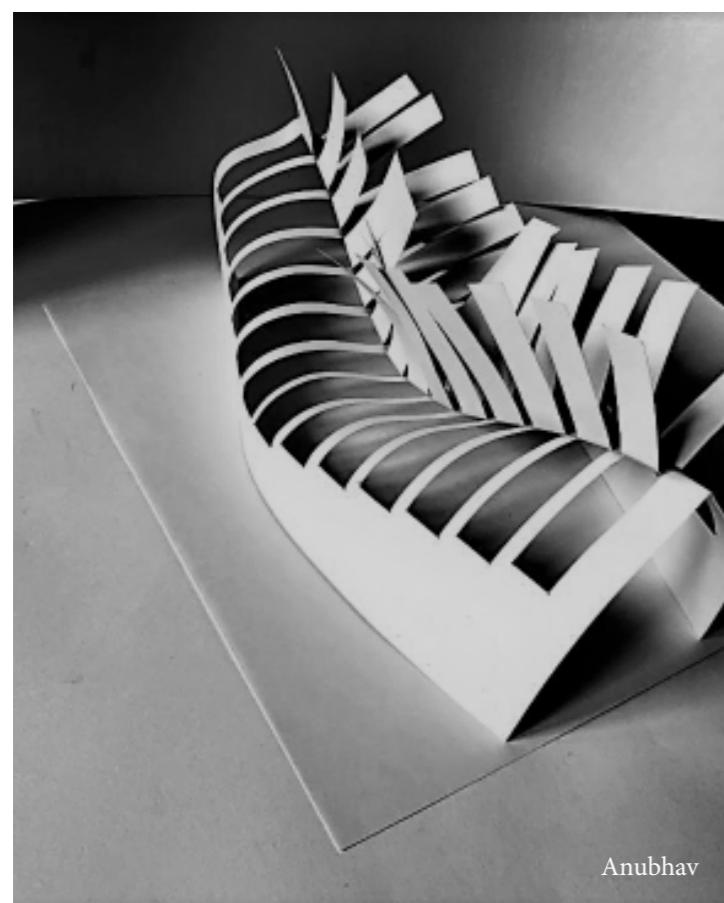


Shreeja

The model-making project of Design Studio-1. Paper was only the material that students had due to the pandemic and lockdown. Either forms or spaces had to be created by playing with paper cuts. The forms produced were compared with different human scales. Students had to create forms or spaces by not thinking about building, they were not allowed to use another different paper cut and include them.



Vishaka



# IN CONVERSATION WITH-



He started his design education in Singapore. He then moved to Australia to pursue architecture, graduating with a bachelor's degree from the University of Tasmania (UTAS) and a master's degree from the Royal Melbourne Institute of Technology (RMIT). His international studies at UTAS and RMIT with Australian architects such as Peter Corrigan and Ashton Raggatt Mc Dougal were integral to his foundational years before returning and working in Kathmandu. He works in Studio MRAA which is a Kathmandu-based design-led architecture and interior design practice with a strong focus on finely crafted projects.

**AR. AMAR GURUNG**

**What is Architecture to you and why is it important for the world that we live in?**  
Architecture doesn't have to be one thing; it could be a lot of different things, approaches in architecture education are different too. I have studied architecture in various institutions- one based on a technical approach, one on the conceptual nature of architecture, and the other on a data-driven future. It doesn't have to have a fixed definition, ultimately what matters is the way you experience it. So, I think we need to think deeply about what we're doing as architects and how it affects everything around us.

**What are the crucial skills and qualities that are needed to become an Architect?**  
Architecture doesn't have to be one thing; it could be a lot of different things, approaches in architecture education are different too. I have studied architecture in various institutions- one based on a technical approach, one on the conceptual nature of architecture, and the other on a data-driven future. It doesn't have to have a fixed definition, ultimately what matters is the way you experience it. So, I think we need to think deeply about what we're doing as architects and how it affects everything around us.

**Is there anyone in the community that you follow or admire for their architectural ability and why?**

Frank Gehry as he approaches it as an artist, it's very intuitive and challenges the norms in terms of what architecture is. Lebbeus Woods hasn't built anything but his writings are quite crucial in pushing the boundaries of what architecture is. The firm- ARM in Melbourne narrates stories through architecture. It's not just building because it's meant to be brilliant but there's always a meaning.

**How do you think the global pandemic has impacted architecture and the architects?**

Personally, the pandemic made me realize that not being in the same room or even country, can't keep us away from producing amazing work (thanks to collaborative tools). On the downside, a lot of projects that I was working on were put on hold or cancelled.

**Why do you think it is important to use locally available materials? How do you think we can preserve the vernacular architecture of Nepal?**

I think the question of sustainability is also a big factor, especially in today's world. You try to reduce the energy used to build a building and create architecture. So it doesn't matter where you try and use as many local materials as possible not just because it's locally available, but also because it's supporting the local economy. We want to learn something from the past, but then we still want to push the boundaries and create and contribute something new. It is important to understand why people did certain things in the past and try to understand if that makes sense now in that particular context. I think it needs to be responding to now rather than responding to 60 years ago.100 years ago.

**What differences did you find in the architectural practices and education in Nepal and abroad?**

In terms of education, there's a lot. Technically, we have to change and adapt to the current times and move to start teaching students digital tools from day one and not wait till the second year. Conceptually, the translation from concept to the actual building or a form is still very little. In practice, it's very hard to work because the team of workers lack professionalism.

**What were the challenges you faced in starting your own firm, MRAA, and what advice do you have for someone starting on their own?**

When I started my practice in Nepal, I had no idea what I was doing but you learn as you go. Working in Australia and in Nepal is just completely different, so I always say yes to everything. It's not just about designing, most of the work is not architecture related. There are moments where you just want to quit, somehow you ask people, figure out how to get better at it over time, and you get more confident. The best feeling ever is when you see what you've designed come to life, how it didn't exist before, it was all in your head and now you can touch it, see it and feel it. It's a very powerful feeling and emotion.

**How do you think the global pandemic has impacted architecture and the architects?**

Personally, the pandemic made me realize that not being in the same room or even country, can't keep us away from producing amazing work (thanks to collaborative tools). On the downside, a lot of projects that I was working on were put on hold or cancelled.

**Is there a certain way you manage time as an Architect and how can we be efficient as students?**

I use a technique called time blocking. It is basically to set a time limit and focus on one task at hand. As a student, I used to pull a lot of all-nighters, but as a practising architect, I have gotten better at organizing.

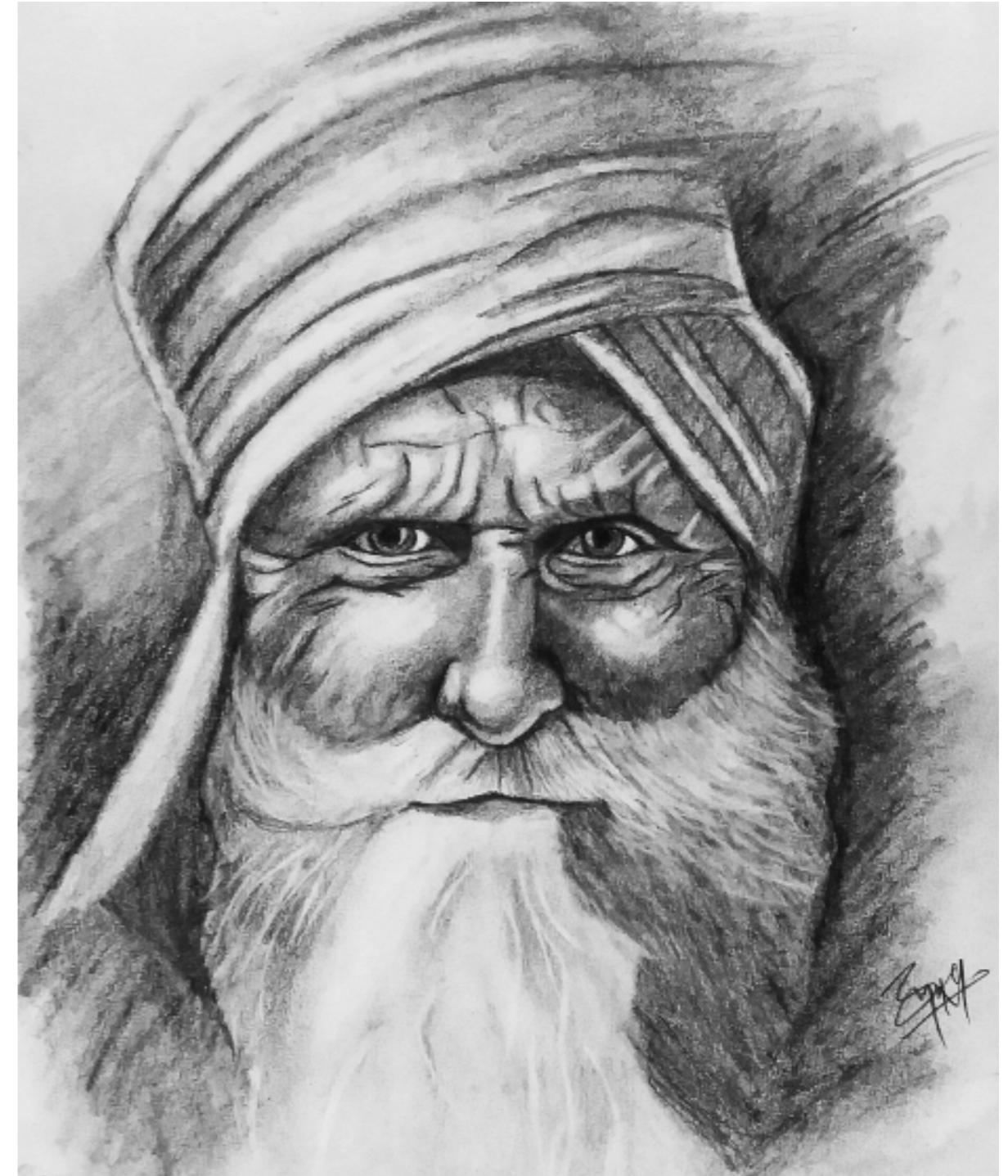
**Is there any project that you hold close to your heart and why?**

Every project is special to me because I get to learn something different with each one. It's just like one can't choose a favourite child.

**Why did you choose Architecture? (Journey also comes here)**

After wanting to study economics, I somehow changed my mind and applied to design school in Singapore and got in.

\* \* \*



Artwork by BIJAY YADAV, B.Arch-20



Artwork by MUNA PANDEY, B.Arch-19

P R O J E C T S

## CAFE DESIGN

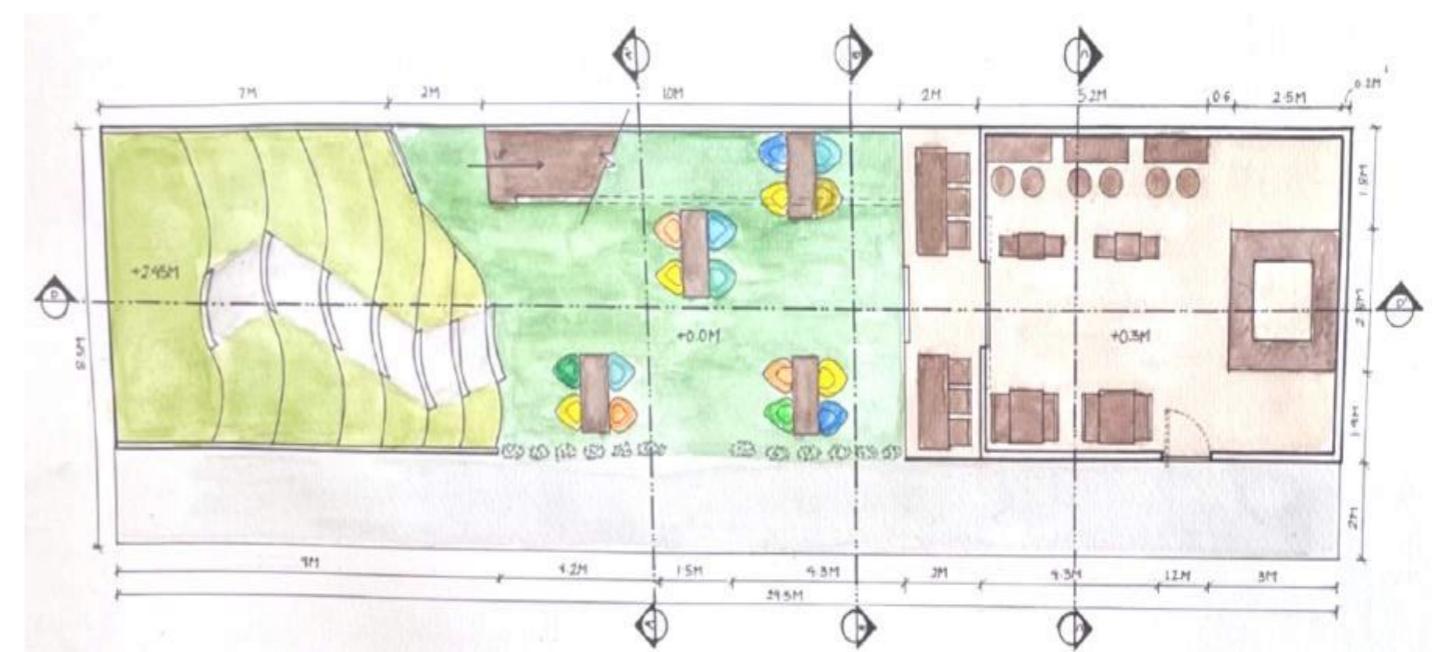
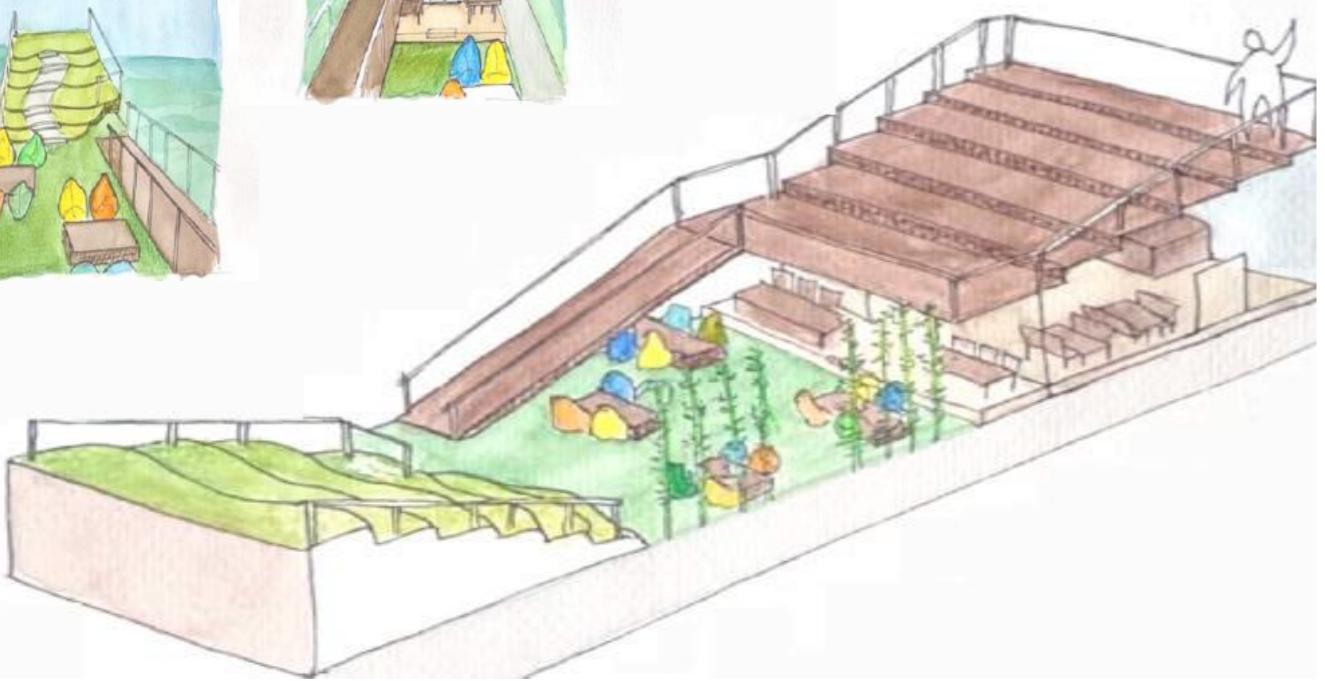
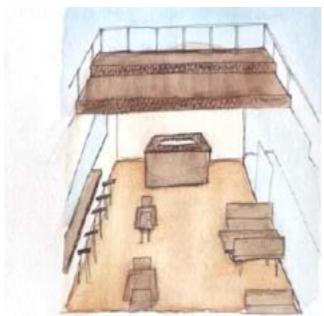
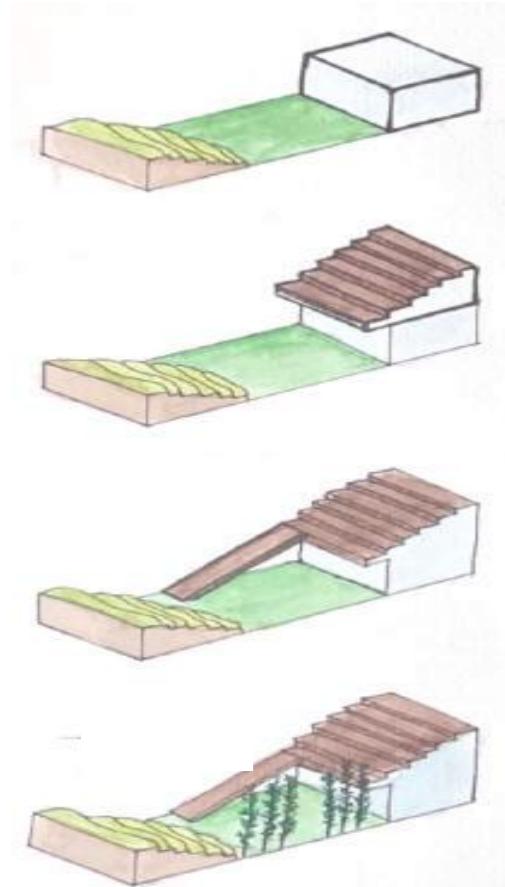
B.ARCH-19

Architecture is not limited to four walls. It's about understanding the surrounding, the landscape and providing a feasible solution. The need of today's generation is a space that is relaxed and user-friendly. The concept of small outdoor cafes is adapted by busy cities and universities all over the world. The concepts demonstrate flexible and functional use of space for a café and food serving area and creative solutions throughout the space. With longer working hours, smaller refreshments are required. The design also includes innovative seating options, artwork display and support spaces.

## THE ASCENT CAFE

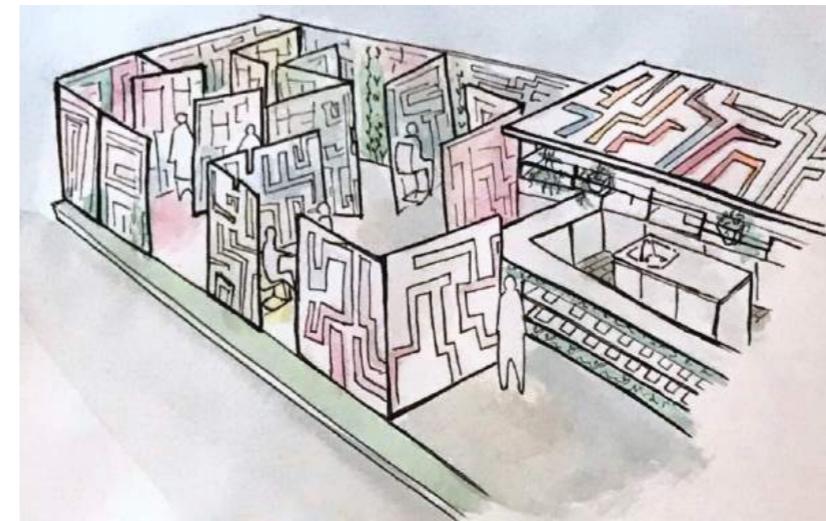
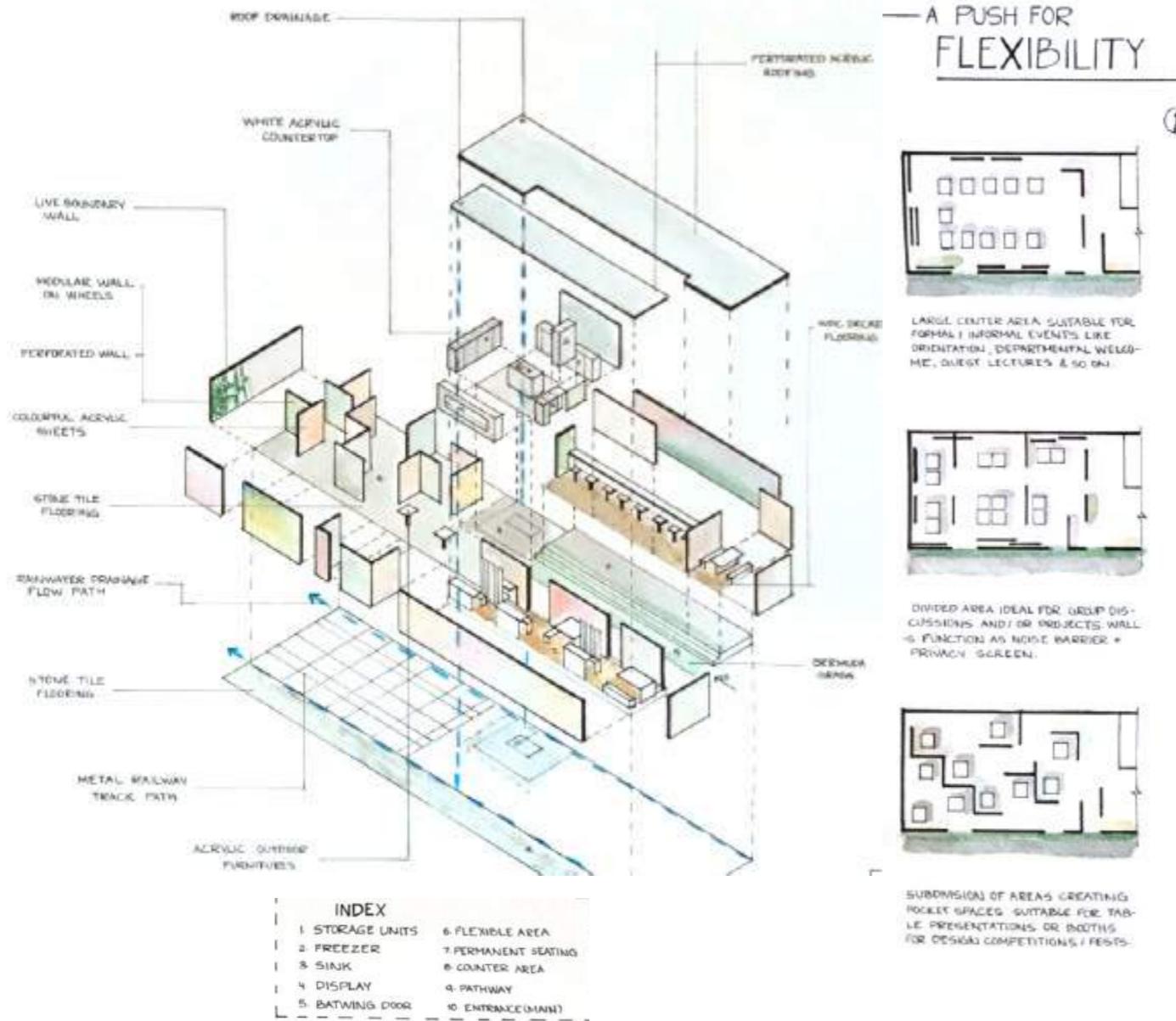
SARAHANA SHRESTHA, B.ARCH-19

The ascent cafe is a self- serving cafe that created an interesting, refreshing and interactive space for the students to work and relax. It is designed so that it does not over power the site, but rather complements it with its stepped landscape seating and building form.

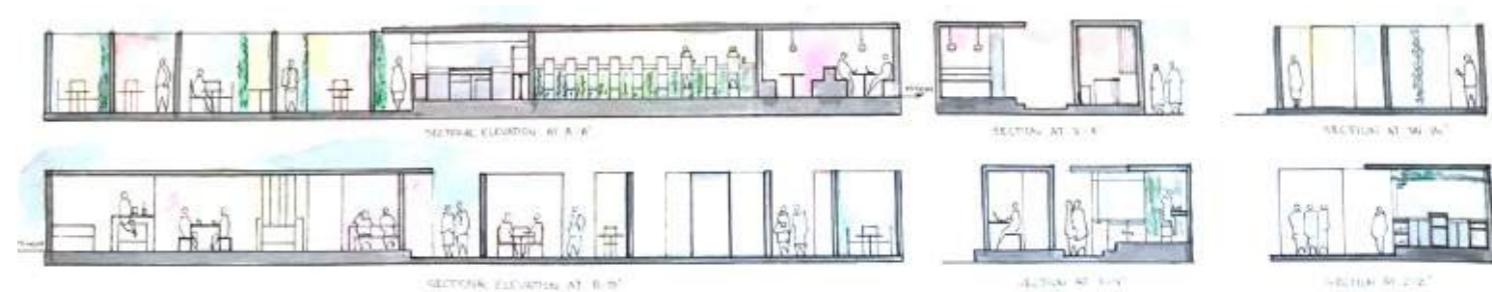
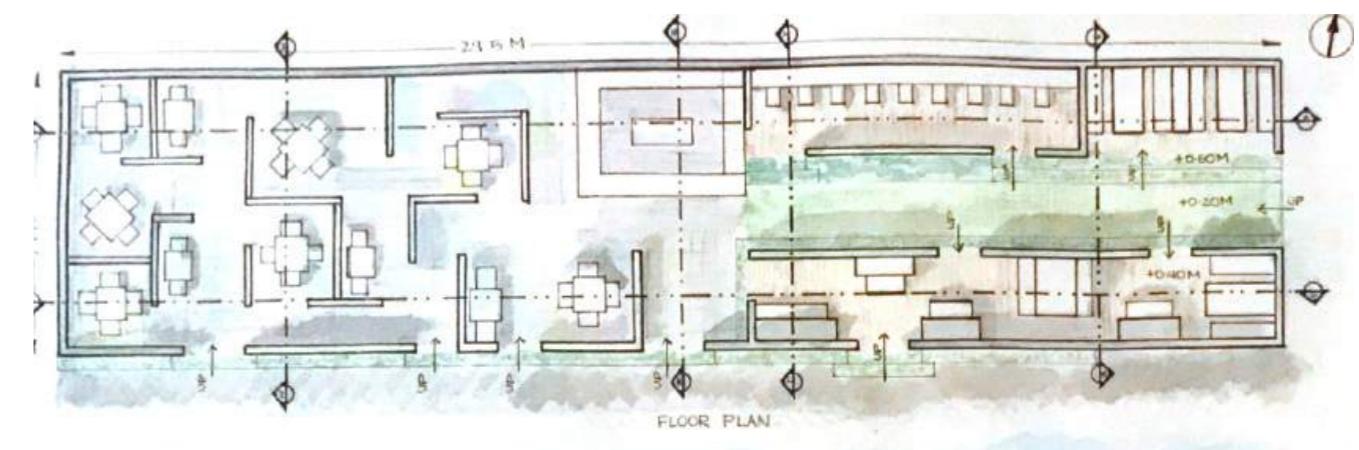


# DYNAMAZE CAFE

SOPHIYA ADHIKARI, B.ARCH-19

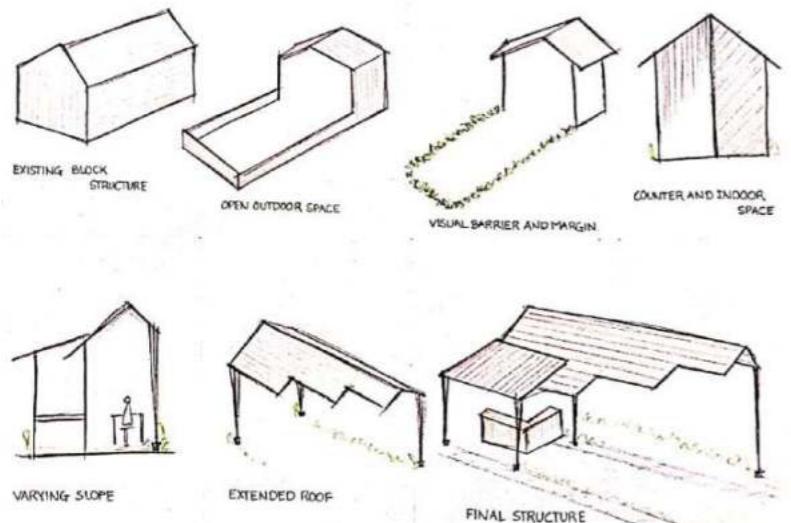


Dynamaze Cafe is a self-serving cafe that re-defines connection between built and unbuilt space through its dynamic approach, allows for noise barrier and attempts to create an activating space for heightened student learning and interaction via the form of a maze. Furthermore, the selection of vibrant colours makes this a playful space that doubles as a defining landmark for architecture block.

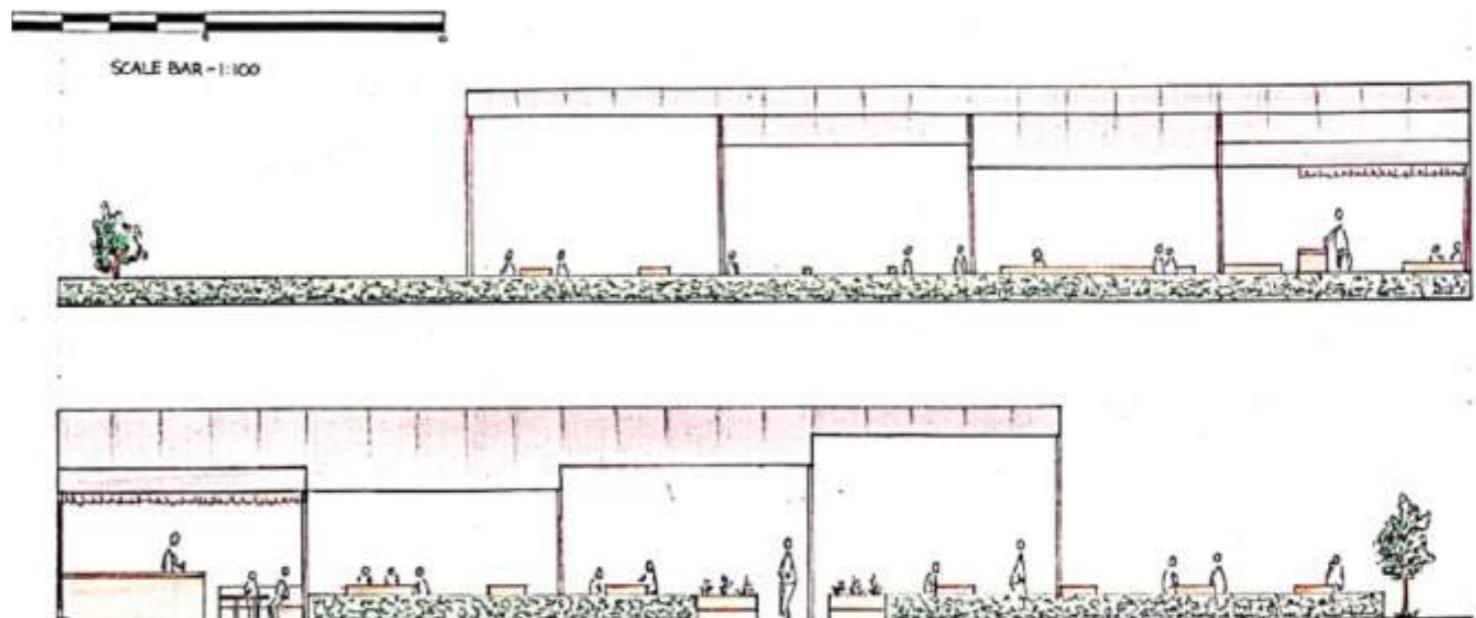
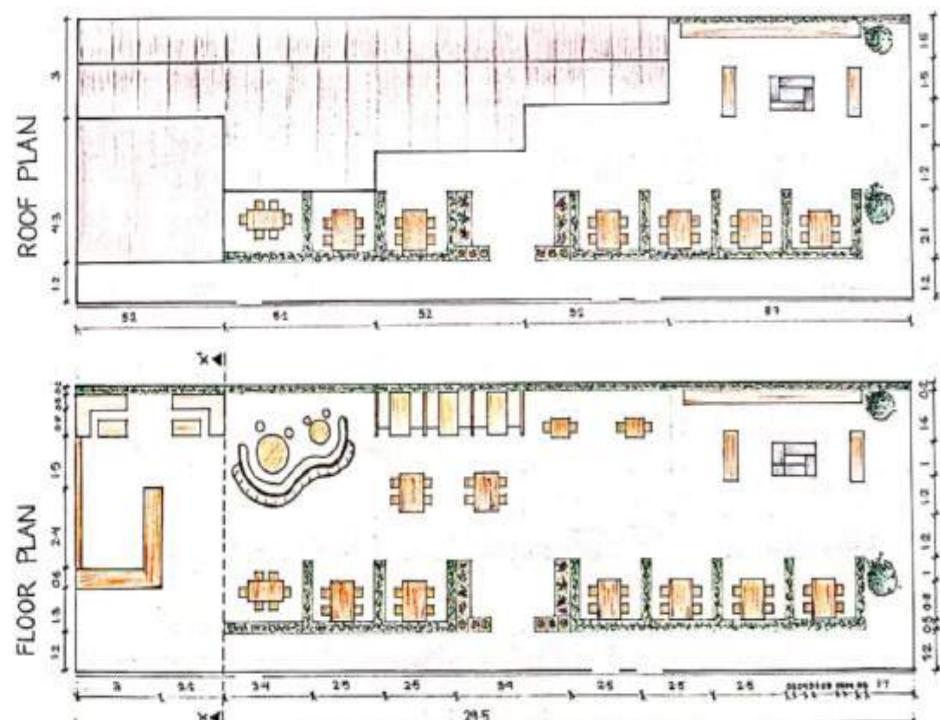


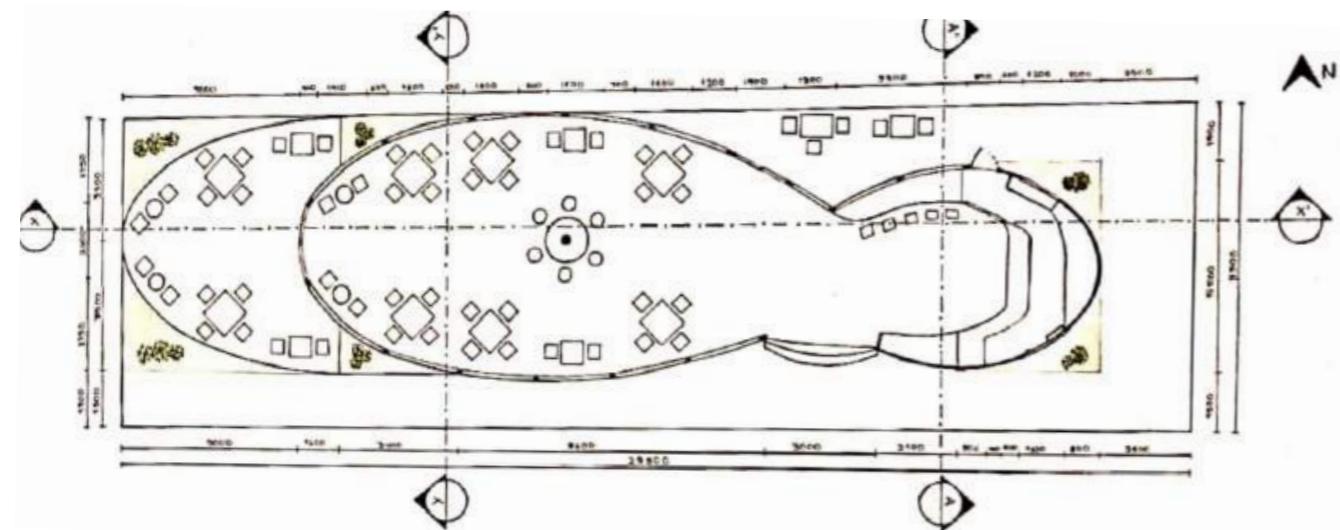
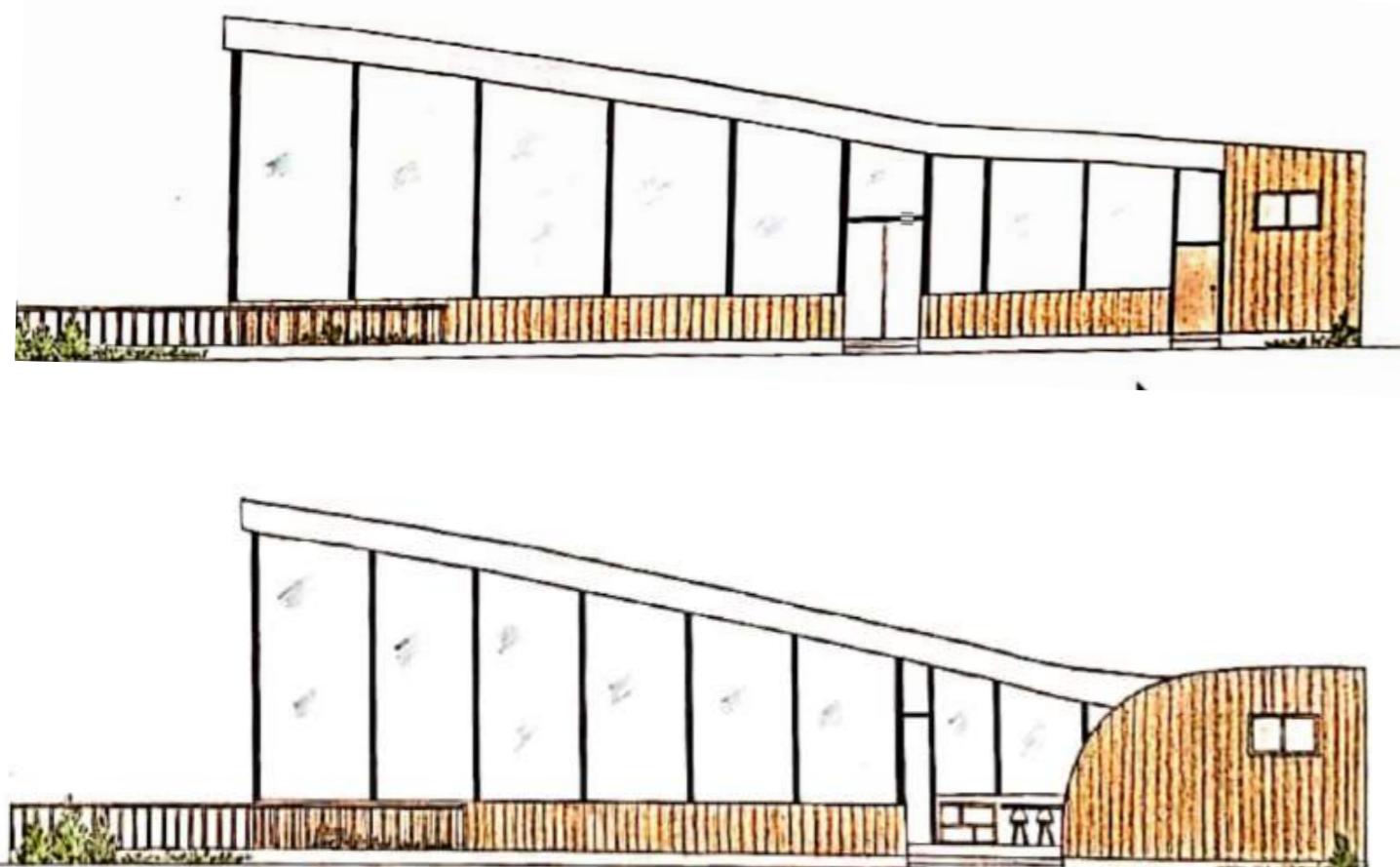
# THE OPEN HUT CAFE

SABAL SHRESTHA, B.ARCH-19



An open structure formed by the configuration of different pitched roofs without affecting the essence of the existing block. The architectural coffee shop blends with the surrounding environment and serves as a relaxing as well as a hangout place for the scholars working around.



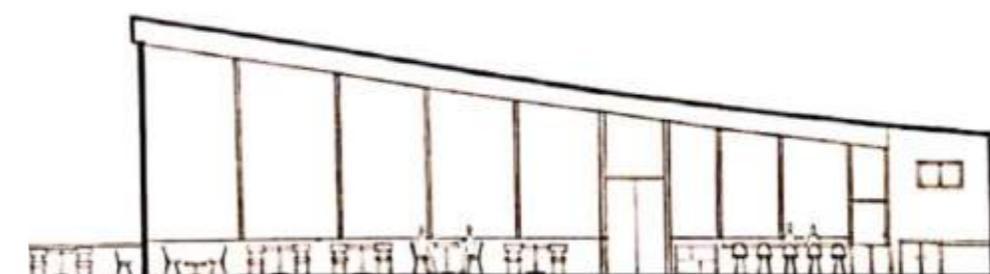
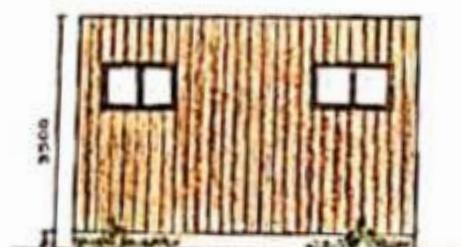
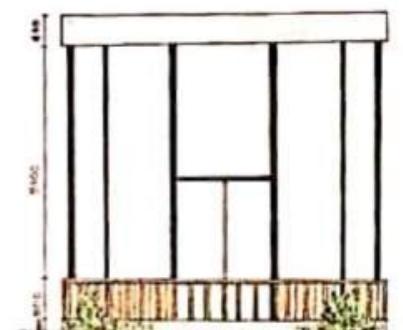
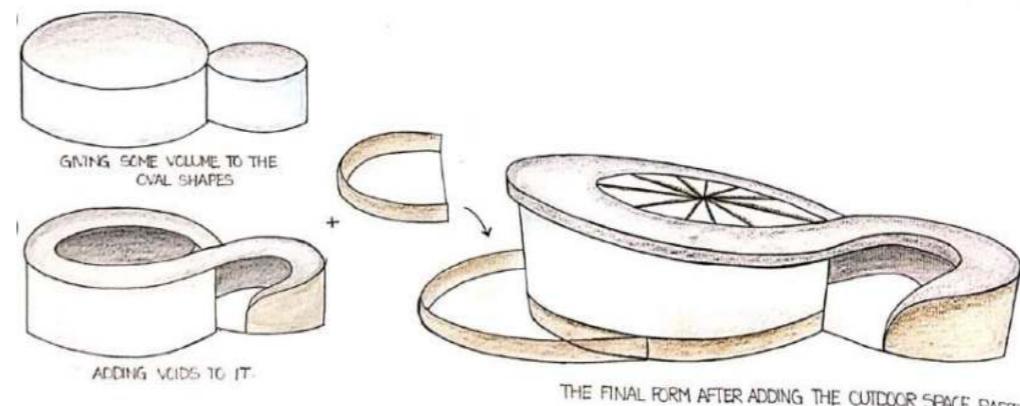


Inspired by the cycle wheels with a distinctive curved structure playing with light and shadows creates a calming environment where students can explore new ideas and refresh themselves.

CYCLING HELPS US TO KEEP OUR MIND AND BODY FRESH AND COOL. LIKEWISE PEOPLE GO TO CAFES TO RELAX, TO FEEL FRESH AND TO ENJOY THE SURROUNDING ENVIRONMENT.



BICYCLE WHEELS



## THE WHEELS CAFE

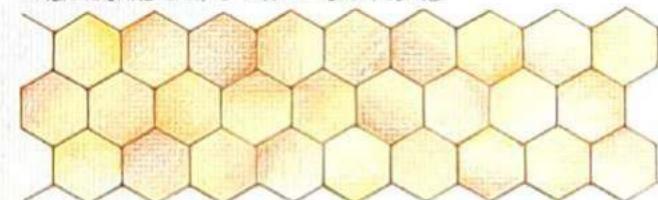
SHRUTI SHRESTHA, B.ARCH-19

# THE BUZZ VILLE

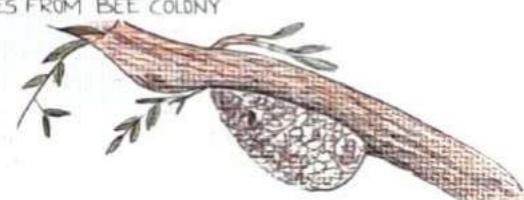
AAYASHREE SHRESTHA, B.ARCH-19

## FORM DERIVATION

• HEXAGONAL SHAPE FROM HONEYCOMB

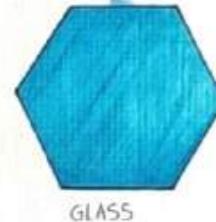


• CURVES FROM BEE COLONY

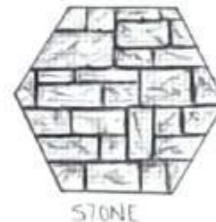


Cafe as a place where the students come to eat and chat is reminiscent of a beehive where bees buzz around while working. Hence, the concept for the cafe is derived from beehive and its colony.

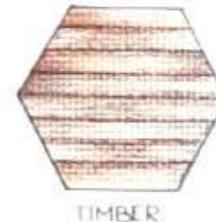
## BUILDING MATERIALS



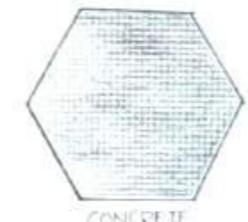
GLASS



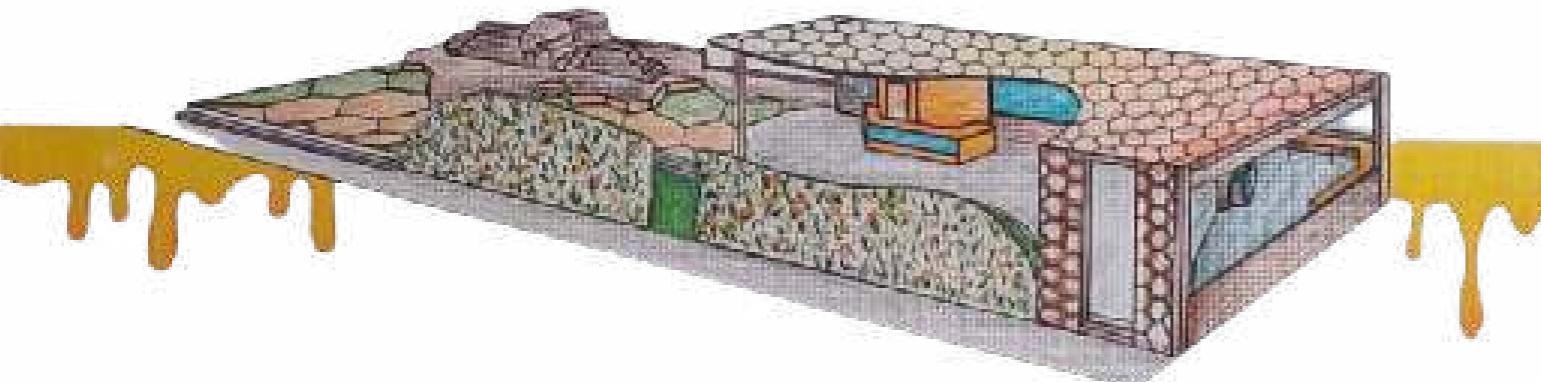
STONE



TIMBER



CONCRETE

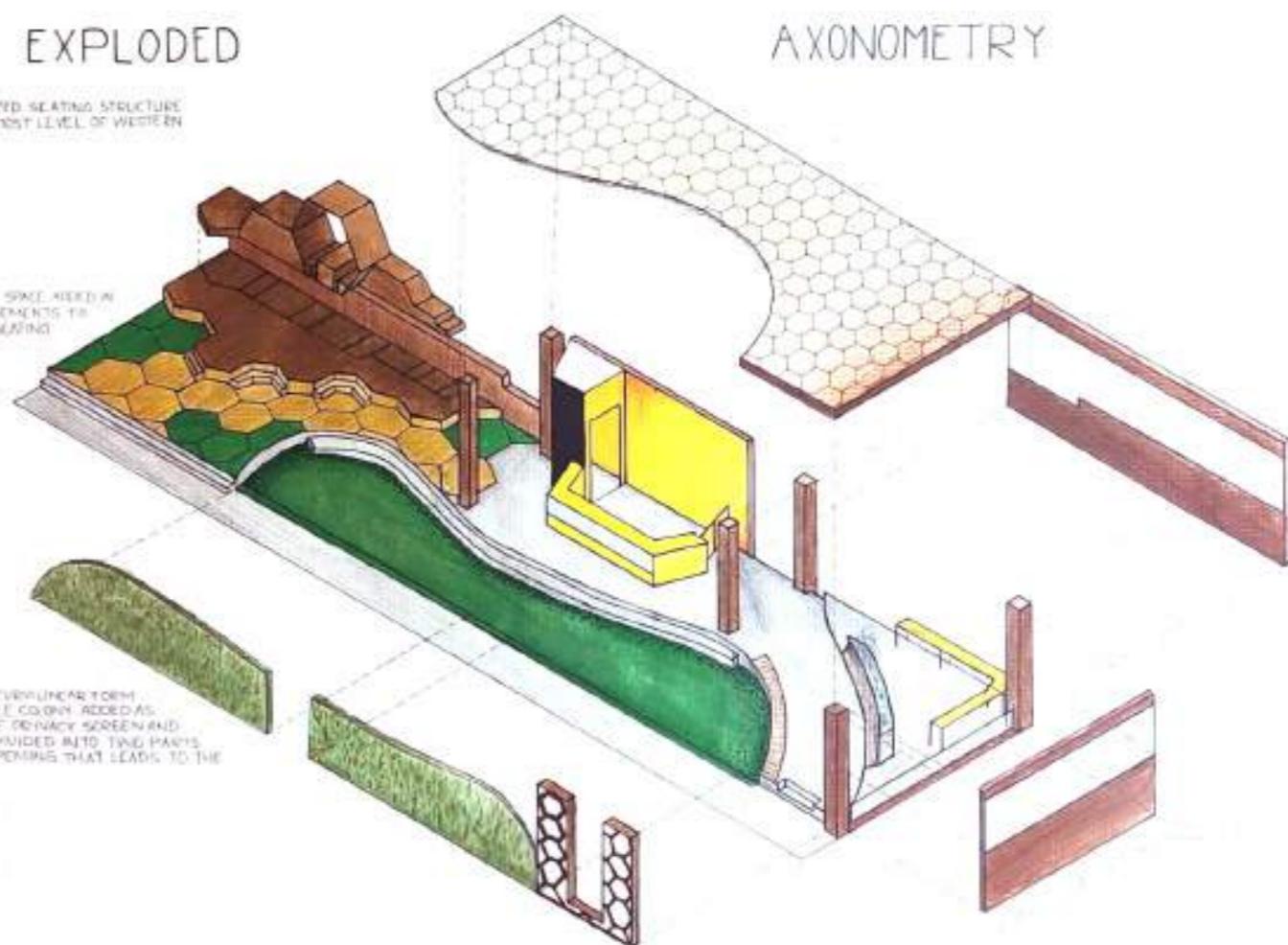


## EXPLODED

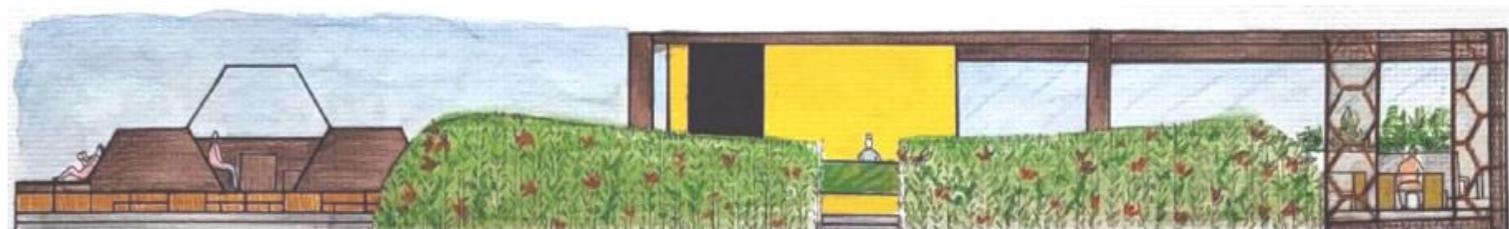
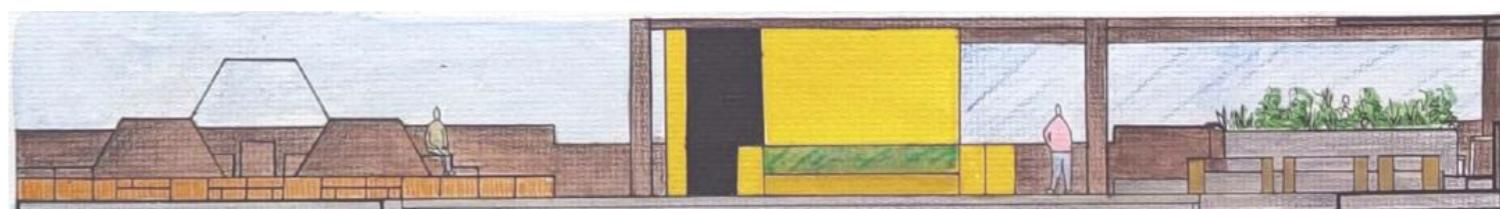
HONEYCOMB INSPIRED SEATING STRUCTURE ADDED ON THE TOP-MOST LEVEL OF WESTERN PART OF THE SITE

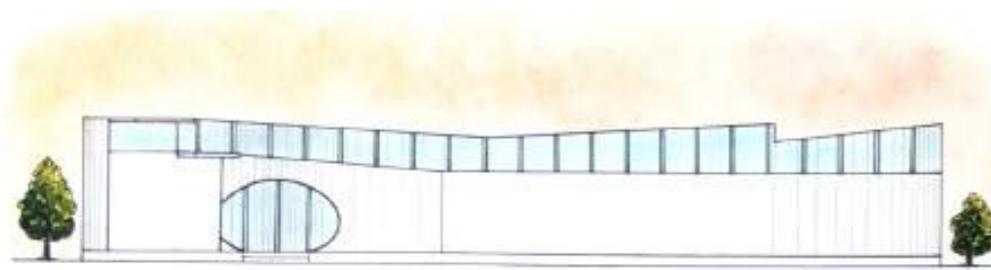
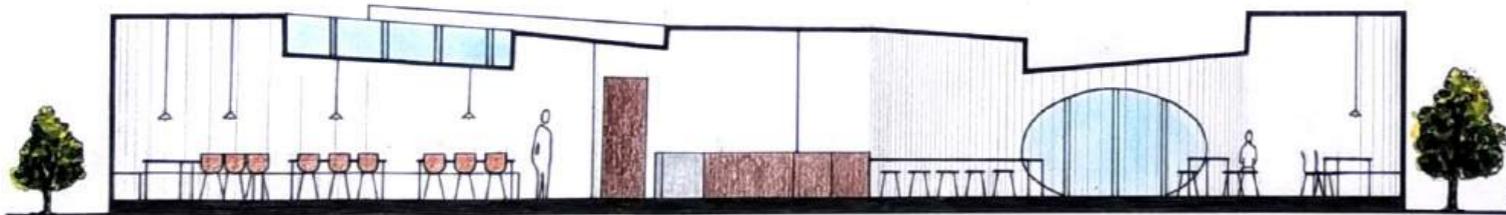
HEXAGONAL GREEN SPACE NEEDS DIFFERENT ARRANGEMENTS TO PROVIDE DYNAMIC SEATING SPACE

WALL BARRIER OF CURVILINEAR FORM INSPIRED FROM BEE COLONY ADDED AS A COMBINATION OF PRIVACY SCREEN AND CLIMBER, IT IS DIVIDED INTO TWO PARTS TO SPREAD AN OPENING THAT LEADS TO THE CAFE COUNTER

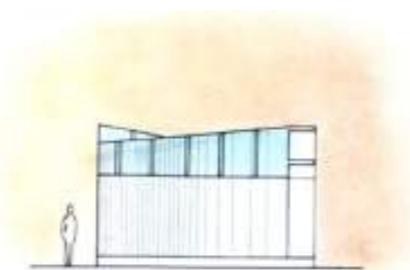


## AXONOMETRY





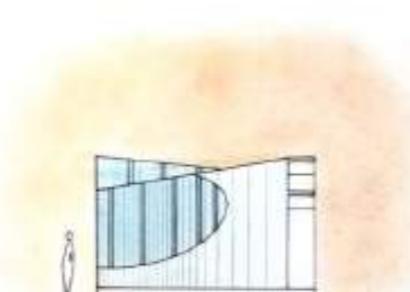
NORTH EAST ELEVATION



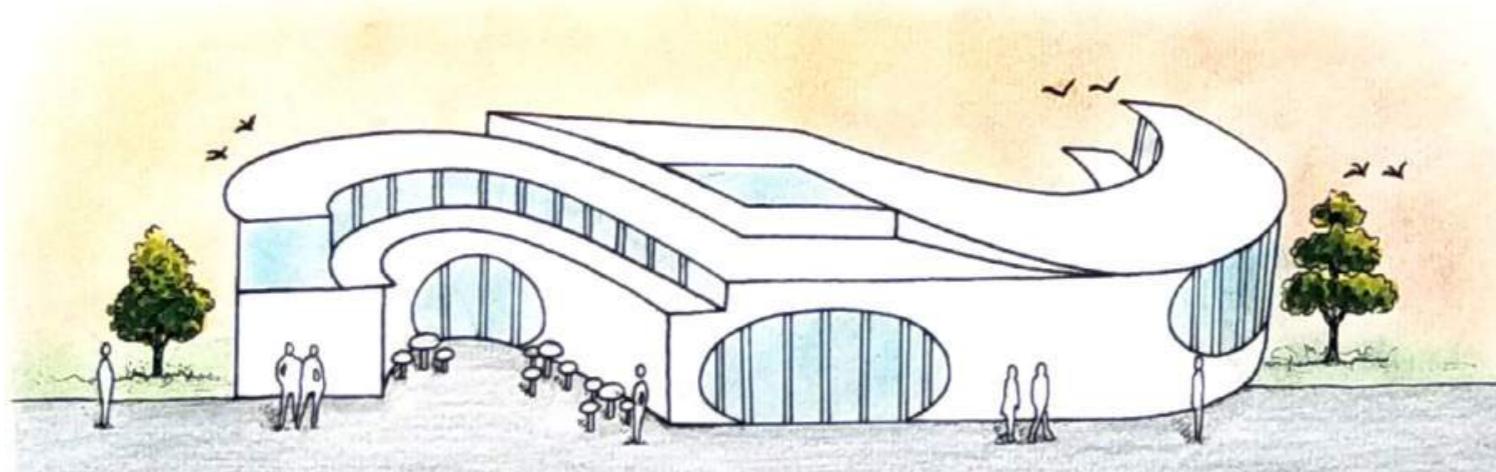
NORTH WEST ELEVATION



SOUTH WEST ELEVATION



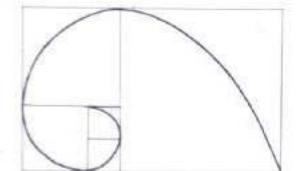
SOUTH EAST ELEVATION



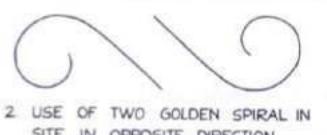
## THE GOLDEN SPIRAL CAFE

SUPRIYA BHUJU, B.ARCH-19

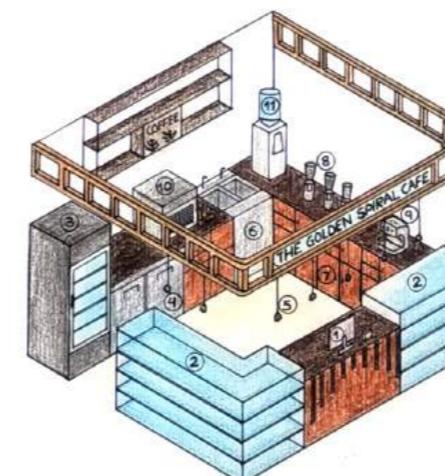
Inspired by the golden spiral, the cafe uses the delightful fractal curve of the golden spiral and its golden ratio for massing, incorporating the site and creating interconnecting dynamic spaces to provide an interactive and freshening atmosphere for students.



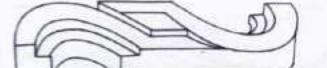
1. INITIAL FORM EXTRACTION OF GOLDEN SPIRAL



2. USE OF TWO GOLDEN SPIRAL IN SITE IN OPPOSITE DIRECTION



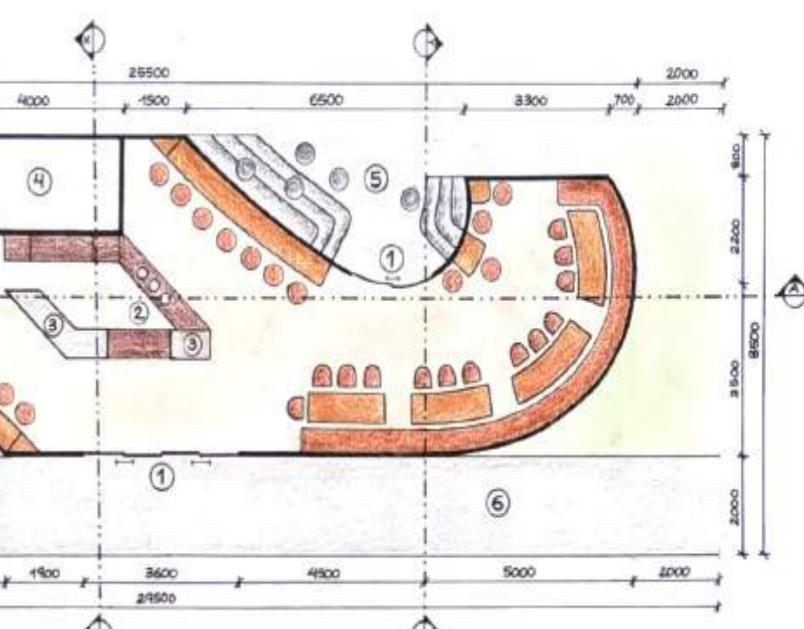
3. SLIGHT ALTERATION IN GOLDEN SPIRAL BY CUTTING OFF SOME PORTION



4. DIVISION OF A SITE INTO THREE ZONES

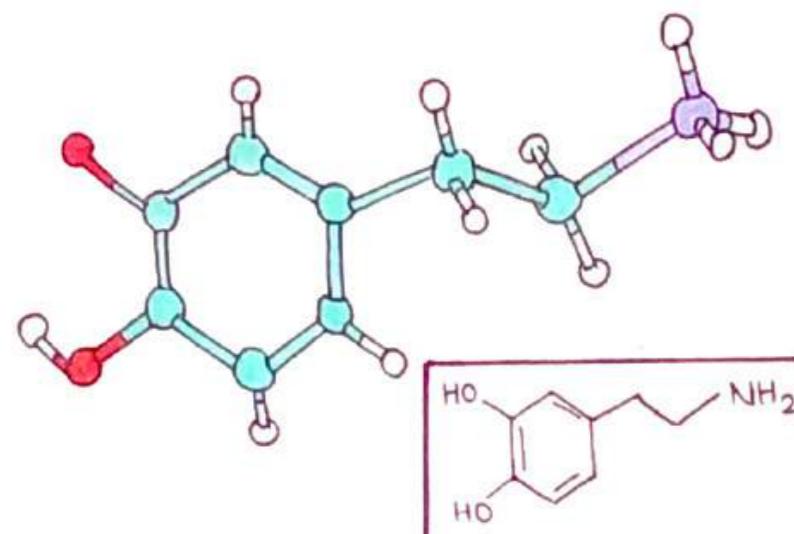
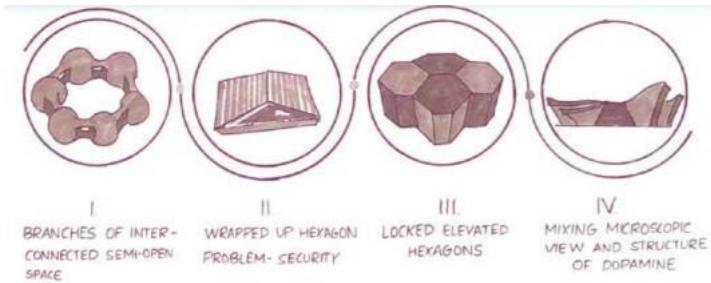


5. GIVING A VOLUME

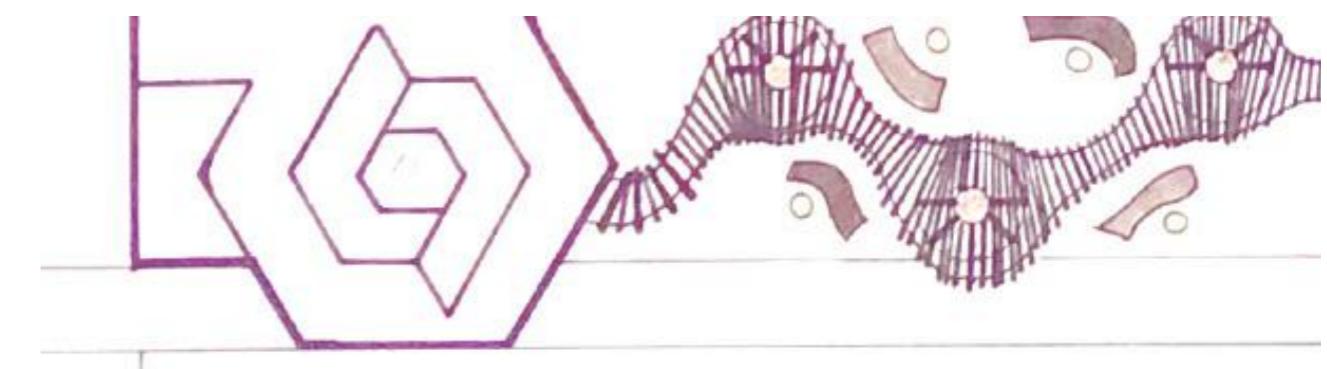
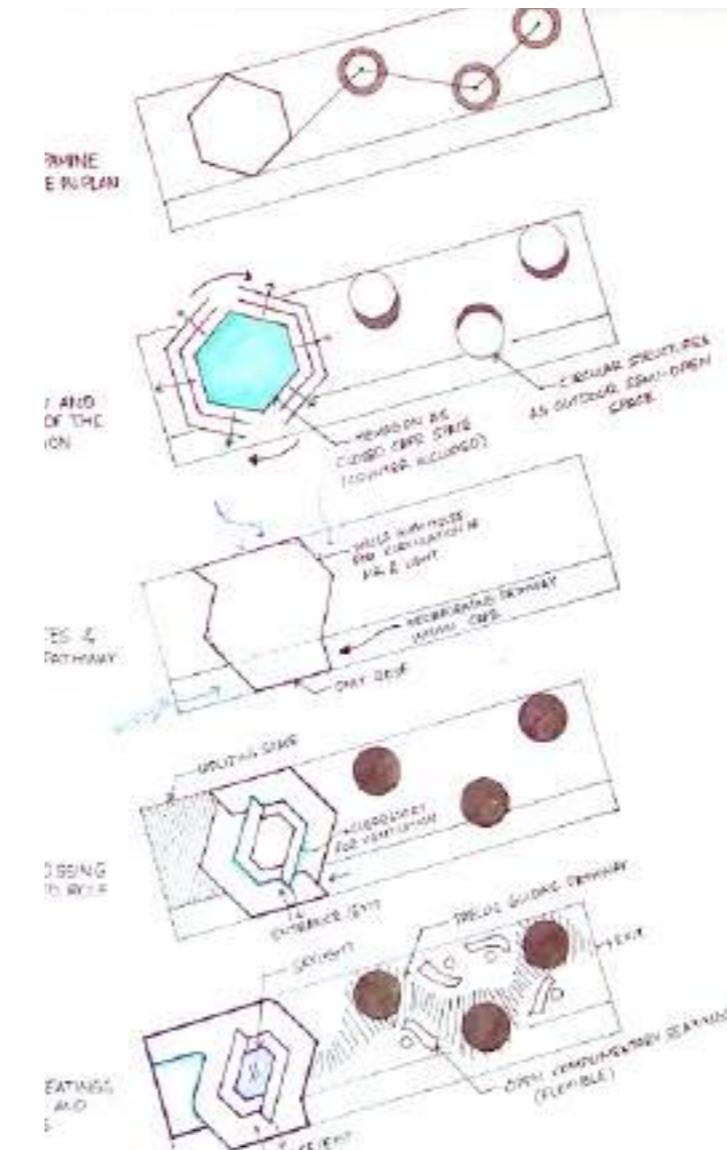
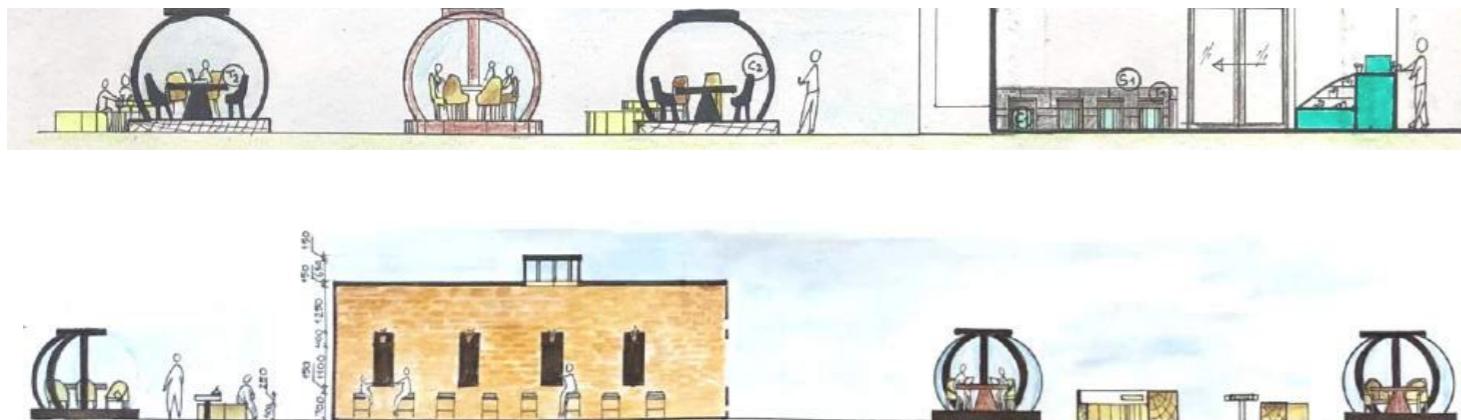


## DOPAMINE HUB CAFE

SHREYA TULADHAR, B.ARCH-19



Entitled "Dopamine Hub", the cafe inherits its circulation passages from the interlinkage between neurons as in a neurotransmitter, particularly dopamine. Working to and fro in form, eventually, the ultimate design is extracted. The hexagonal layout has a close brick structure and circles as subsidiary raised built-in platforms. The pergolas supplement the pathway and connectivity.





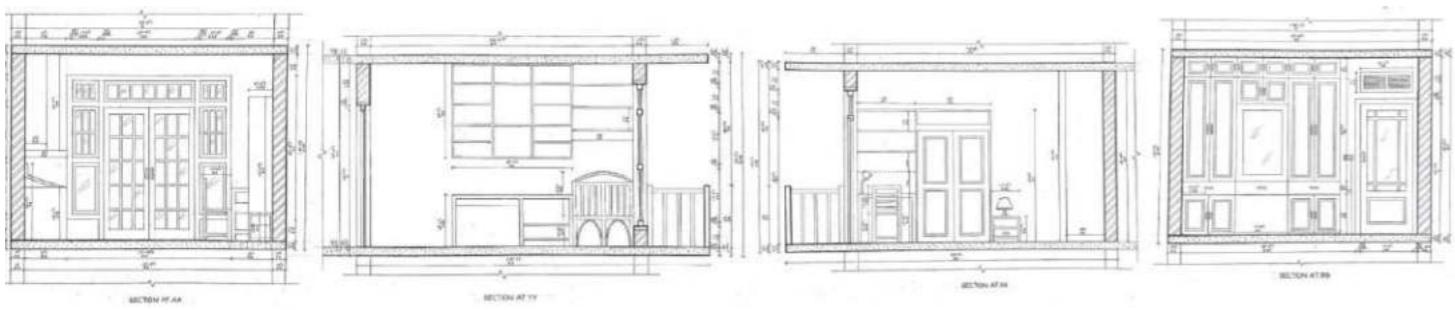
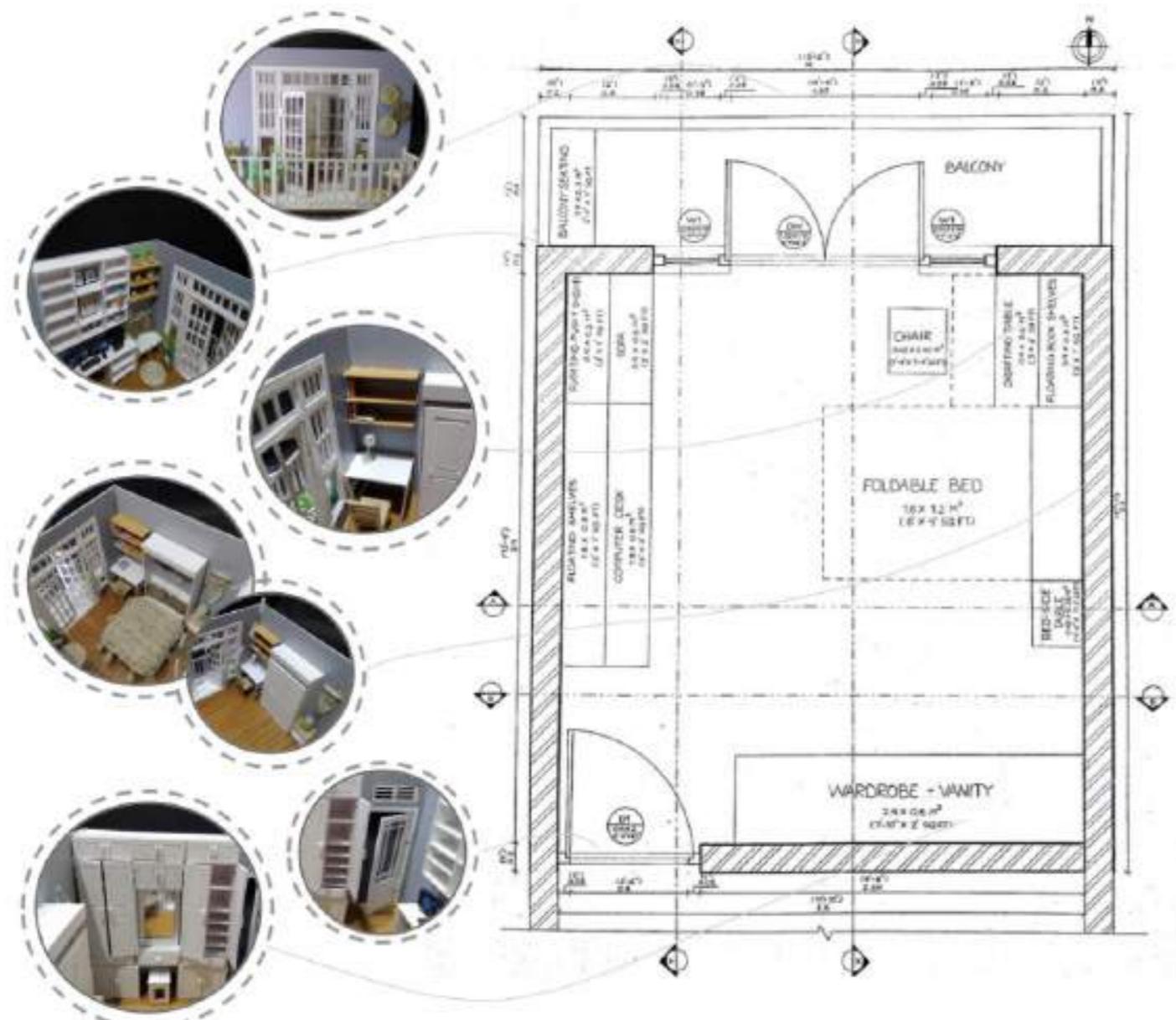
Artwork by DHIRAJ BHANDARI, B.Arch-17

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## REDEFINING SPACE

B.ARCH-19

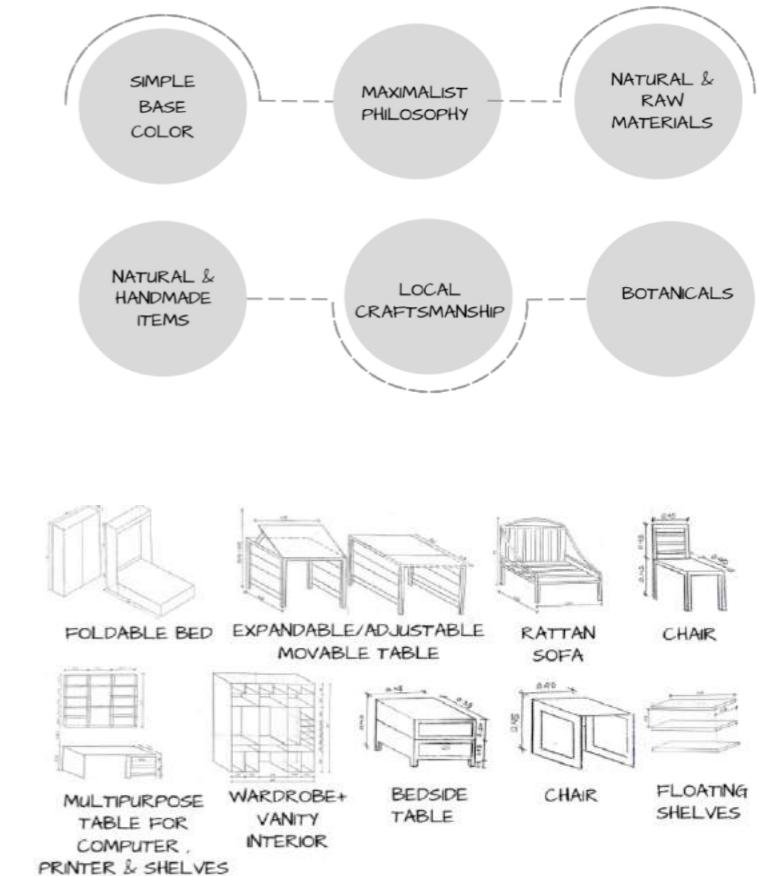
Redefining space was a project that aimed to continue the thought process and knowledge gained through Francis DK Ching's Form, Space and Order. It tried to incorporate the basics of form, space, organization and Principles along with a relatable architectural space. By considering the pandemic, this project involved redesigning/redefining a room in the students' own houses with the idea of shaping the space according to users' needs. During this project the students measured the internal space of the room, including the existing volume of furniture, its layout in the room, door, window, light and switches placement. After the analytical study of the existing space, every individual creatively designed the internal space as required.



## REDEFINING SPACE

SUPRIYA BHUJU, B.ARCH-19

To redefine one's room into the most functional space for an architecture student incorporating a mini design studio as well as creating a bohemian atmosphere.

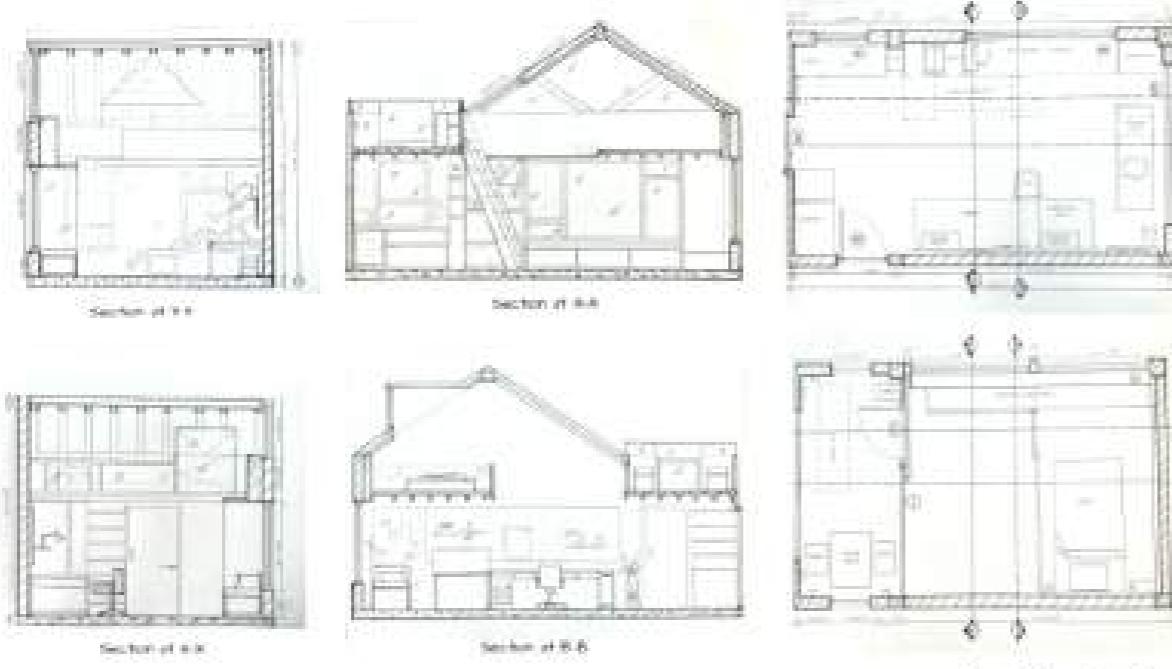


# REDIFINING SPACE

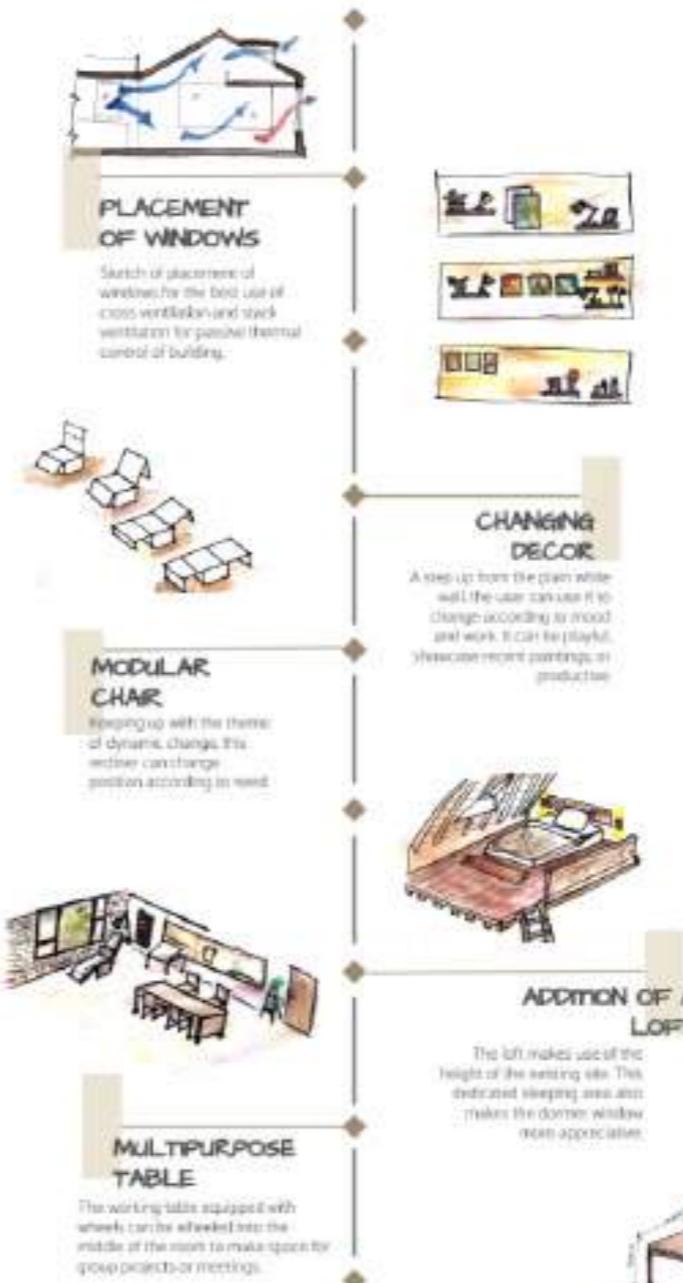
SOPHIYA ADHIKARI, B.ARCH-19



Dynamism expressed through modular furniture and furniture, enables the architect to inhabit her space towards change and growth in this redesigned studio shell. The raw industrial edge theme displays structural boldness while the personalization of mood boards conveys emotions in this architect's cocoon.



## CONCEPTUAL SKETCHES

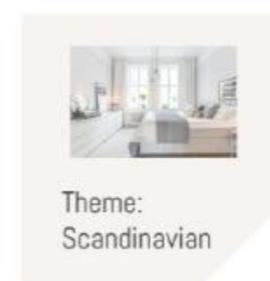


## FURNITURE DETAILS



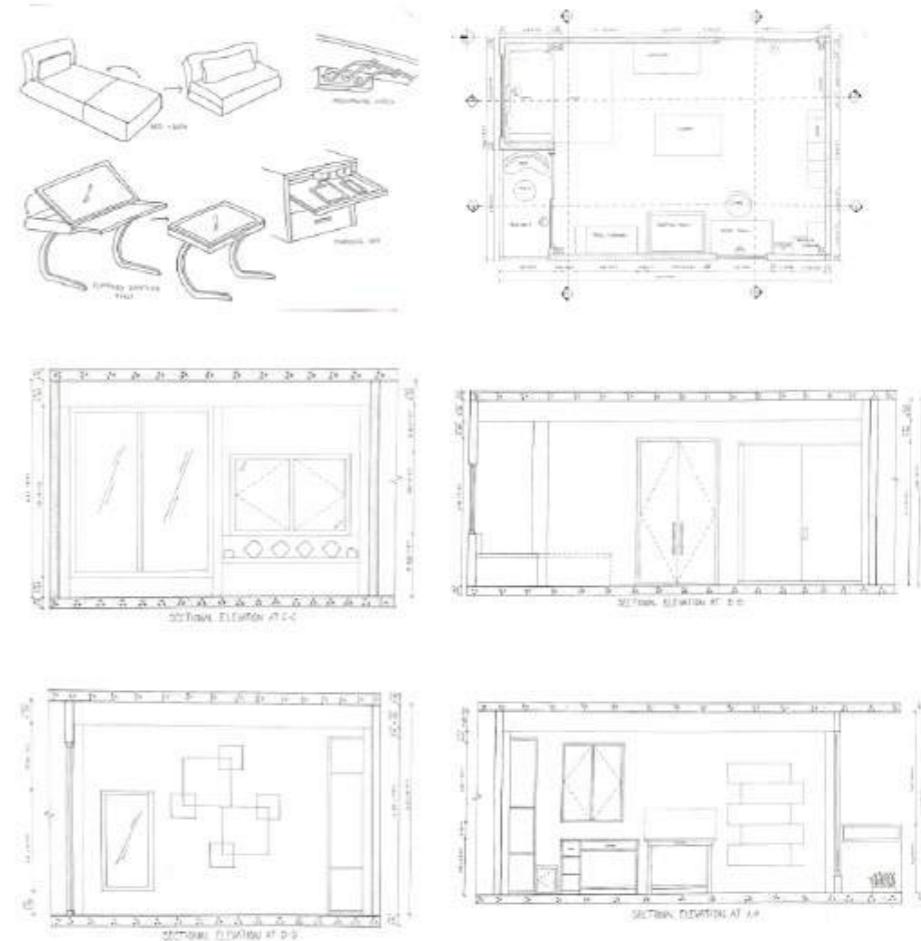


Analyzing and addressing the problems of one's room & creating a working as well as hobby space within an available volume with the essence of Nordic Scandinavian theme and the use of minimal furniture and indoor plants.



## REDEFINING SPACE

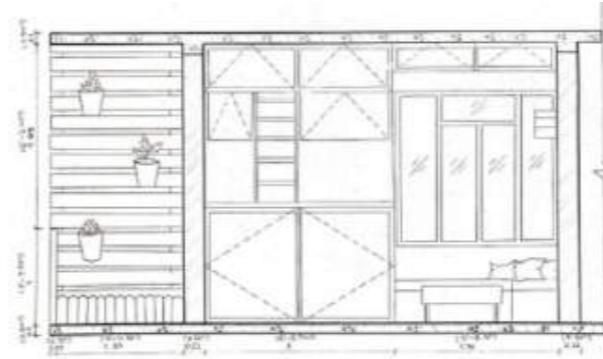
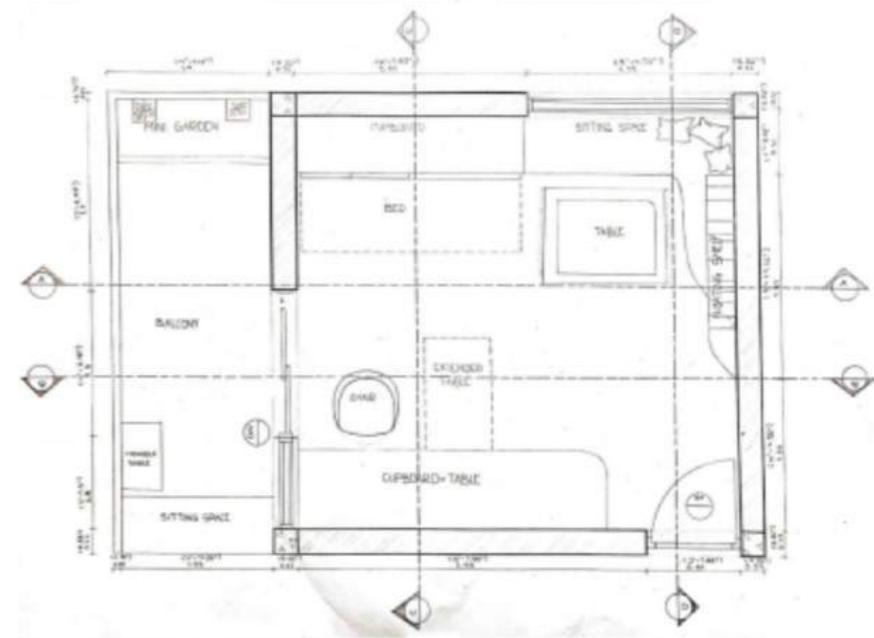
PRIYANKA SHAKYA, B.ARCH-19



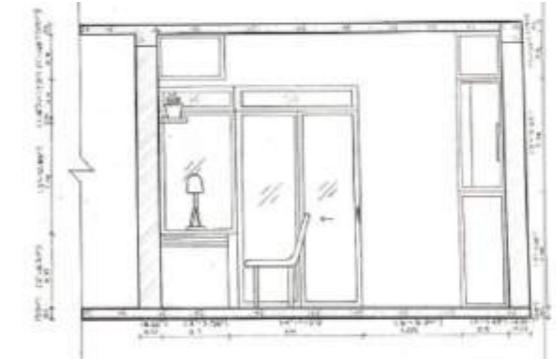
## REDEFINING SPACE

AAYASHREE SHRESTHA, B.ARCH-19

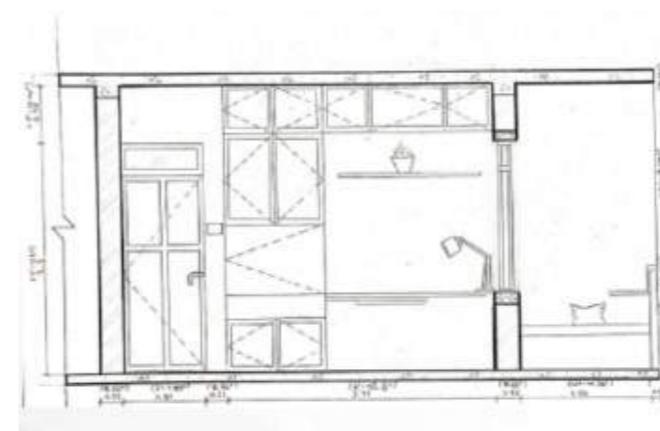
A room measuring 5.58M by 4.09M designed in a nordic Scandinavian theme with a dual function of a home office and bedroom equipped with spaces required to meet the user's personal and professional needs.



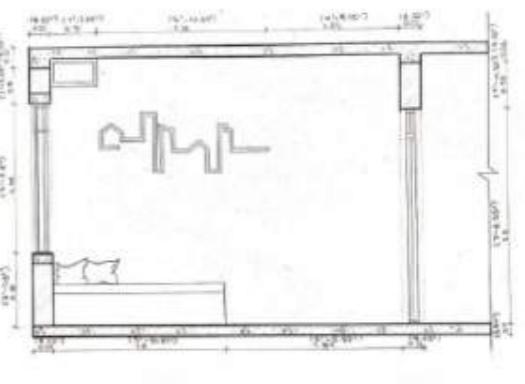
SECTION AT AA



SECTION AT CC



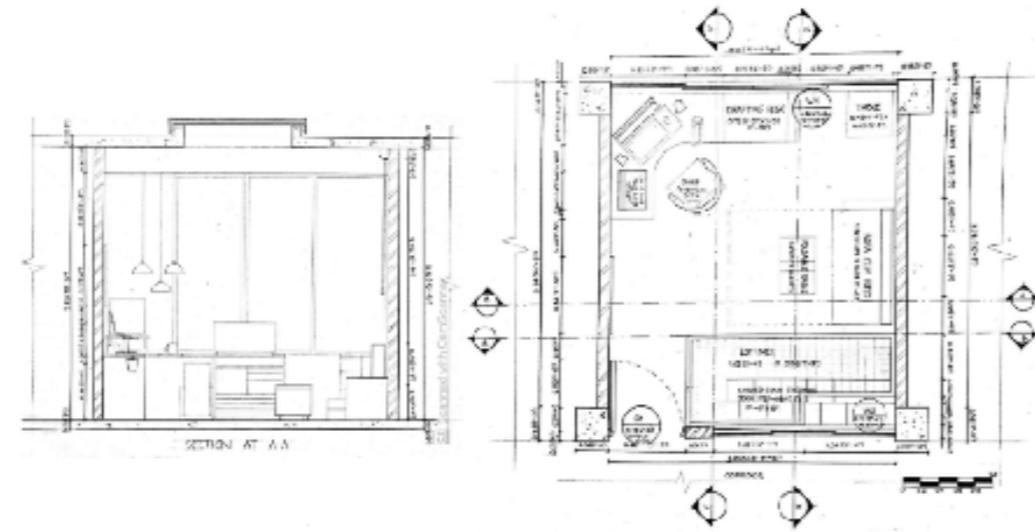
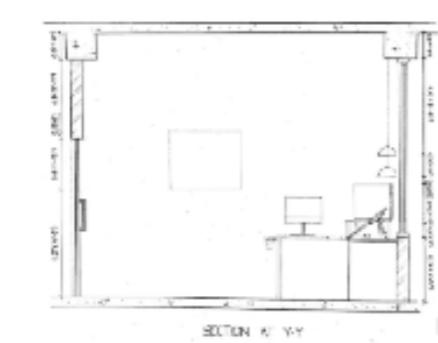
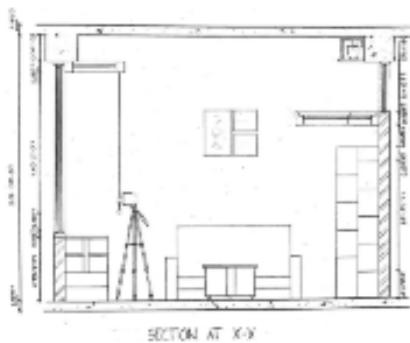
SECTION AT BB



SECTION AT DD

The room follows Nordic Scandinavian Style through the presence of off-white walls, wooden flooring ,plain but modern multifunctional furniture and a lot of natural lighting.

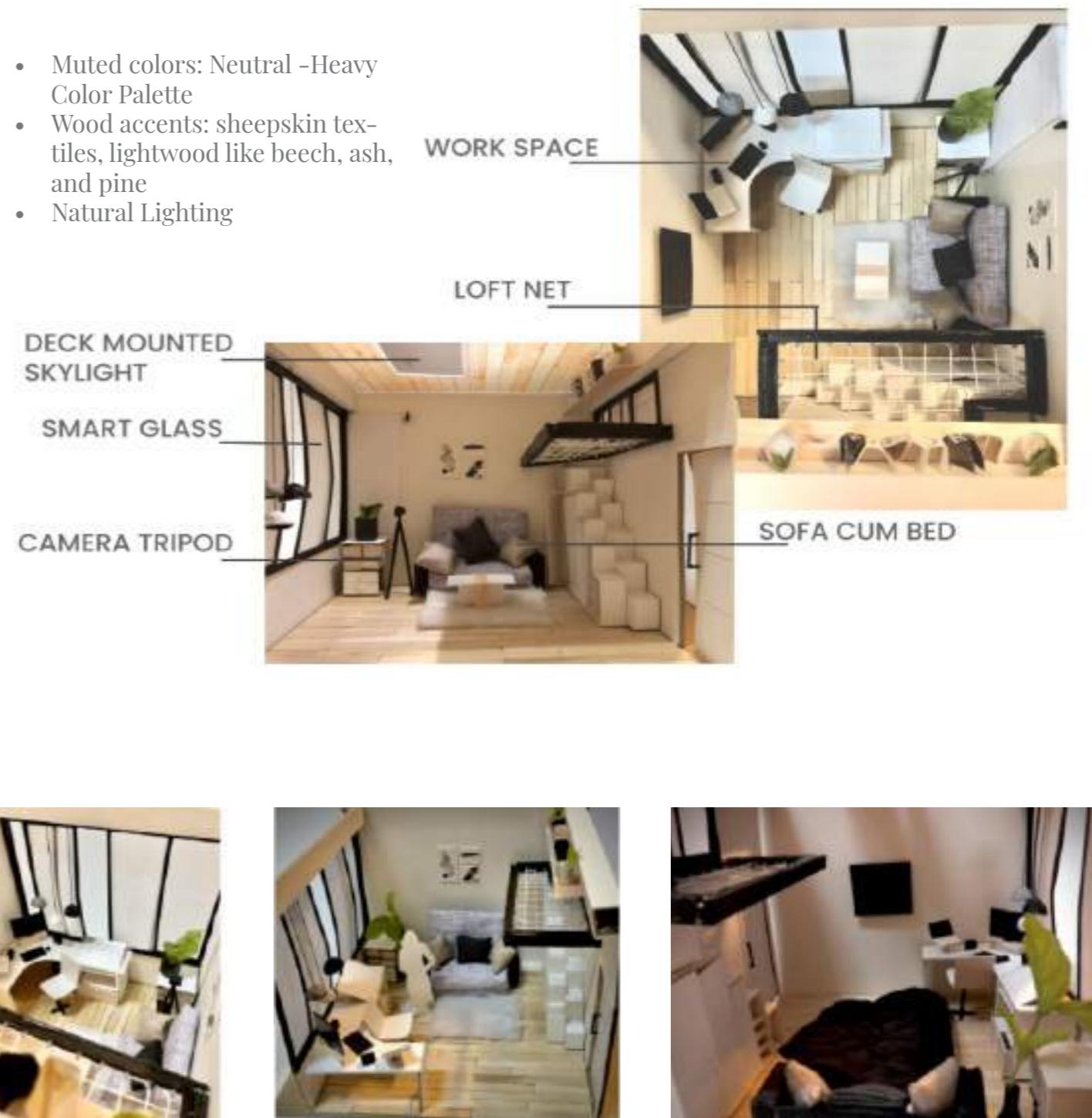
## Redesigned Room



- Muted colors: Neutral -Heavy Color Palette
- Wood accents: sheepskin textiles, lightwood like beech, ash, and pine
- Natural Lighting

## REDEFINING SPACE

SHREYA TULADHAR, B.ARCH-19





Artwork by MUNA PANDEY, B.Arch-19

P R O J E C T S

## PAVILION DESIGN

B.ARCH-19

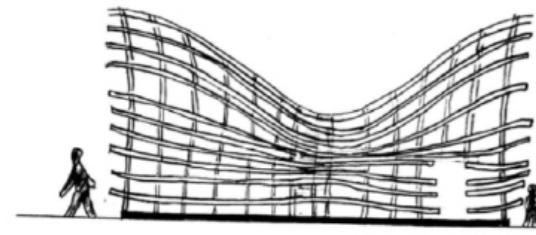
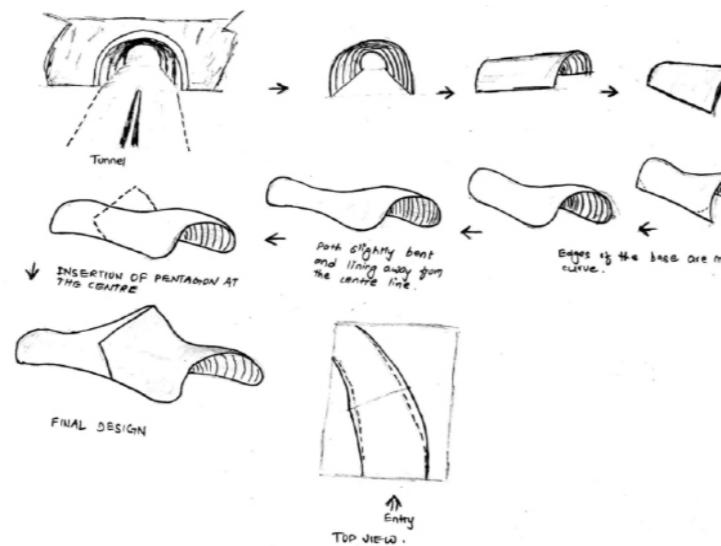
With principles learnt from Francis DK Ching's Form, Space and Order, designing a pavilion aimed to work with aligning the basics of form, space, organization, light shadow, and principles with design ideas. This project aimed to explore the knowledge of circulation, proportion and scale and infuse them in the project design.

The brief is to build The Serpentine Pavilion for the year. It is one of the most exciting projects in London's cultural calendar and one of the top ten most-visited architectural and design exhibitions in the world. Every year since 2000 the Serpentine Gallery has commissioned a temporary summer pavilion by a leading architect.

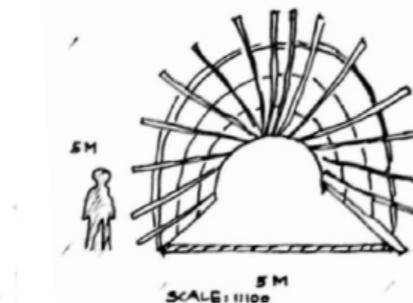
## PAVILION: THE TUNNEL

SARAD ARYAL, B.ARCH-19

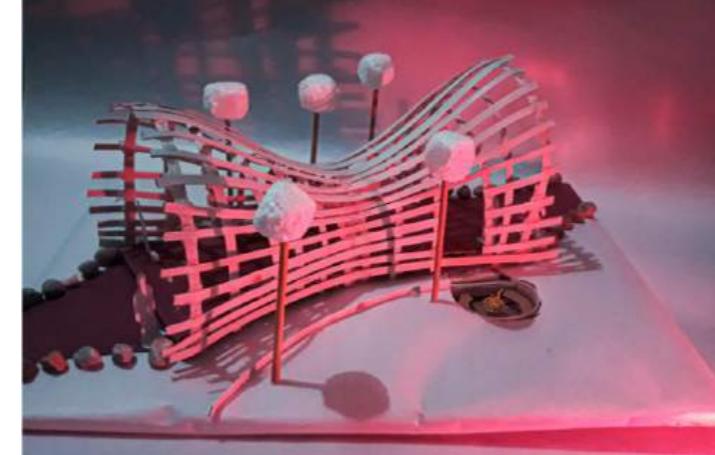
"Pavilion the Tunnel" derived from the concept of Tunnel not only serves the beautiful social space for gatherings or hangouts for families and friends but also beautifies the site with the curved stripe with voids in between all over the entire structure and also with the large access from the two ends of the lying axis with the narrow central section.



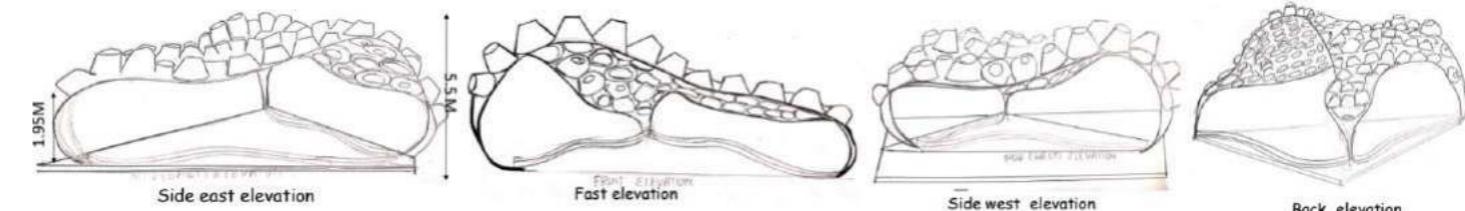
SIDE ELEVATION



FRONT AND BACK ELEVATION



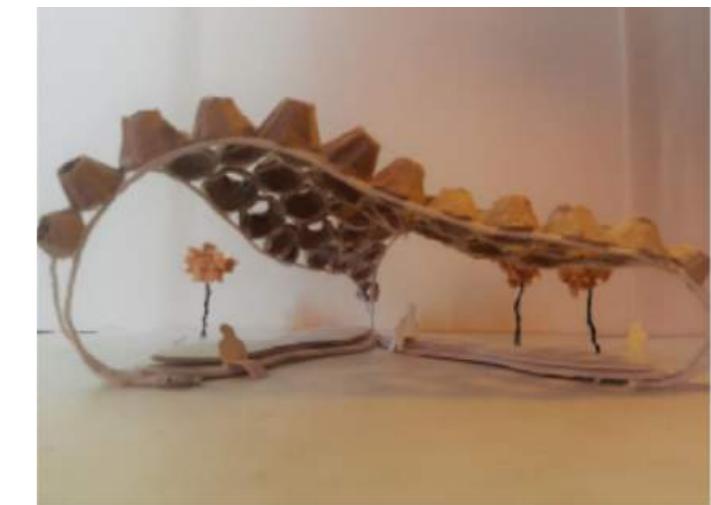
The shadow pavilion is designed with the use of soft curves whose space is made entirely of holes penetrated on top of cone shaped form inspired from clusters of hills, aims to comfort the visitors on the oasis of shade through the play of dynamic shadow pattern.



Small Pyramidal structures can be made up of timber as it is more flexible to use and easily blends with surrounding nature.



Pine tree plank can be used as a load bearing structure.



## THE SHADOW PAVILION

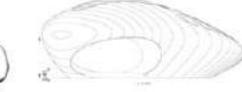
SARISHA DESHAR, B.ARCH-19



This flowy curve is derived from case study of Burnham pavilion.



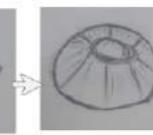
Three curves of different height interconnected to each other forming a triangular plan.



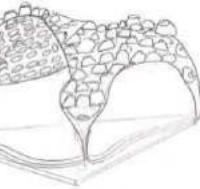
Idea of using soft curves from the philosophy of Ma Yansong



Derived from pyramid like shape of hills



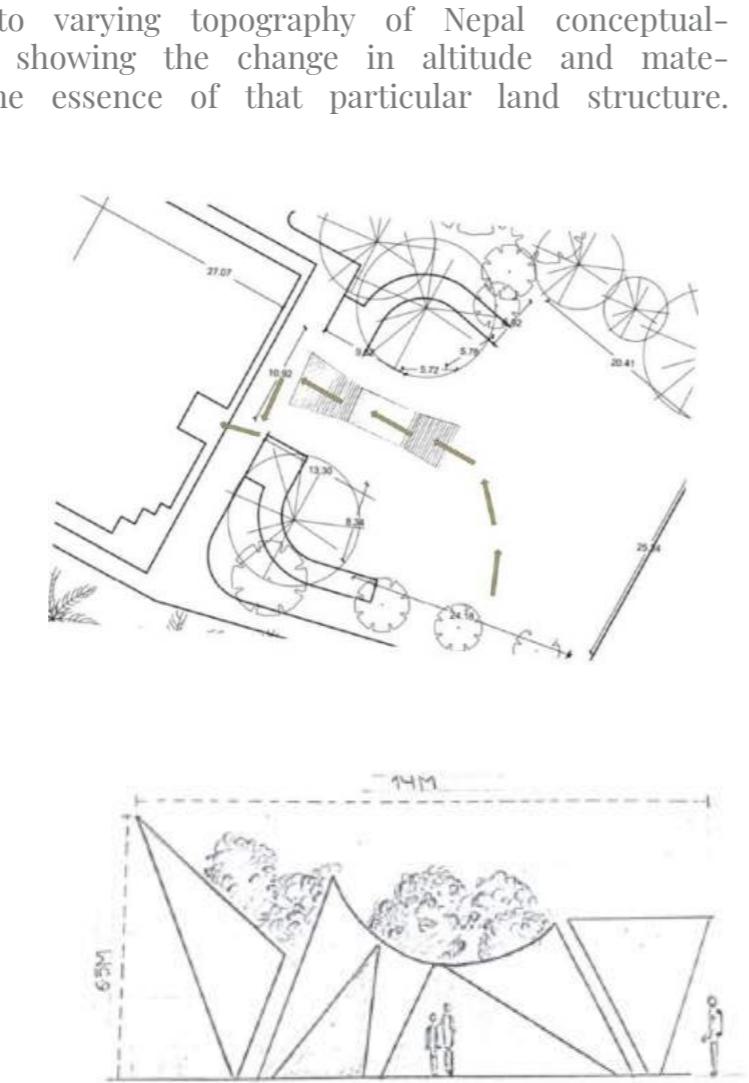
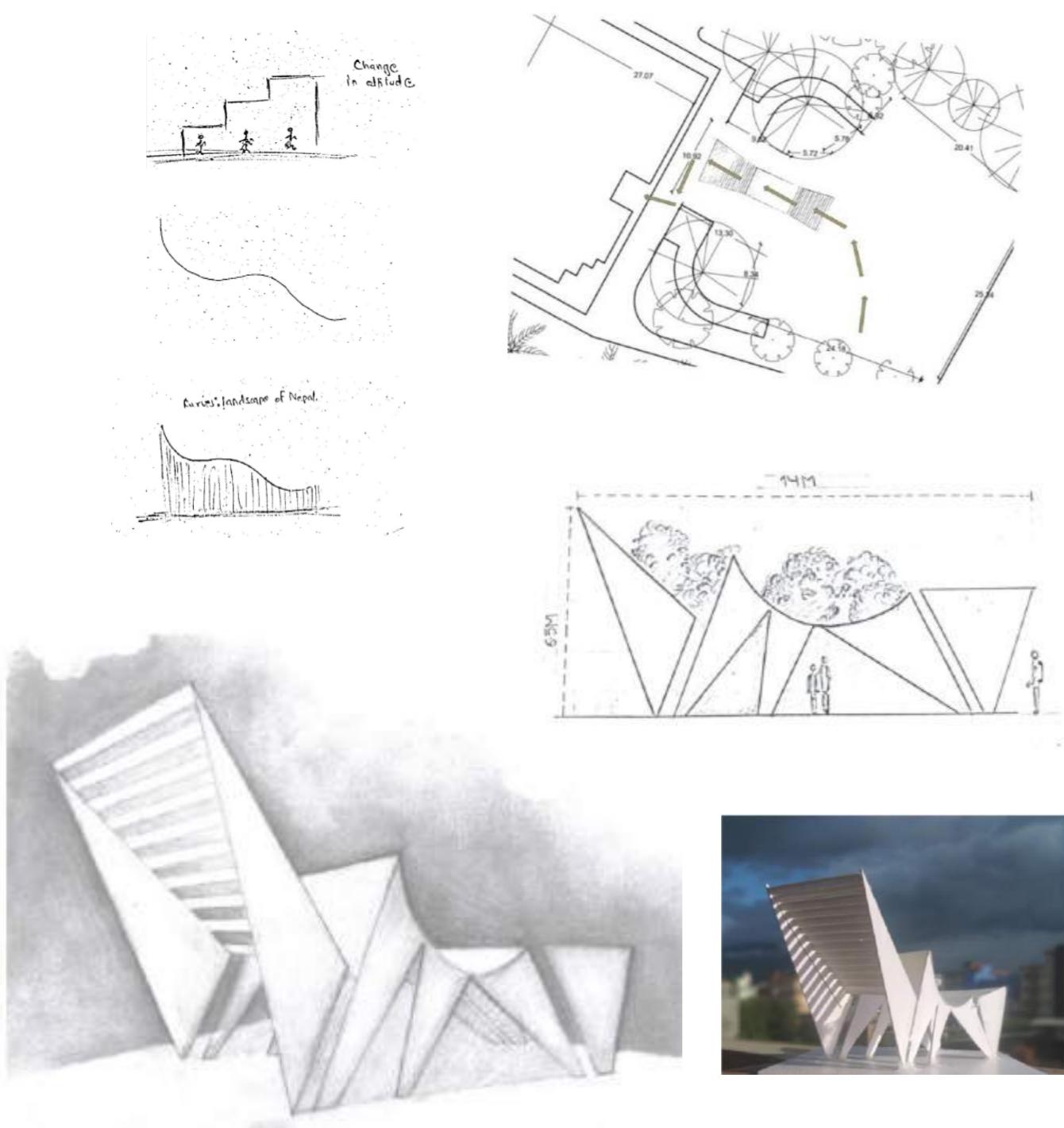
Cluster of pyramids of different sizes with small hole on top to cast shadow



Back elevation

## PAVILION DESIGN

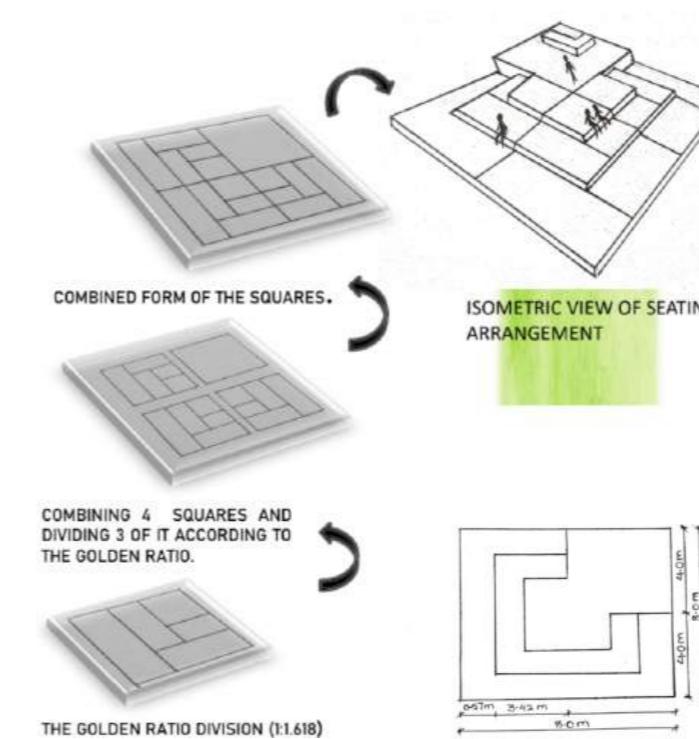
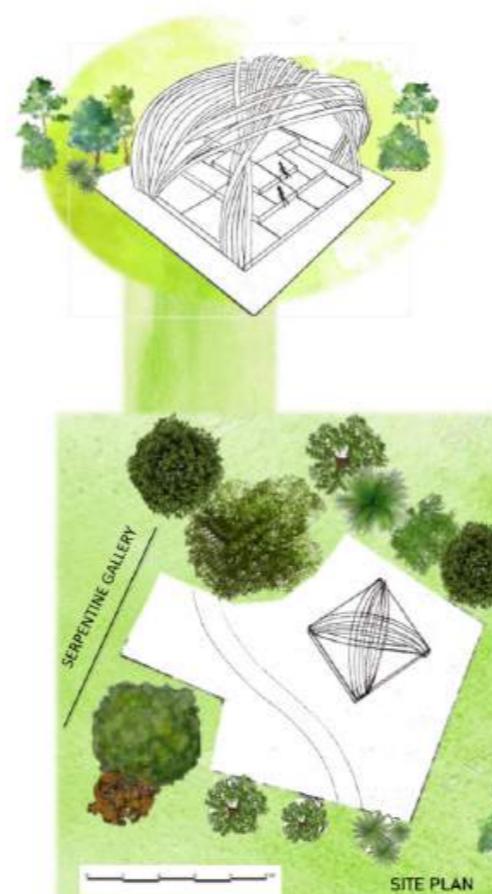
SRIZAN KC, B.ARCH-19



The pavilion is an ode to varying topography of Nepal conceptualized with a simple curve showing the change in altitude and material choice that reflects the essence of that particular land structure.

## THE GOLDEN RATIO PAVILION

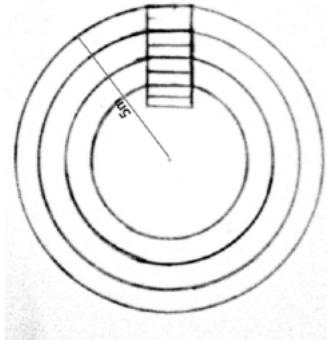
SHRUTI SHRESTHA, B.ARCH-19



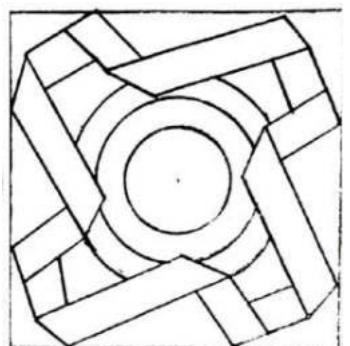
The idea of Golden Ratio pavilion was conceived based on the geometry of the golden spiral- a logarithmic spiral whose growth factor follows the golden section, a ratio. Different sets of curves of golden spirals, running in opposite directions, form the criss-crossing contours on the roof with levelled floor also inspired from the ratio of golden spiral i.e the ratio of (1:1.618), creating a space where people can gather and relax.

## BRAID PAVILION

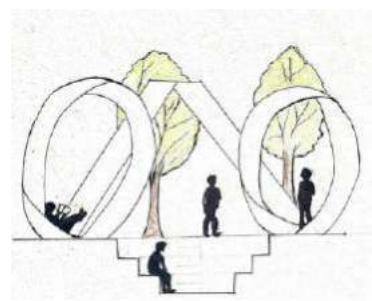
PUJA SILWAL, B.ARCH-19



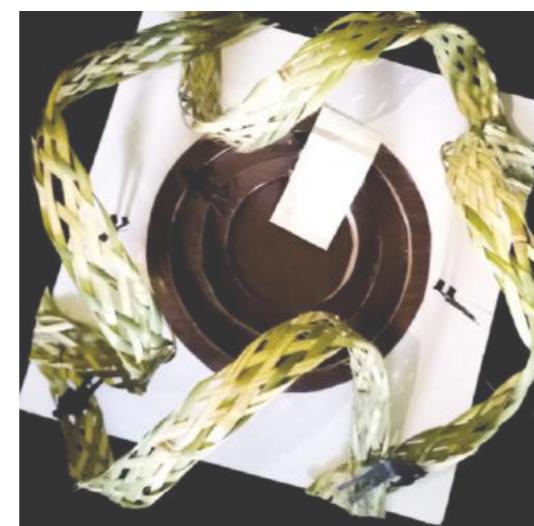
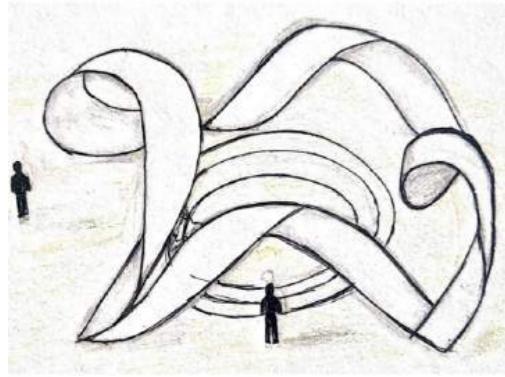
FLOOR PLAN



ROOF PLAN



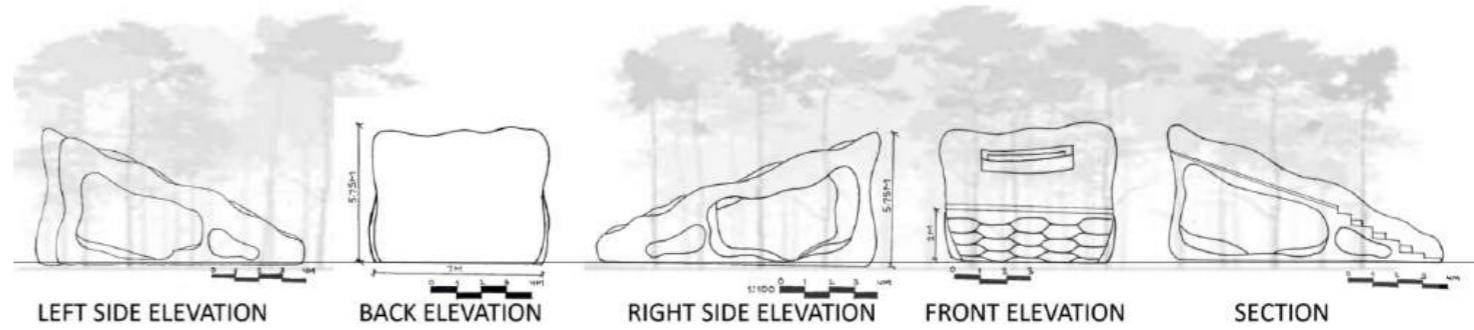
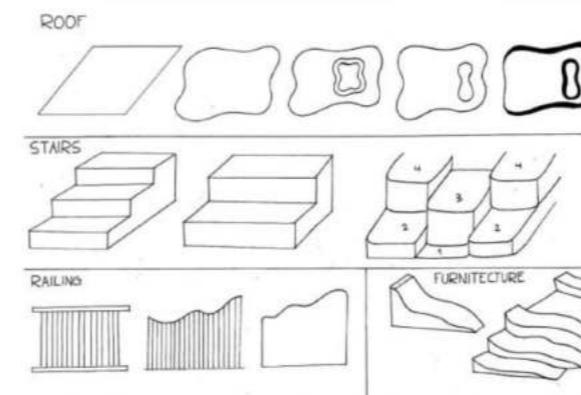
SECTION



"The Braid Pavilion" created with a concept of twisting the braid in looped form with corner and playful spaces and landscape seatings, glorifies the excellent bending resistance and tensile resistance of the material: bamboo..

## THE CURVATURE PAVILION

AAYASHREE SHRESTHA, B.ARCH-19



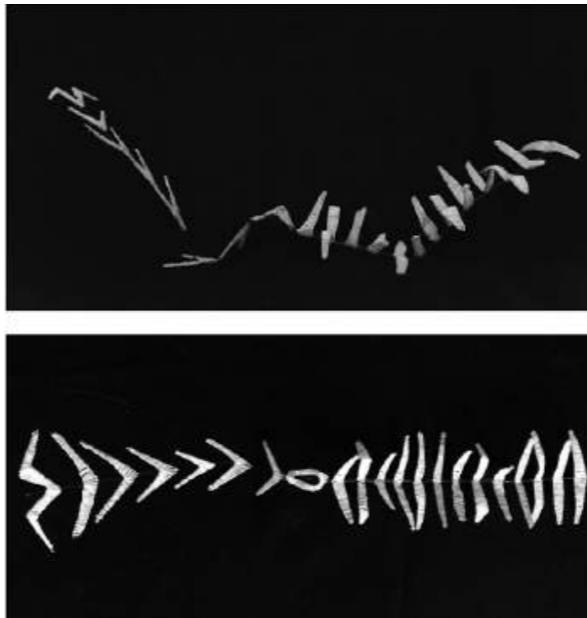
## BIOMIMICRY

B.ARCH - 19



Shreya Tuladhar

The inspiration for this biomimicry is taken from the disparate layers inside of deer antlers; the horn sheath, bony core and epidermal layer. The antlers being extensions of the skull is depicted by the wires branching out beneath the exterior of cotton & paper that resembles a velvet covering for the antlers. Further, the irregular punctures over the surface are the fundamental tissues undergoing shedding and regrowth yearly. A whole network of metal wire makes it rigid and flexible at the same time and the cotton mixed with fevicol sits well exposing like the white cartilage that the antlers are originally made up of.



Sarahana Shrestha

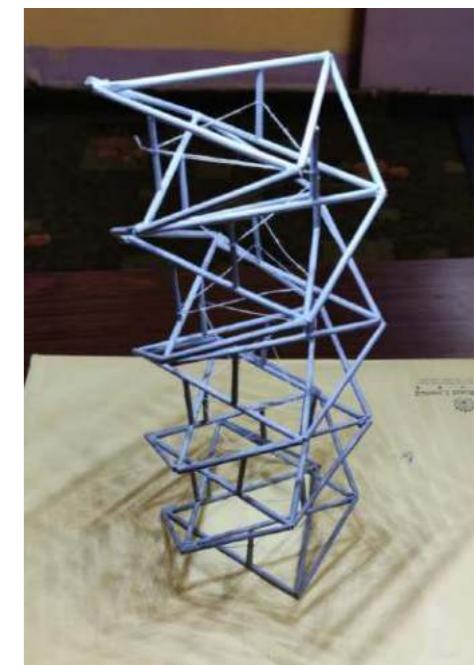
The inspiration for this biomimicry is taken from the movement of a pelican bird. Pelicans are water birds characterized by webbed feet, long beaks and large throat pouches for catching prey. This design is primarily based on the motion of the pelican's wings and its flying sequence as it dives in, catches its prey and flies out of the water. This motion is captured by the different shapes of wire tied in white thread. Furthermore, the waves on the surface are formed by its webbed feet as it runs over the water and pounds the surface before taking off.



Srizzan K.C

The inspiration of this project is based on the mimicry of a grasshopper's hind limb. It represents the phenomena of movement of a grasshopper's hind limb when its muscle contracts and relaxes, working just like spring because of which the grasshopper hops into the open air.

The inspiration for this project is taken from the spider web; web development process, shape and color of the web. As the web development process is completed in nine steps, the nine thin triangles of newspaper rolls depict this process and white thread gives the essence of a spider web. The endpoints of triangles and vertical newspaper rolls represent the main support and sub-support of a web. Moreover, the light gray colored spiral and hexagonal look resembles the color and shape of a web. When light is projected, the form casts shadow identical to that of a spider web.



Priyanka Shakya

# IN CONVERSATION WITH-



Ar. Prajal Pradhan, the founder of AFA, is an architect (B.Arch 2007 Nepal) and a landscape planner (Ms Landscape Planning, Sweden). His notable projects include Agantuk Resort, Dhulikhel, Sajha Party Head Office, Bakhundole, Stone Barn Meditation camp, Latvia (3rd Prize winner international design competition), Ethiopian Satellite School, Ethiopia (Finalist, intl design competition), O2 Bar and Grill, Pokhara, Swornim Boutique Hotel, Naxal, Antalya Expo 2016, Turkey, Big Tiny Coffee House, various European sites (Finalist, Intl design competition) and The Urban Space, Satdobato. He also has been successfully working on recycling and reuse-based projects and some of the major ones are De rustic restaurant, Durbarmarg, Bajra Cafe, Durbarmarg, O2 Bar and Grill, Pokhara and Sajha Party Head Office, Bakhundole.

## AR. PRAJAL PRADHAN

### What is Architecture for you and how has the definition changed over the years?

Architecture for me is very simple, it is about what and how you feel in a space. It is when you are in that space, the feeling it emits, and the emotion stimulated because of the built environment. The definition changed for me over the years, I was still understanding architecture. I thought architecture was all about drawing—that houses were built just by drawing. So being intrigued by that, I came to pursue my future in architecture but I didn't understand the meaning of it until a later phase in my career.

### What are the crucial or necessary skills and qualities that are needed to become an Architect?

Passionate is the only skill one needs to have, it's to have a hunger and need to understand at least about what architecture actually is. Saying "I like art so I'll study architecture" might not work in this field. Art and architecture are quite related but they're different too. So knowledge, research, and interest is necessary. Having all these will then make you realize if you are actually passionate or not. So that is, I think, a prerequisite for pursuing architecture. People who have joined with a clear understanding of what architecture is will have resilience. People who don't begin to realize it in the second year, third year, slowly start to lose interest in it and could be depressed and frustrated.

### Is there anyone in the community that you follow or admire for their architectural abili-

### ty or someone you look up to and why?

I don't think I get inspired by one person alone. I get inspired by everything. I get inspired by books and movies. So it's not that I only get inspiration from architects. But, if you're talking about architects who inspire me, one person is Siddhartha Gopalan. He never taught me directly but I've learned a lot from his work, especially interior design. In the international scene, Tadao Ando is my favourite architect. I even keep a photo of him with me at all times. He is for sure my biggest source of inspiration.

### What changes have taken place in the architecture field of Nepal since you started your architecture journey? What further changes do you expect in the future?

When I started, I found it to be very primitive. During that time, there wasn't much software available. The internet wasn't as widely available as today—there were a lot of limitations. But now, the world is at your fingertips, you can learn a lot about architecture, be it software or drawing. If you have any queries, you can get in touch with any experts. In the past, while rendering a small scene or perspective or a corner of a room, it took hours on end. Now, when we make 3Ds, the software itself renders it, that's the major leap. But, unfortunately, the growth has not taken place the way it should have. There have been technological advancements, but the quality of design has taken a nosedive in my opinion. I don't know the reason for this, but I feel that way.

### How do you think we can elevate the significance of landscape architecture, in the context of Nepal?

In places like Nepal, landscape architecture should play a major role but people here are still understanding architecture, they have not understood it yet. They think architects mean engineers or are 'Thekedar' who dig land and build houses. So I think it's too early for us to take charge given the current conditions. It's a little complicated, I can't just say that this is the actual reason for not valuing landscape architects in Nepal though. Now that people are just beginning to understand architecture, it'll still take decades for landscape architecture to be significant.

### What was your motive behind starting your own firm, A for Architecture (AFA)?

Very frankly speaking, when I see what is happening all over the world, the innovations architects are coming up with, how they are thinking out of the box, I think about how in Nepal, that doesn't happen at all. People here don't understand the core values of architecture. That architecture means designing spaces, not just facade treatment, not just layout planning. I started A for Architecture with that same vision. I wanted to make a team that would actually try and prove that Nepalese are also architecturally capable. That's why we take part in design competitions, to show that not just us, but Nepali architects, Nepali design firms can be just as good.

### How do you balance a competitive and healthy working environment in your firm?

There's a lot of competition in architecture because there are thousands of firms that have been mushrooming, evolving but I do not want to compete with them. Our office's

objective is crystal clear. We don't see or worry about what other firms are doing. We do take part in design competitions where we get competitive but we don't take other local firms as competitors. Architecture is all about work, even on weekends and it can get toxic. I'm still exploring and trying to find ways to minimize that toxicity, so maybe one way to do that is to create a good environment. At AFA, we have a very studio-like environment, quite homely with no restrictions. Whenever we get frustrated, we stop and play cards or watch a movie. So, I think this also at some level helps to break the toxicity.

**Among all the projects you have done to date, which project do you feel close to your heart? And Why?**

To be frank, there's no such project which I'm 100% satisfied with but let's say, we created one good project which was satisfactory in a design competition, a peace pavilion design competition in Senegal. When we completed this design, we achieved a certain level of satisfaction. I keep looking back at that design from time to time and I feel that energy. I think this can be considered as one of my favourite projects but it's not like my dream project, I think that is still yet to come.

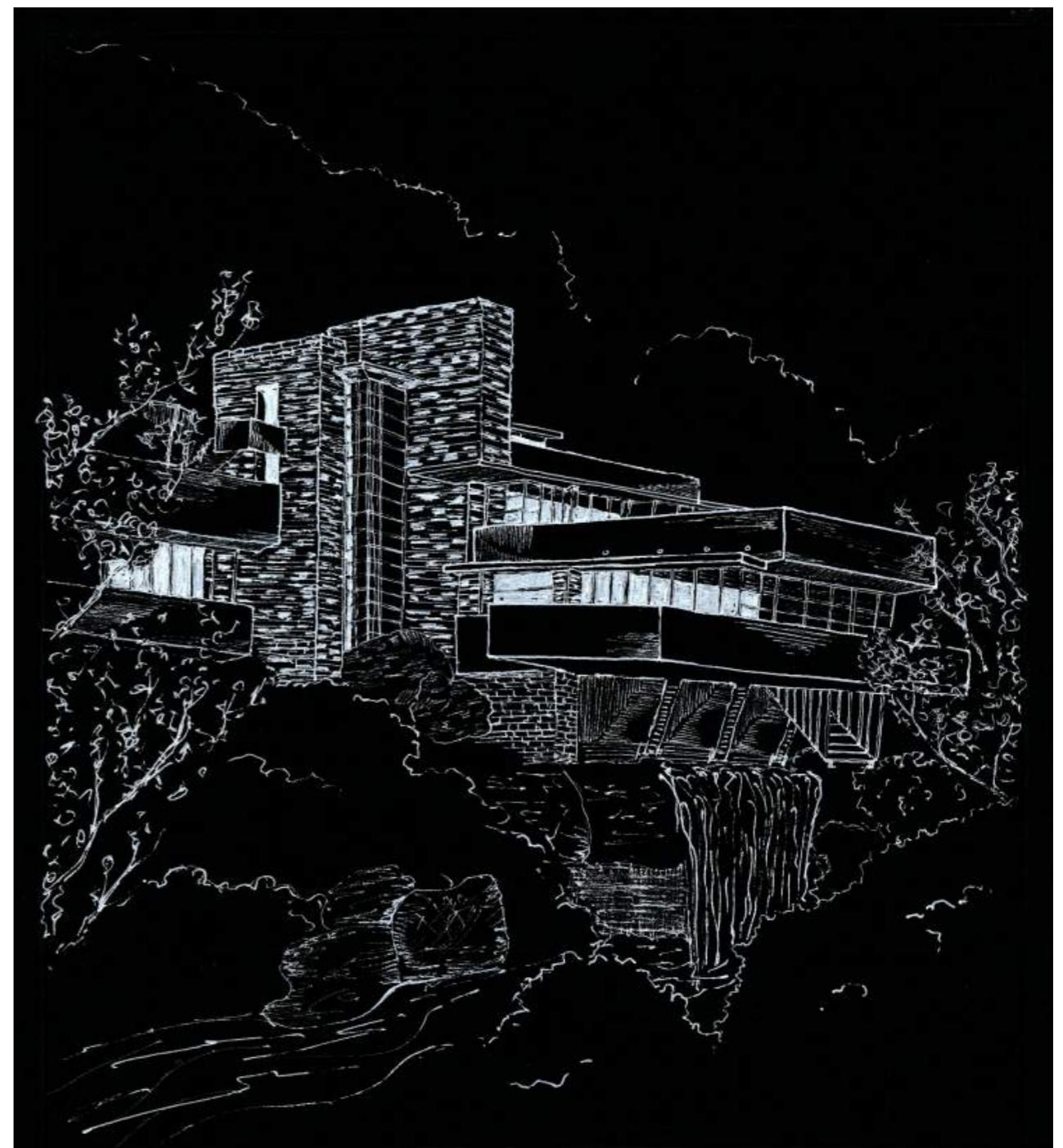
**Does every recycled material add the same aesthetic value to the design? How difficult is it to design with recycled materials?**

When I go to junkyards, I feel heavenly. I used to explore a lot before. I personally love recycled materials because these are thrown materials and it's the responsibility of an architect to reuse them. Using them and seeing them be transformed into aesthetically pleasing elements in design makes one feel that they have achieved something really big. There's a wide range of possibilities, so I suggest students, young architects explore junkyards. You'll find at least something, so you can make lights or furniture or wall cladding or anything with those materials. I think only creative architects can create a habitable environment with thrown materials. So, I just love working with recycled materials.

**How challenging was it to design the Urban Space in Satdobato? How did you expect the end result to be?**

The Urban Space was a challenging project because this is a different type of housing. The major limitation of this project was the small piece of land where we had to design 12 units. Changing the paradigm of housing was another challenge. We thought about creating a boundary-less community, so you don't feel like you're living in housing. We wanted to create a sense of belongingness. At the same time, we created a community space, a common backyard where children could play, run, go out, read, communicate and play with the neighbours with an intent to foster social harmony. Due to the limitation and high prices of the land, the requirement of 12 units later became 11. Because of that limitation, the project hasn't met the level that we imagined it to be. But we've optimized it to the best of our abilities. I wouldn't say it's our dream project but it's very different from what is practised here in Kathmandu, Nepal.

\* \* \*



Artwork by DHIRAJ BHANDARI, B.Arch-17



Artwork by AABHUSHAN MAN SINGH TULADHAR, B.Arch-17

PROJECTS

## MEASURED DRAWING

B.ARCH-18

Measured drawing is the architectural drawing of pre-existing buildings and sites drawn accurately on the basis of field measurements. This project involves several groups going to their respective sites, taking a series of measurements and finally drafting them on sheets. The existing sites/buildings that are chosen to be drawn have a historical or a cultural significance. This project enables students to better understand the features and construction technology of these buildings. Moreover, it will help keep an architectural record of the buildings in question.

# THANPATI NARAYAN TEMPLE

LOCATION: LAYAKU, BANEPA

PROJECT BY AASHRAYA RAJKARNIKAR, BHAWANA BHANDARI,  
DEEPANSHA SITAULA, EUREKA BHOCHHIBHOYA, YUTHICA ADHIKARI



Perspective View

Thanpati Narayan Temple is a traditional Newari temple located in Layaku, Banepa. It was constructed around the 4th to 7th Century C.E. during the Lichhavi Period. The temple is dedicated to Lord Krishna hence, is also known as the Krishna Mandir of Banepa. The temple is used for day-to-day religious activities and is managed by the local guthi of Bhote Marga in Layaku.



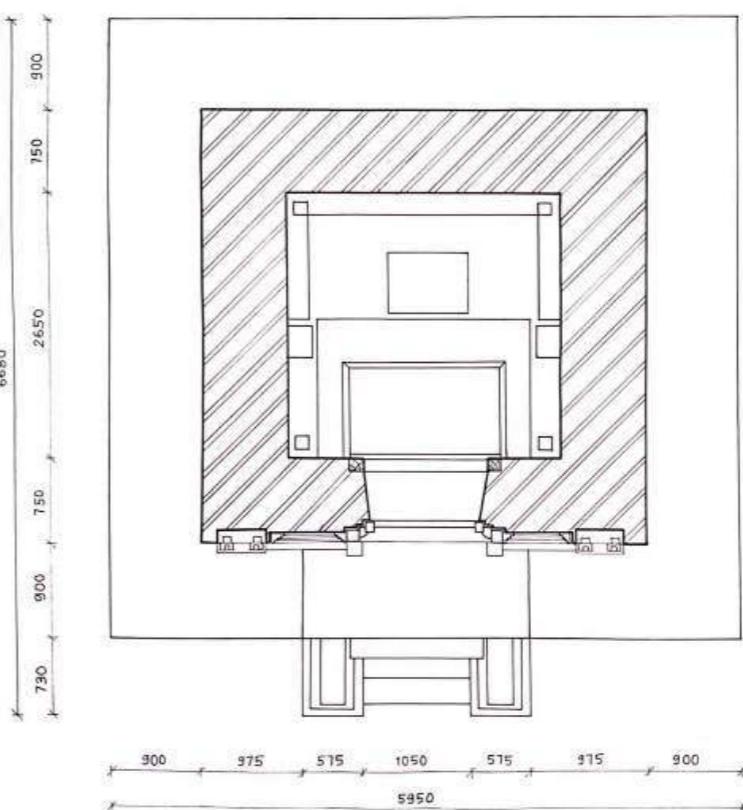
Lion Iconography



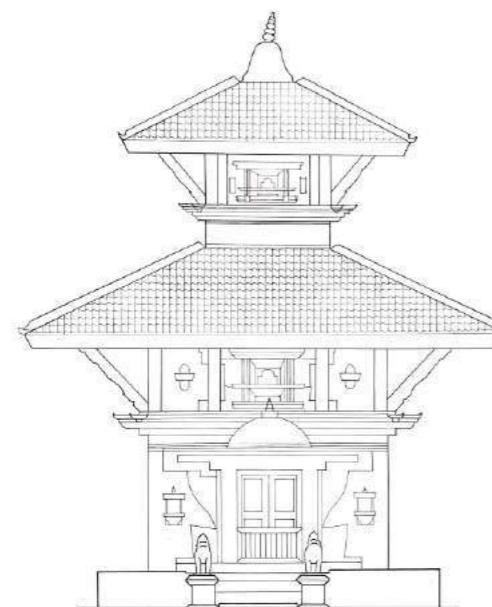
Garuda



Master Plan



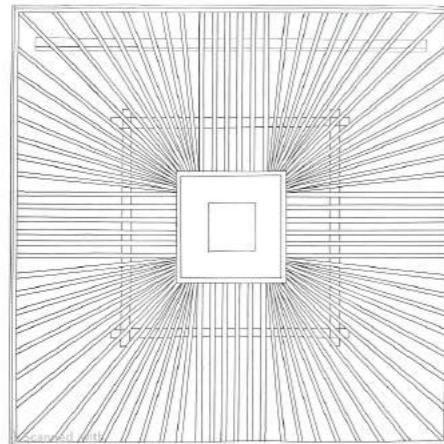
Ground Floor Plan



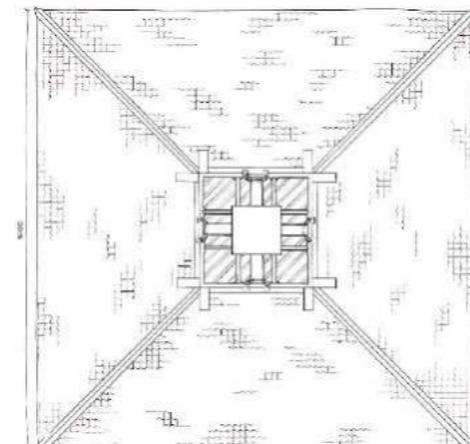
West Elevation



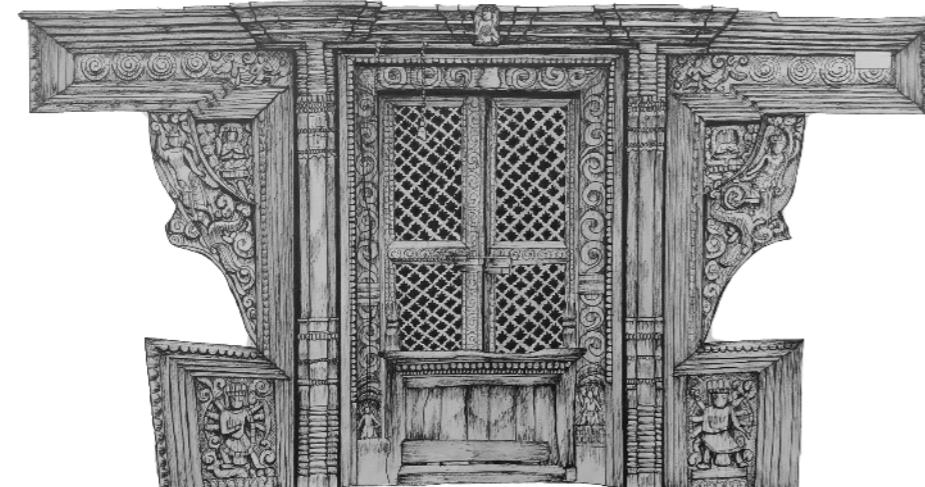
South Elevation



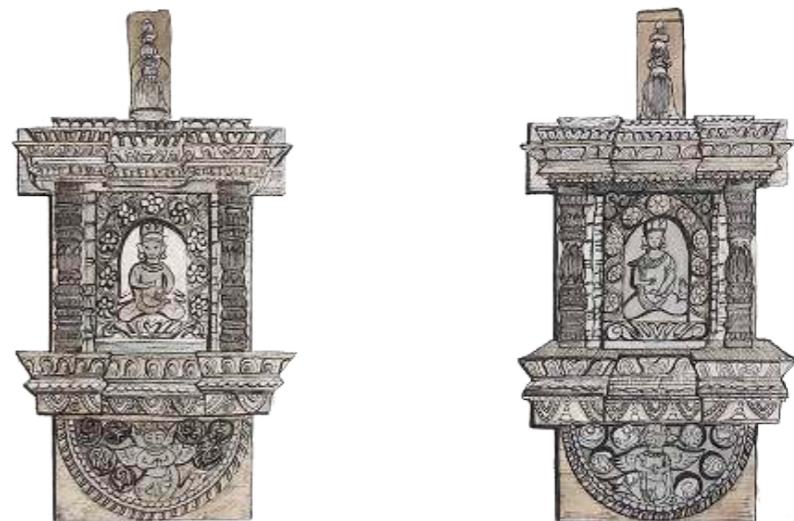
Roof Truss Plan



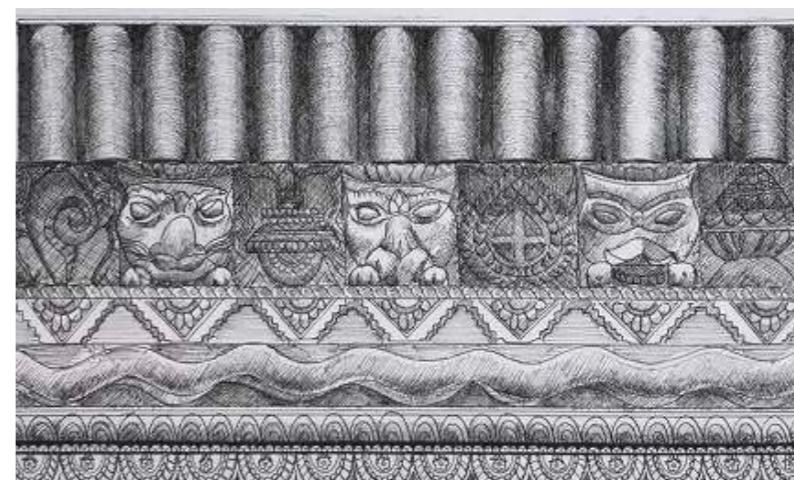
First Floor Plan



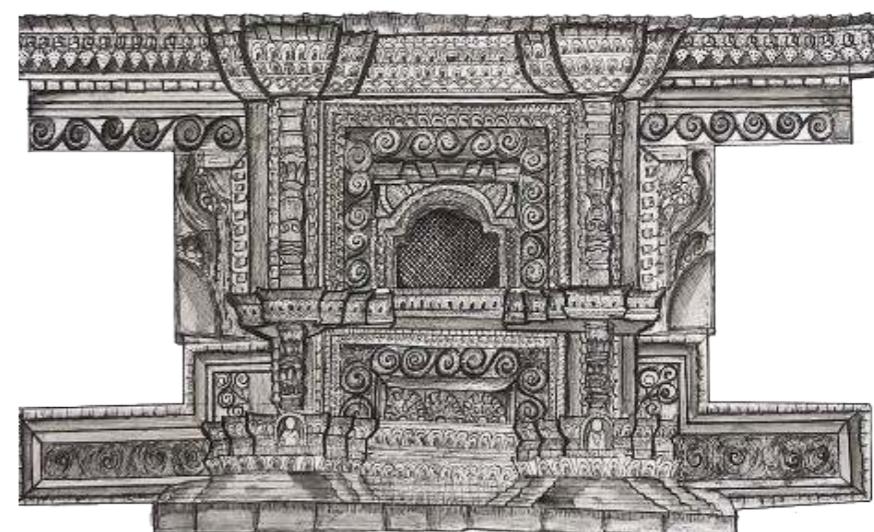
Door Detail



Niches Detail



Cornice Detail



Window Detail

## NEWARI GHAR

LOCATION: DHULIKHEL

PROJECT BY PRIYANSHU KAYASTHA, KAPIL NEUPANE,  
RAKSHA CHAUDHARY, SHITAL PUN MAGAR

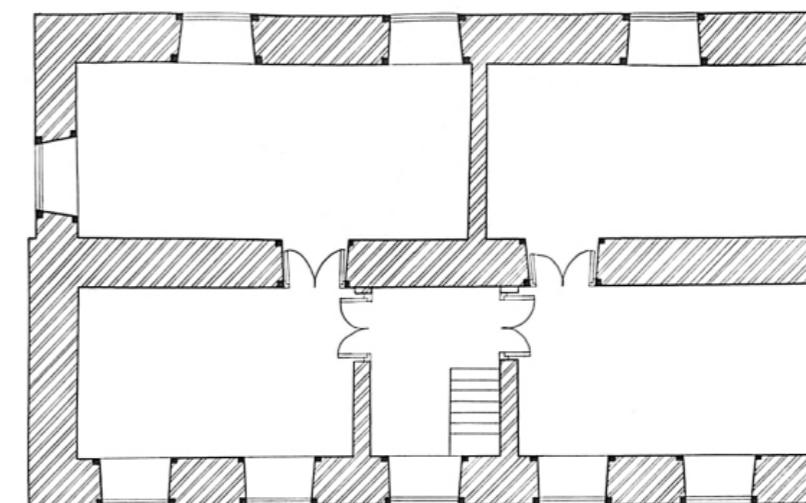


Perspective View

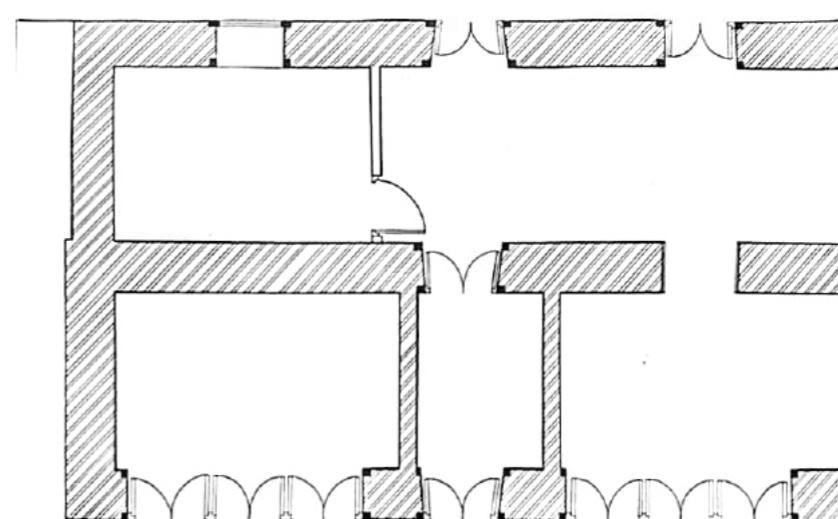
Newari Ghar is a three storeyed residential building built in the traditional Newari architectural style. However few newer features like brick arches over windows are found. The house has a rectangular plan and a symmetrical façade. The ground floor is occupied with shops whereas the upper floors consist of living and bedrooms. The chaityas around the building date back to the Lichhavi period in the 4th and 7th century.



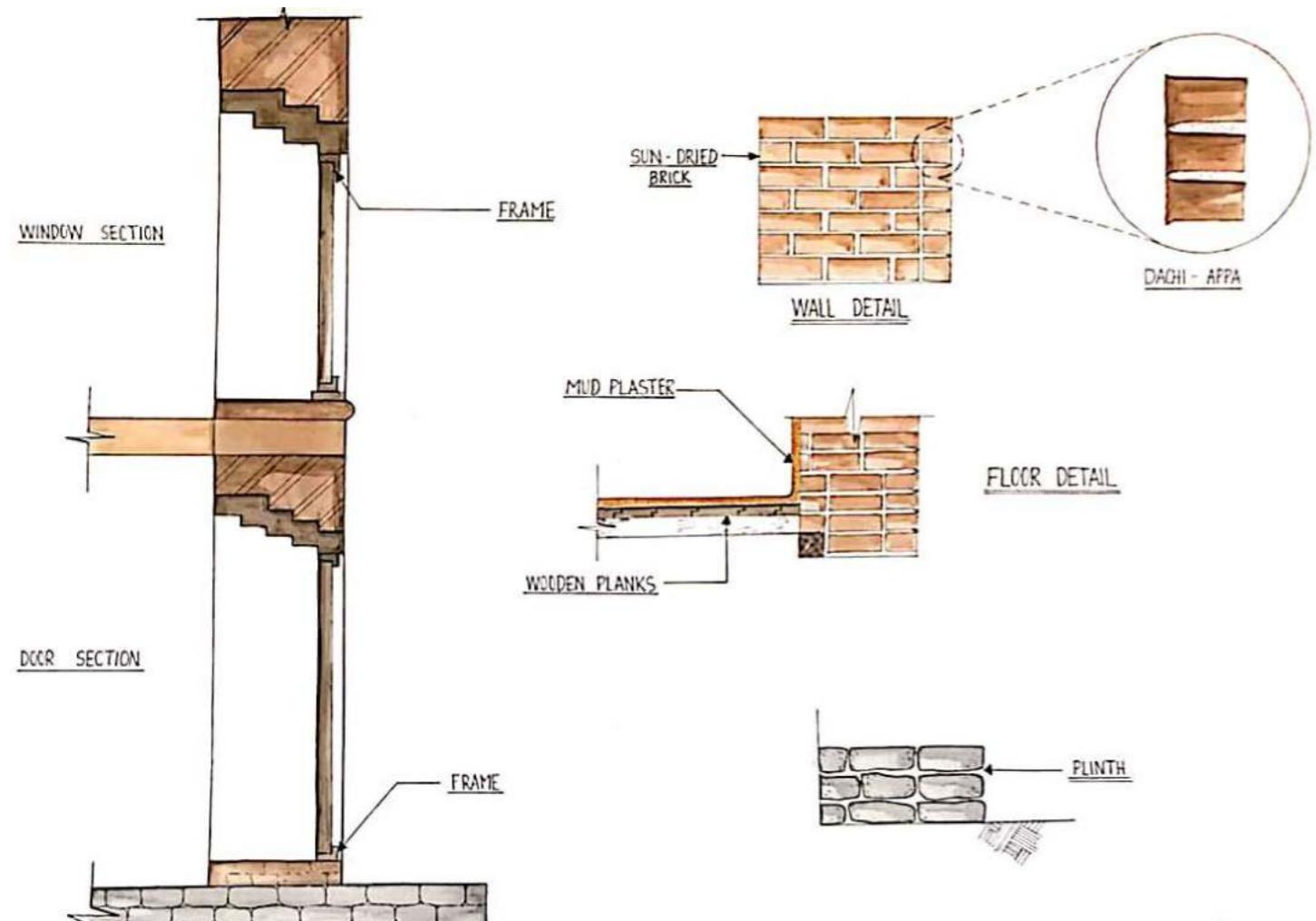
Front Elevation



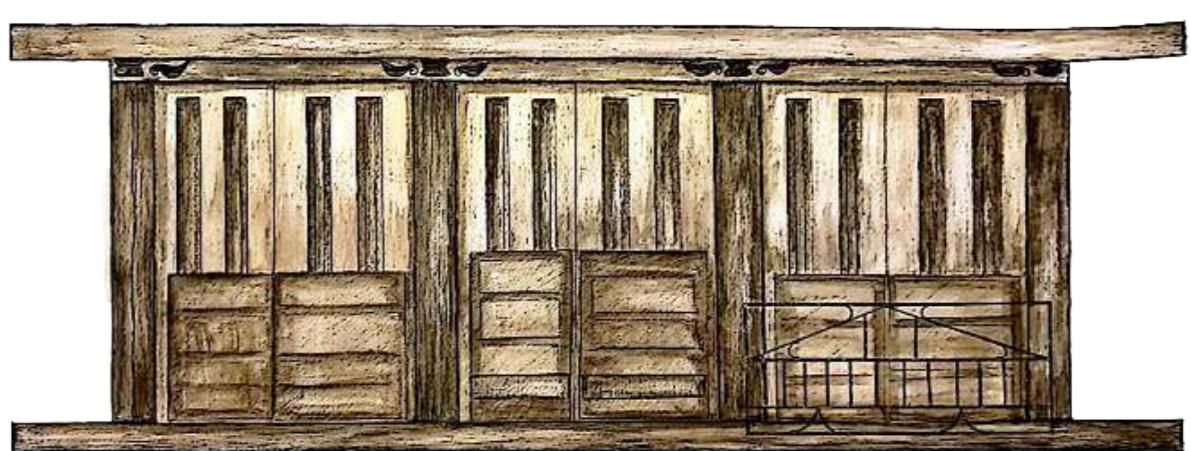
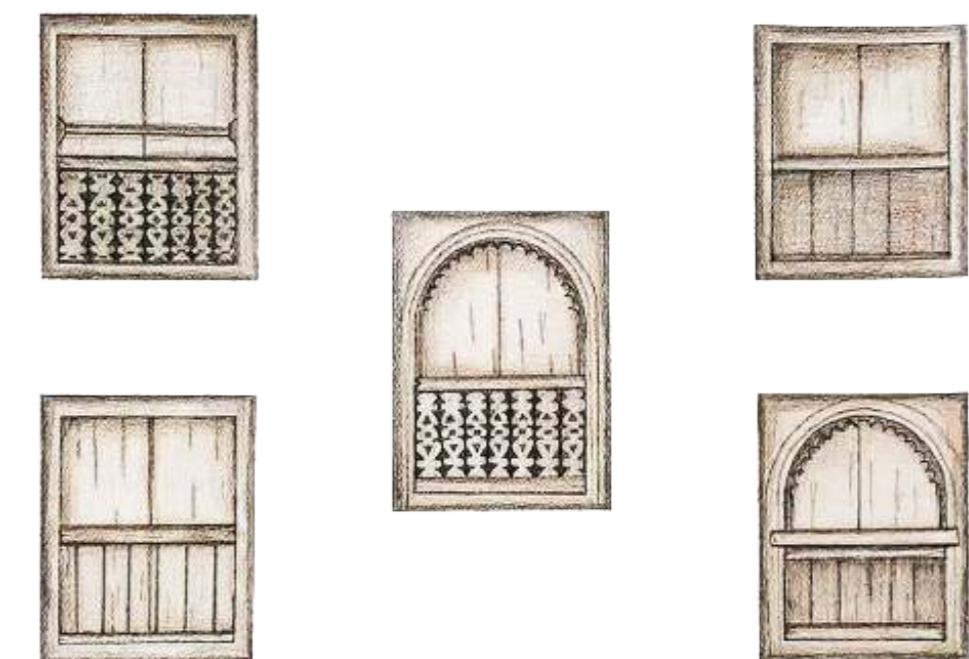
First Floor Plan



Ground Floor Plan



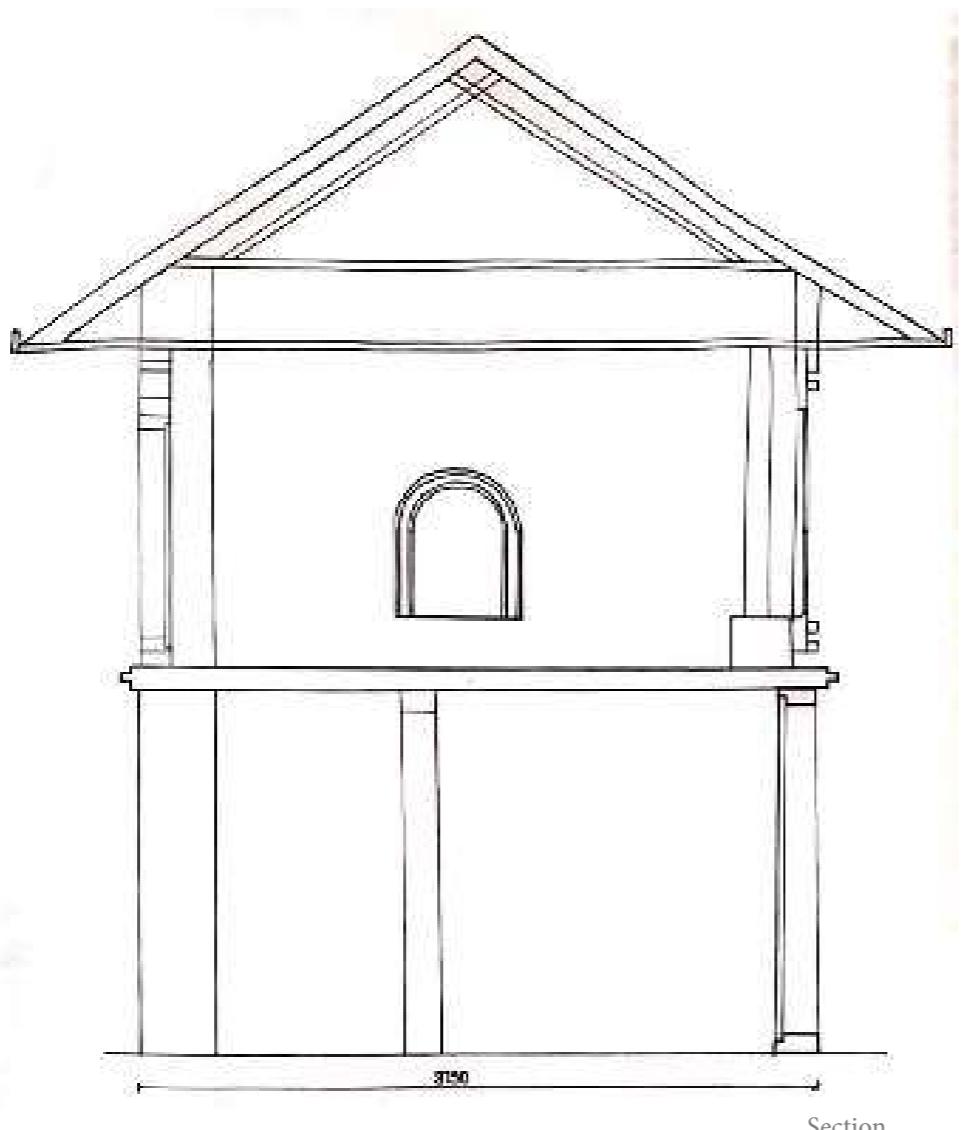
Sectional Detail



# BHAJAN GHAR

LOCATION: LAYAKU, BANEPA

PROJECT BY PRIYANKA SHRESTHA, BIJAY KHADKA, SRESTAA BHATTARAI,  
ANUSHA OJHA, ANUSKA SAPKOTA

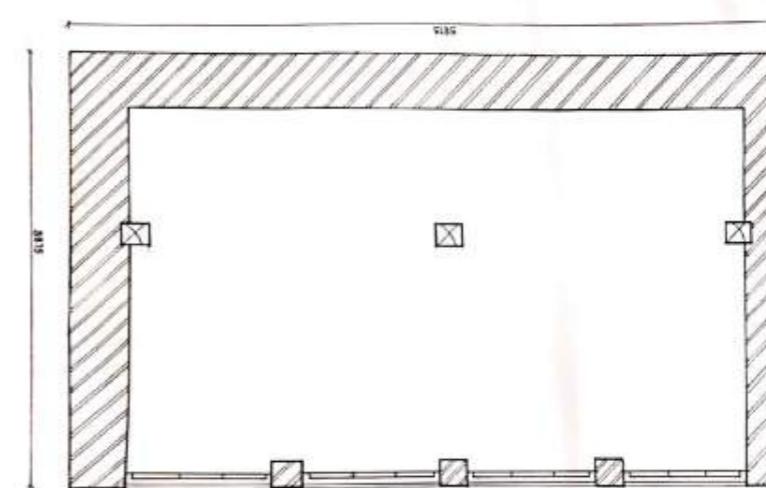


Section

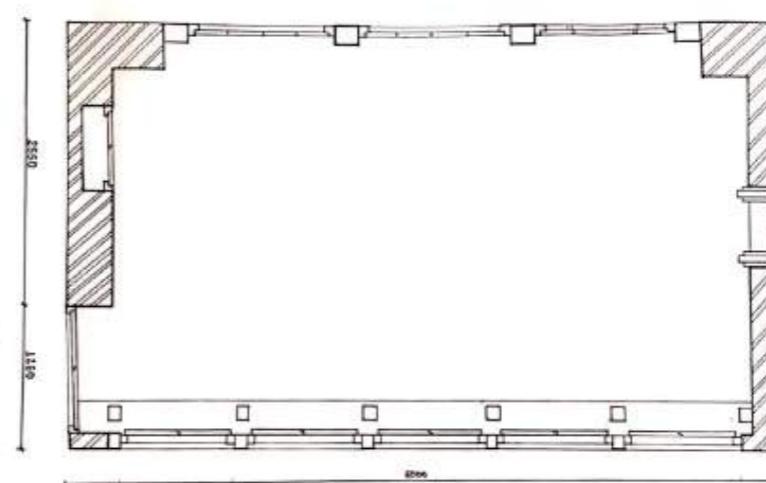
The Bhajan Ghar is a traditional Newari structure located in Layaku, Banepa within the Thanpati Narayan Temple complex. The structure is connected to a 'Dhunga Dhara' erected around 870 A.D. The two storeyed structure has been used as a hub for people taking part in singing religious melodies that refer to the history of the place. The dhara is also still used everyday by the residents of Layaku.



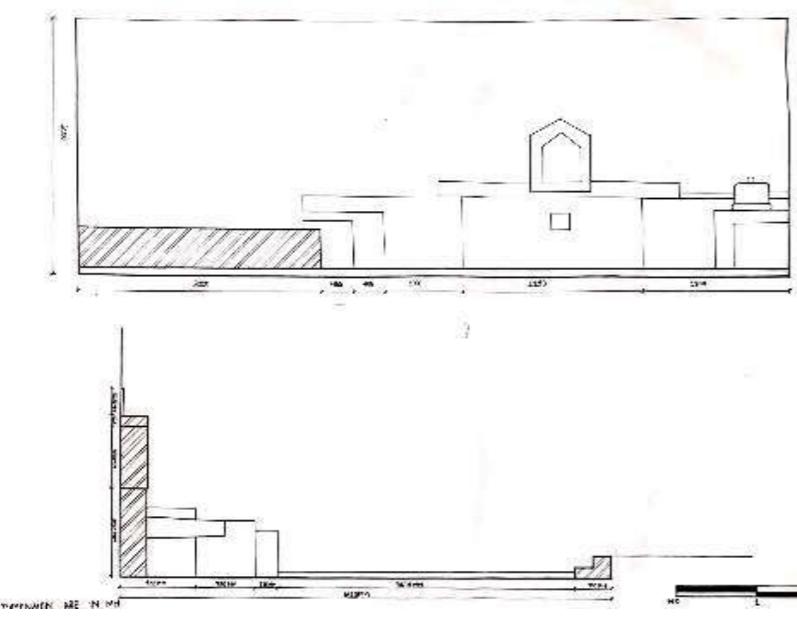
Site Plan



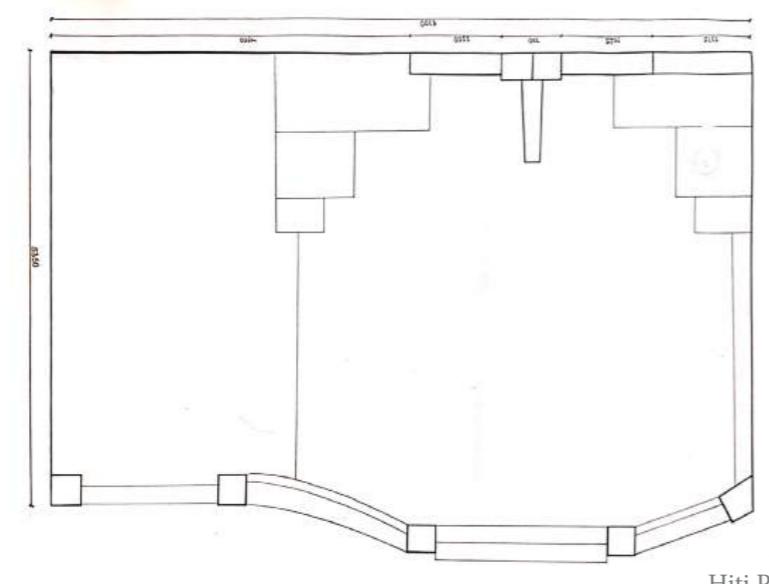
Ground Floor Plan



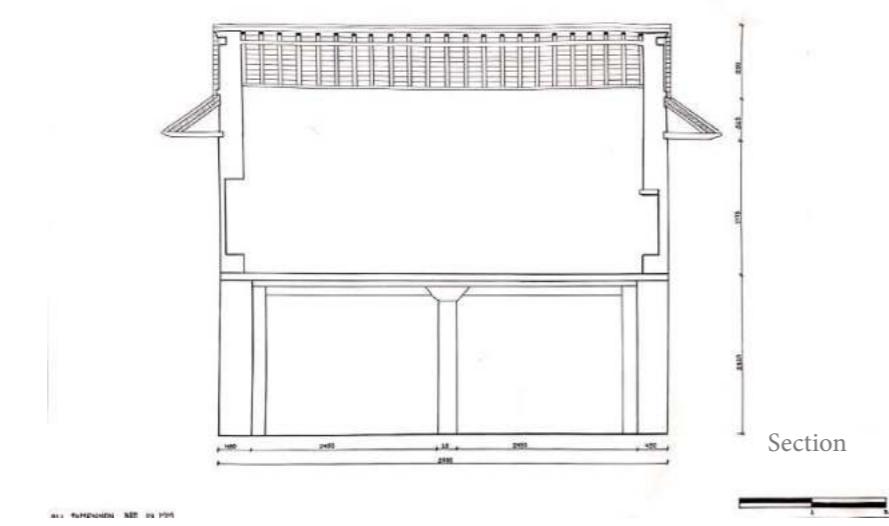
First Floor Plan



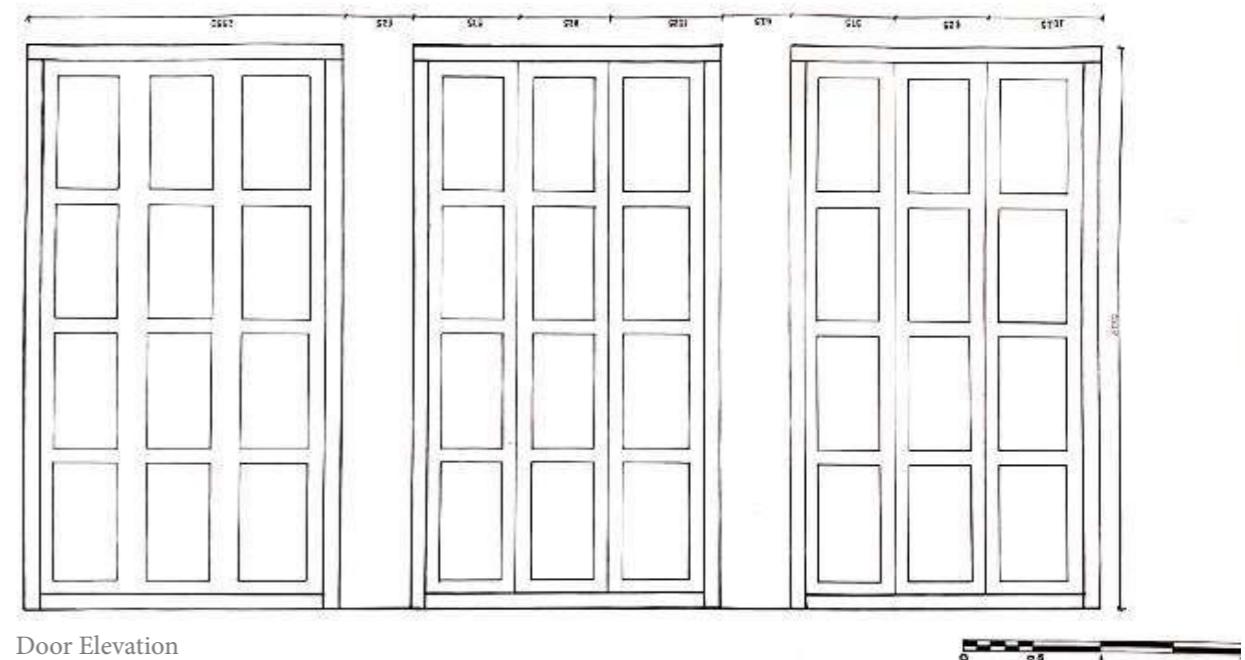
Hiti Section



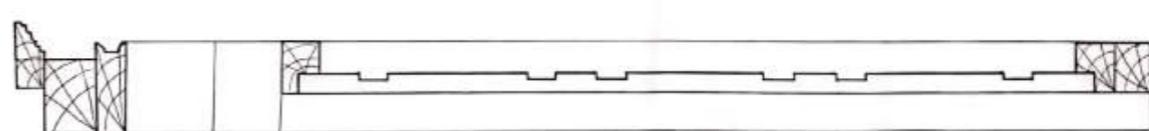
Hiti Plan



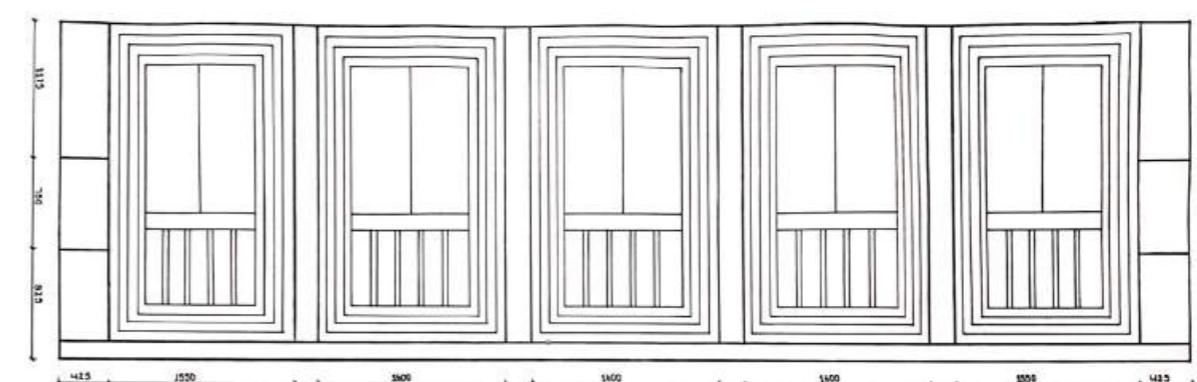
Section



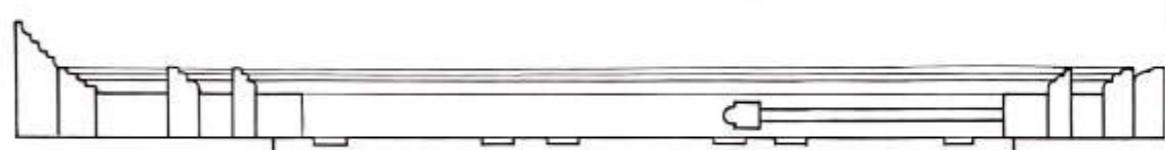
Door Elevation



Door Plan



Window Elevation



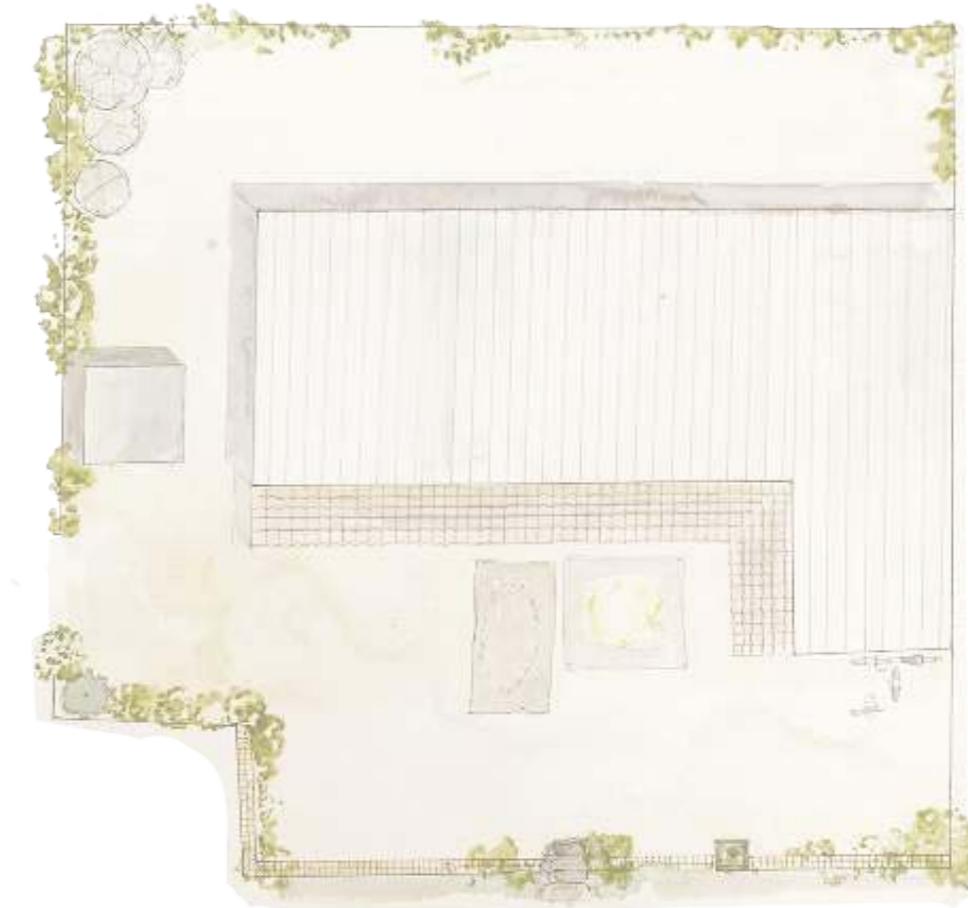
Window Plan

## NEWARI RESIDENCE

LOCATION: LAYAKU, BANEPA  
 PROJECT BY AAGYA K.C., PRATIMA BASYAL, MANASHI SHRESTHA,  
 MANISH BANIYA, NIRANJAN JAISWAL



Perspective View



Site Plan

This building is also a traditional residential building located in Dhulikhel. However, unlike other traditional houses seen here, this one has overhangs that make up the portico, providing an additional working/resting space for the users. These overhangs are made of timber truss and jhingati tiles. The house also has different types of wooden windows that make the building unique and add architectural value to it.



Side Elevation



Front Elevation



Exterior Views



Details Of Post



Interior Views



Window Details

## 3 - TIERED HOUSE

LOCATION: LAYAKU, BANEPA

PROJECT BY SHREEYA PRADHAN, KRITIKA ACHARYA,  
SMRITI BHUJEL, NEHA MAHATO

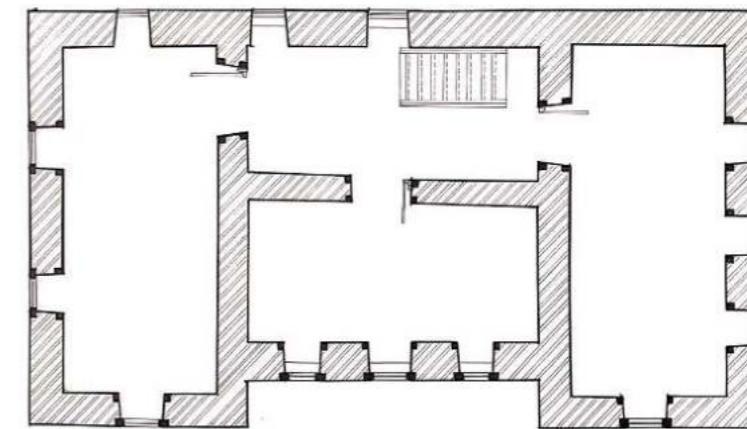


Perspective View

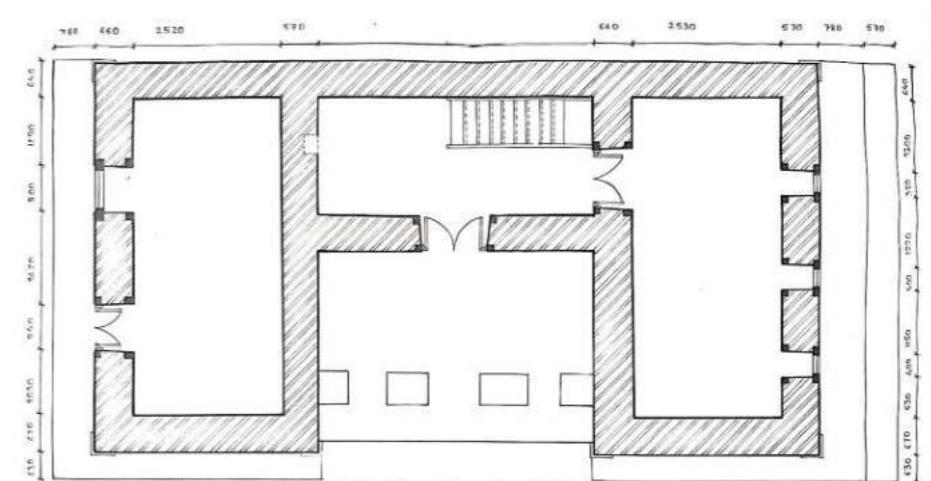
3-Tiered House is a neoclassical-influenced traditional newari structure located in 28 Kilo, Dhulikhel. The building was constructed around 1980-1985 B.S. It is a three-and-a-half-storeyed residential building with an asymmetrical facade and the main entrance at the center. The facade was made unsymmetrical by the earthquake in 1990 B.S.



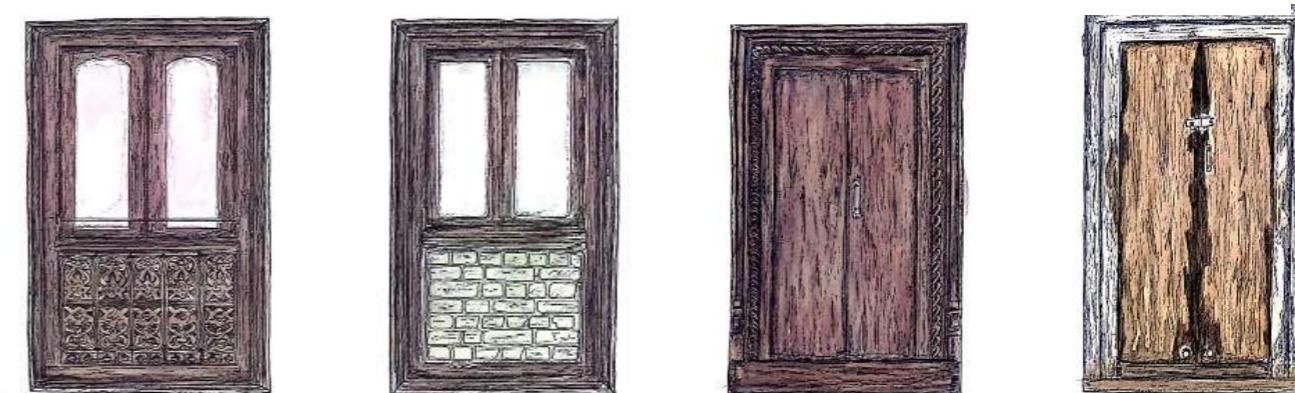
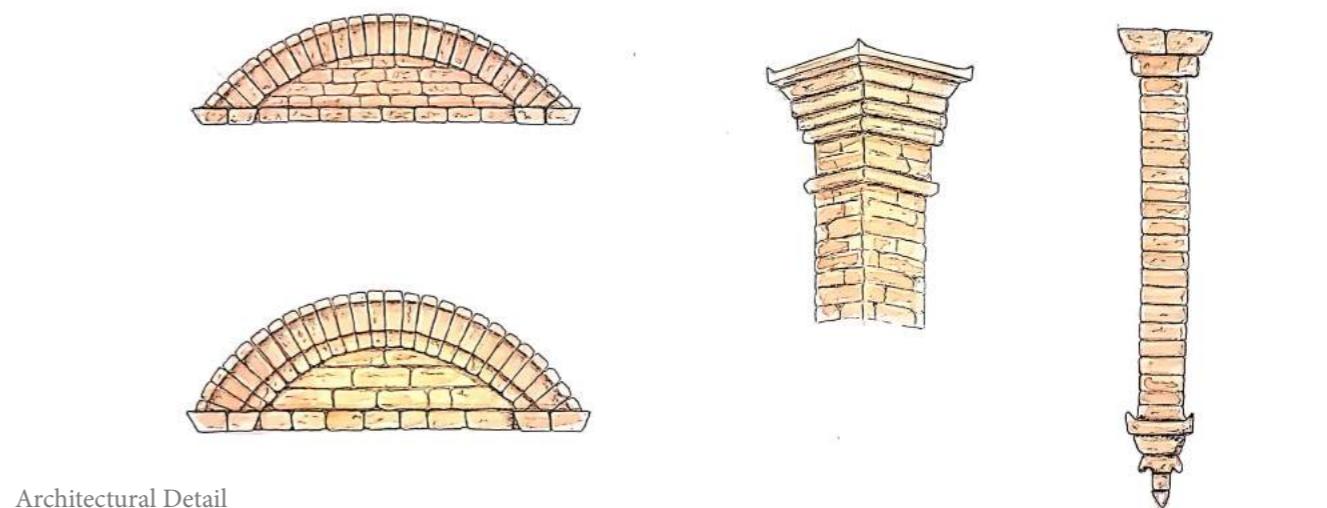
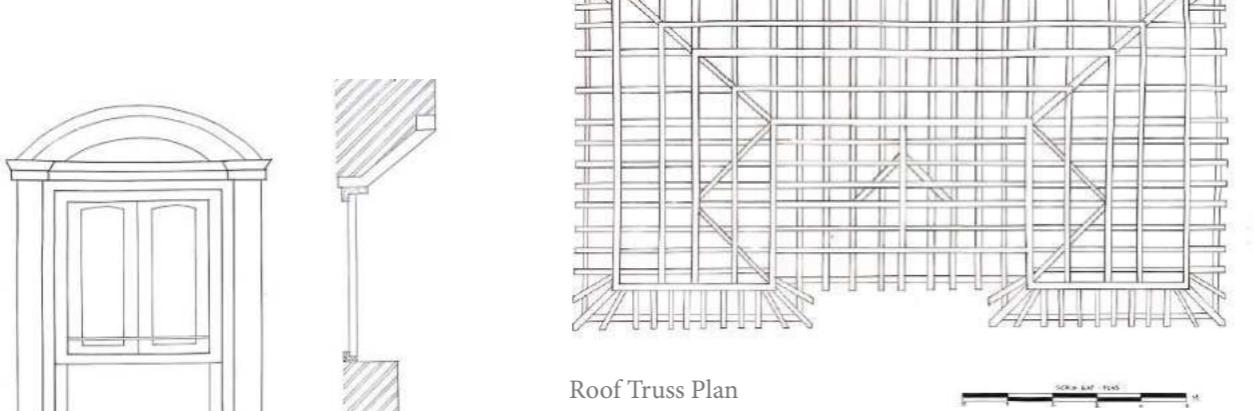
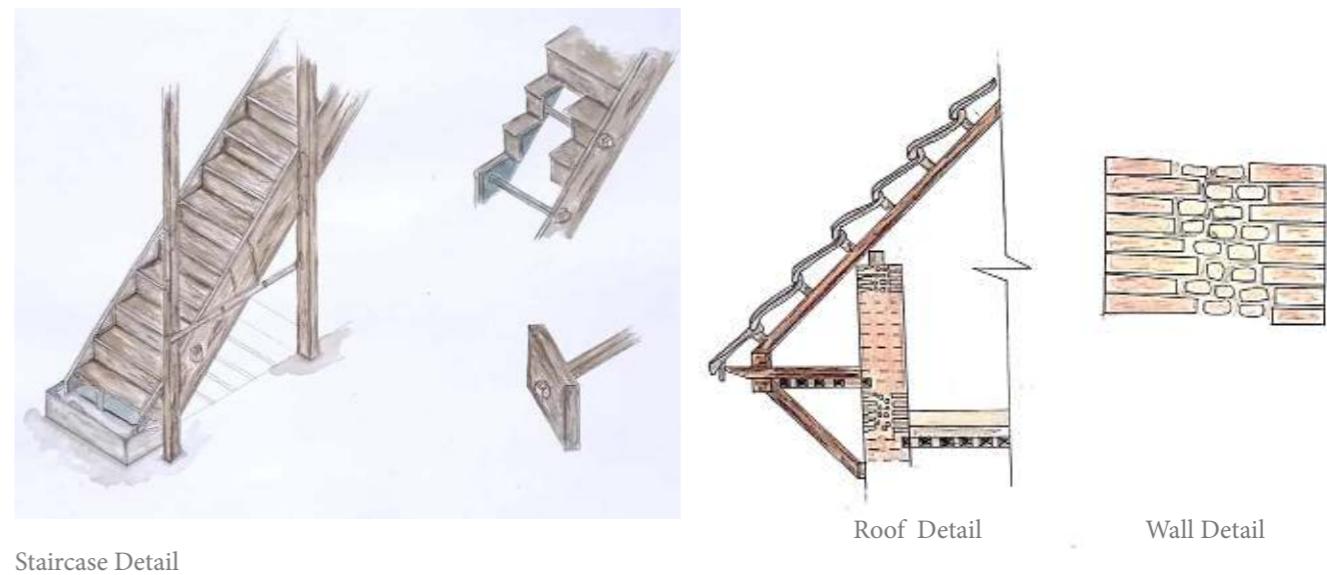
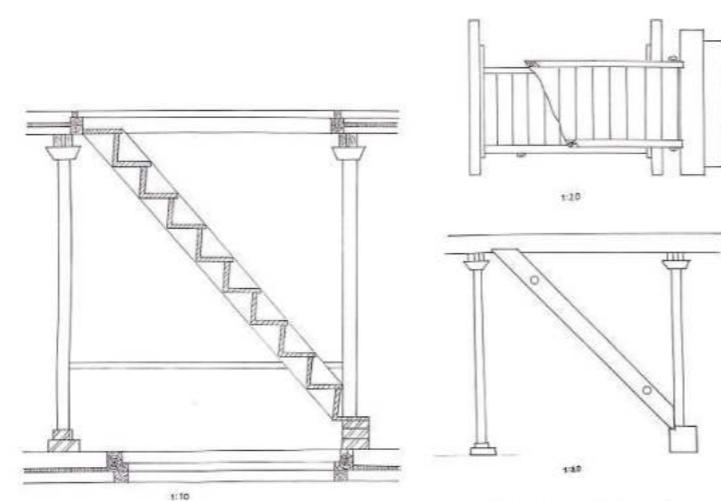
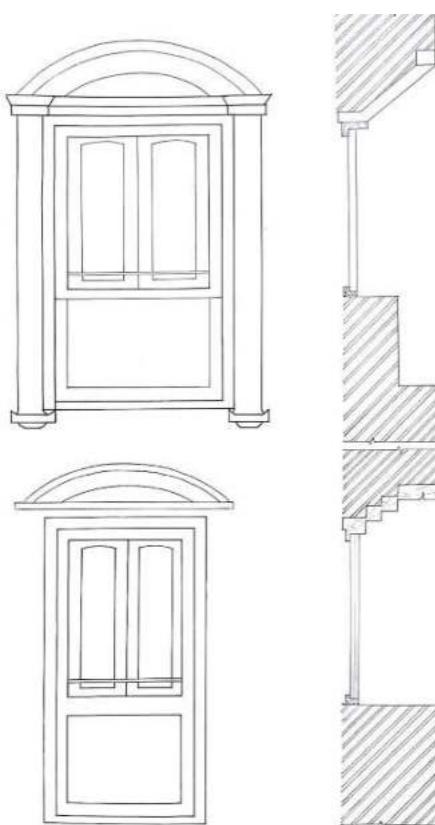
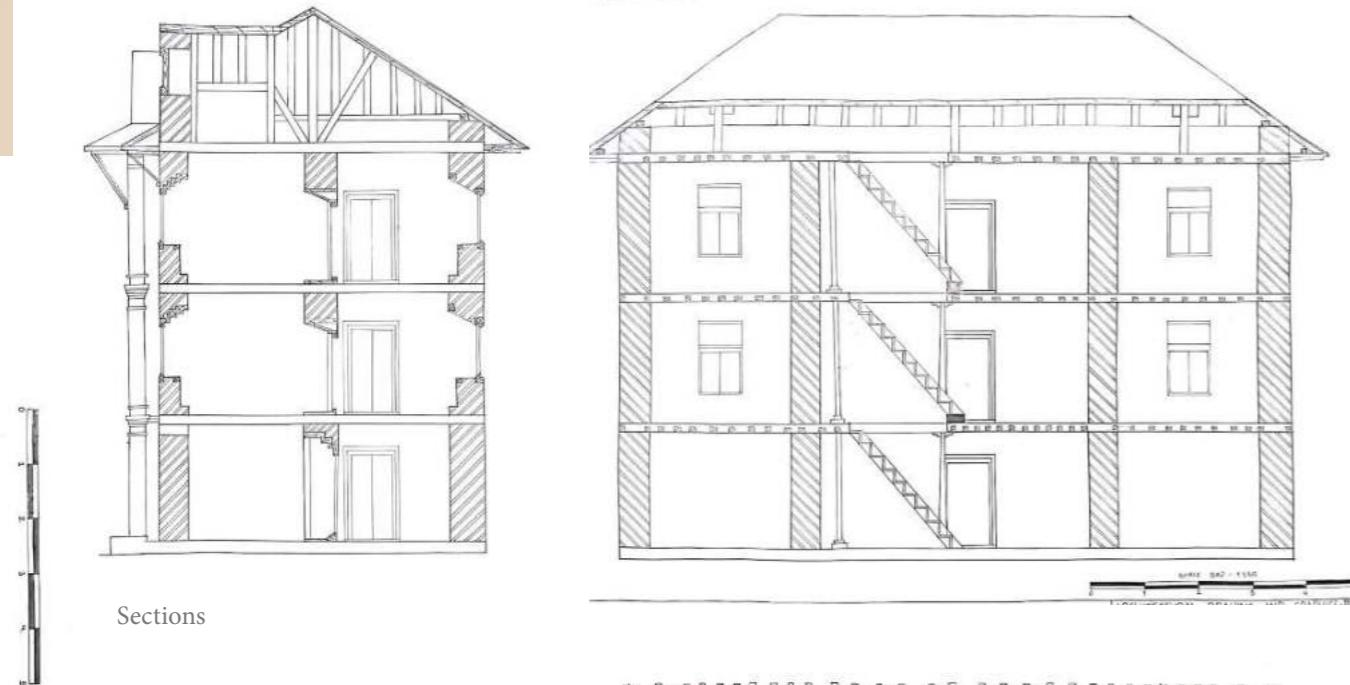
South Elevation



First Floor Plan



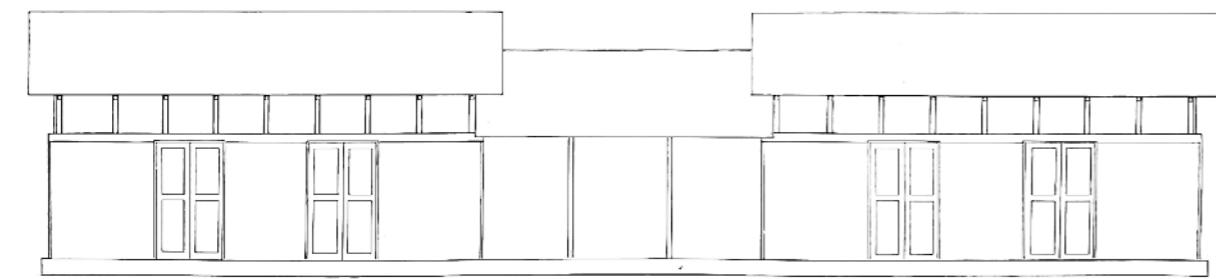
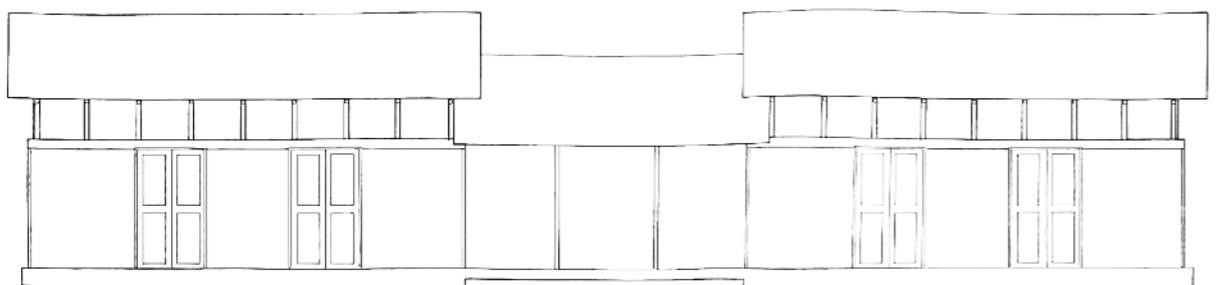
Ground Floor Plan



# KU EARTH AND BAMBOO RESEARCH LAB

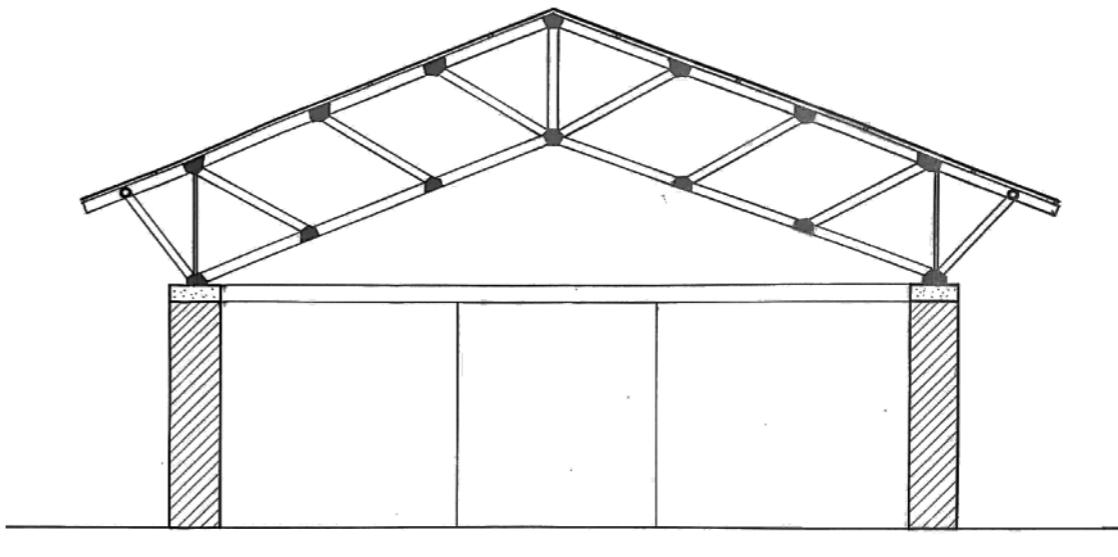
LOCATION: DHULIKHEL

PROJECT BY BANDANA GAUTAM, ROSHAN POUDEL,  
DAKSHA THAKUR, PRAJEETA GYAWAL

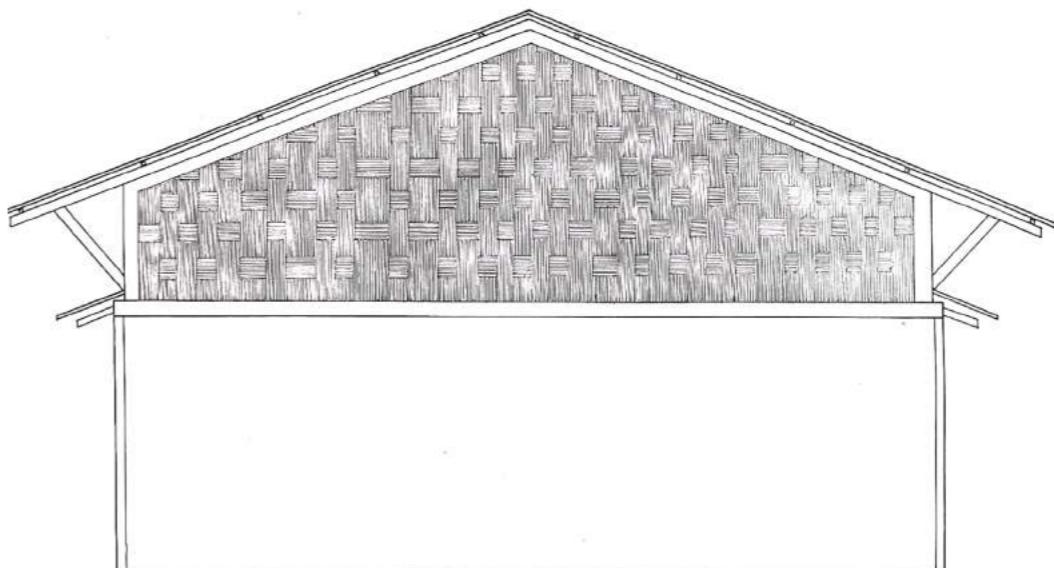


Elevations

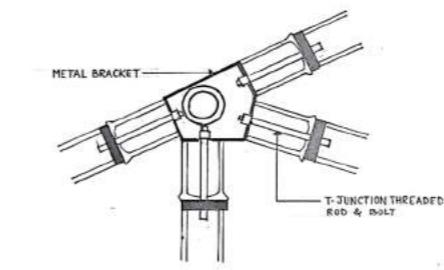
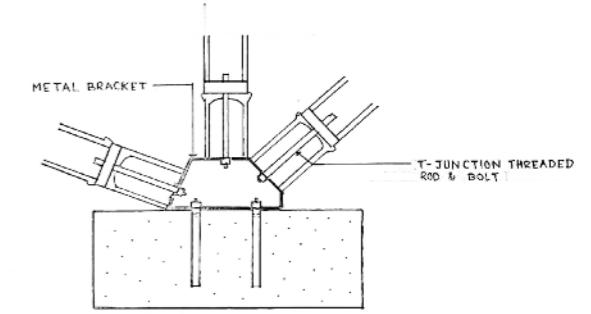
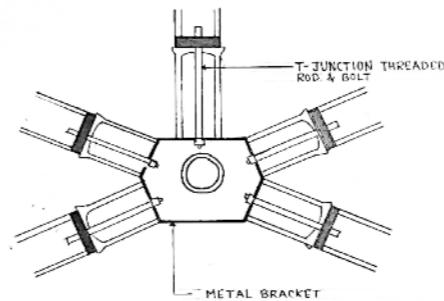
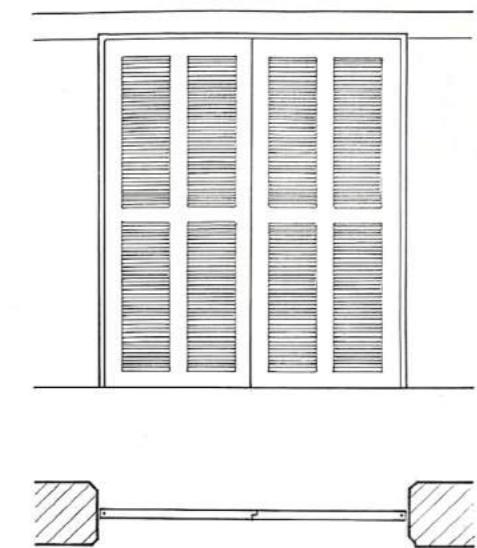
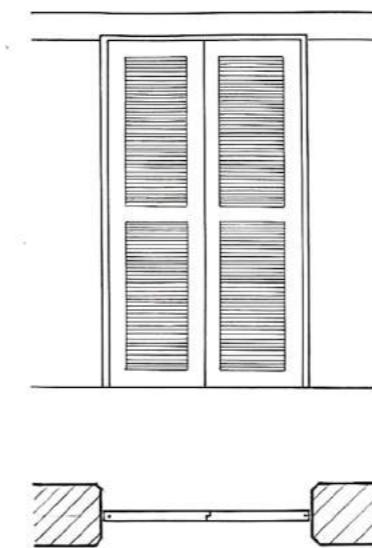
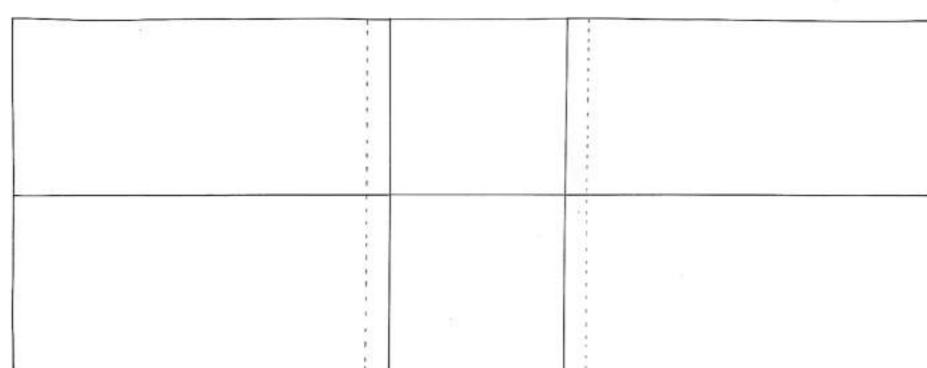
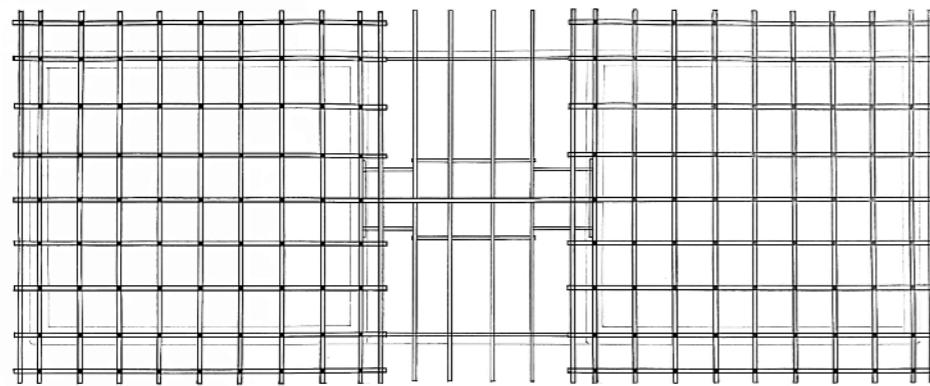
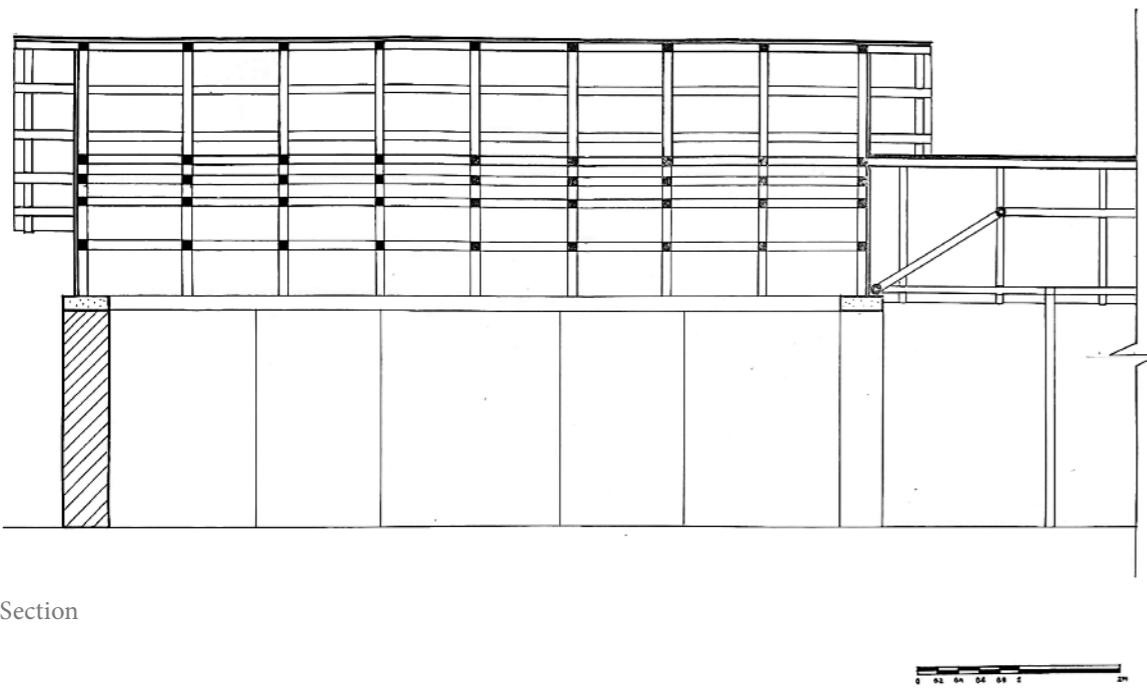
Ku earth and bamboo research lab is Nepal's first rammed earth material testing lab which is based on modular design and is constructed by locally available materials in rammed earth and bamboo. The lab was designed by the architectural firm ABARI and is located in Budol, Dhulikhel. The building was meant to be used as a curing lab but is currently unused.



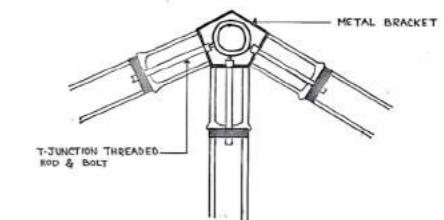
Section



Side Elevation



Joint Details





Artwork by AASHRAYA RAJKARNIKAR, B.Arch-18

P R O J E C T S

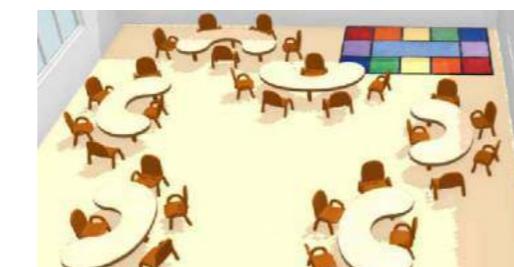
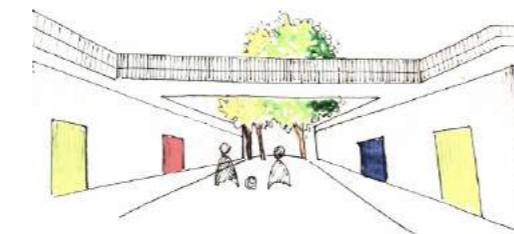
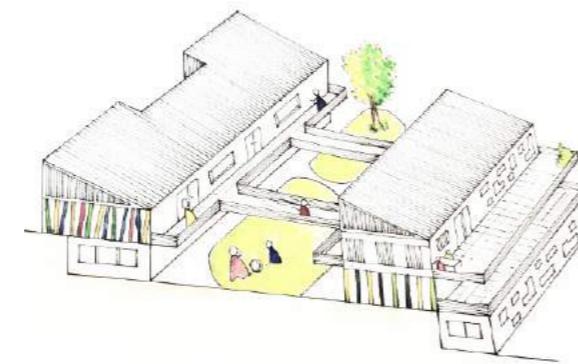
## PRIMARY SCHOOL DESIGN

B.ARCH-18

Throughout their career, architects have to design spaces for many different types of users. The school design project aims to provide better learning spaces for children under the age of 12. As children have a completely different way of perceiving the space around them, these designs can be completely different than what an architect is normally used to. This project enables students to better understand the user's needs and how spaces can change according to them.

## SCHOOL DESIGN

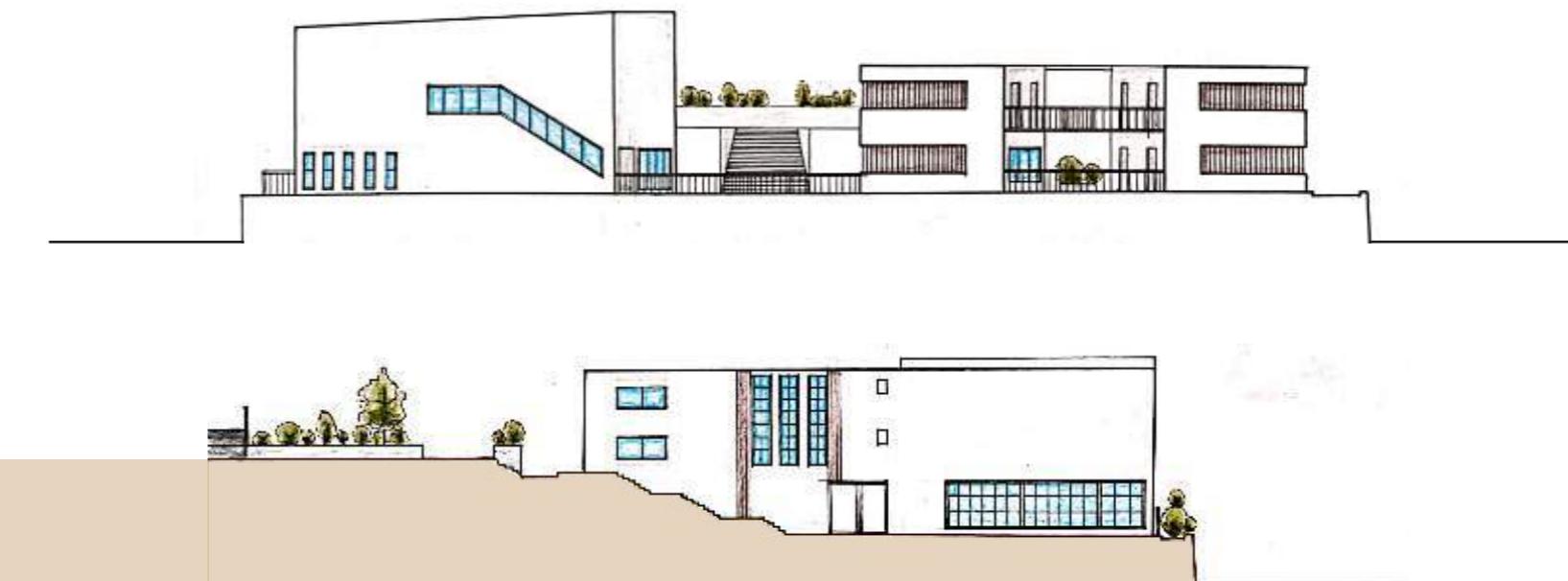
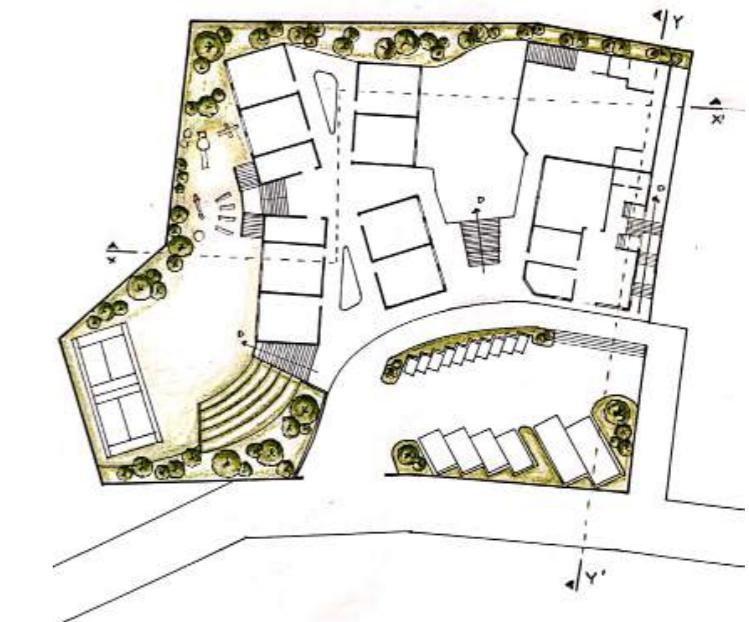
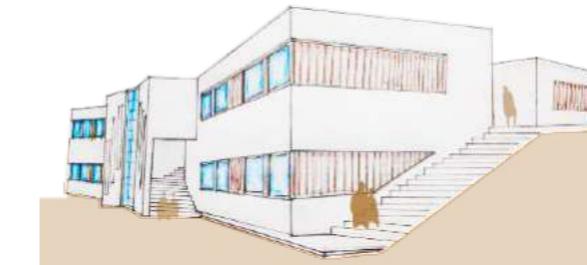
MANASHI SHRESTHA, B.ARCH-18



Imitating the site, the design incorporates a central courtyard that matches the site's level and connects the buildings through a corridor. Composed of clean lines and shapes of primary colors, the design aims to create a pure and simple paradise with memorable spaces for children. By looking through the lens of a child, the purity of childhood is wonderfully retained in the architecture.

## SCHOOL DESIGN

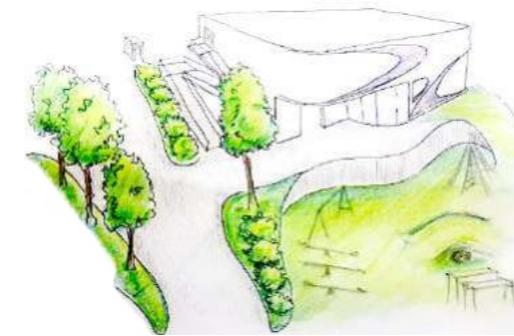
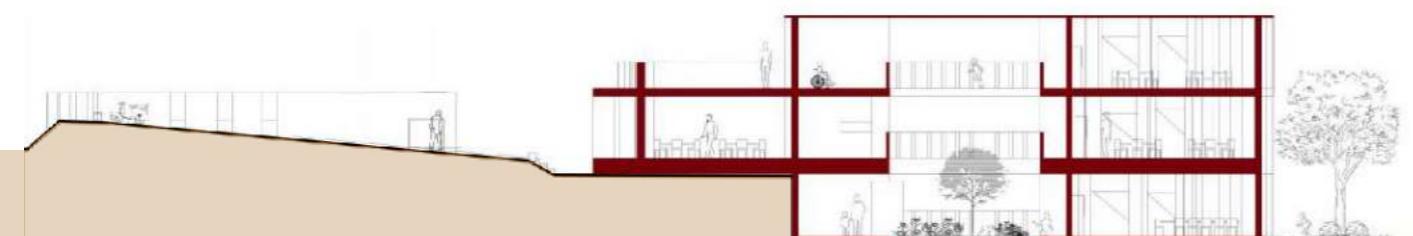
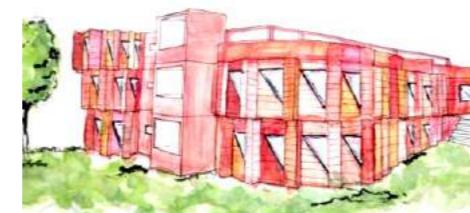
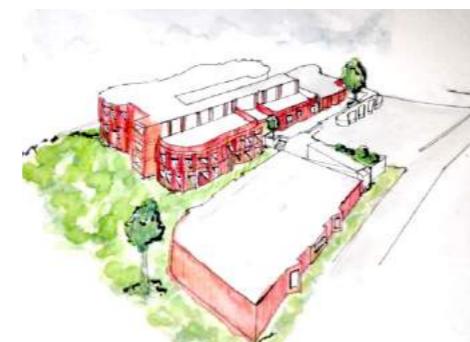
ROSHAN POUDEL, B.ARCH-18



## SCHOOL DESIGN

PRIYANKA SHRESTHA, B.ARCH-18

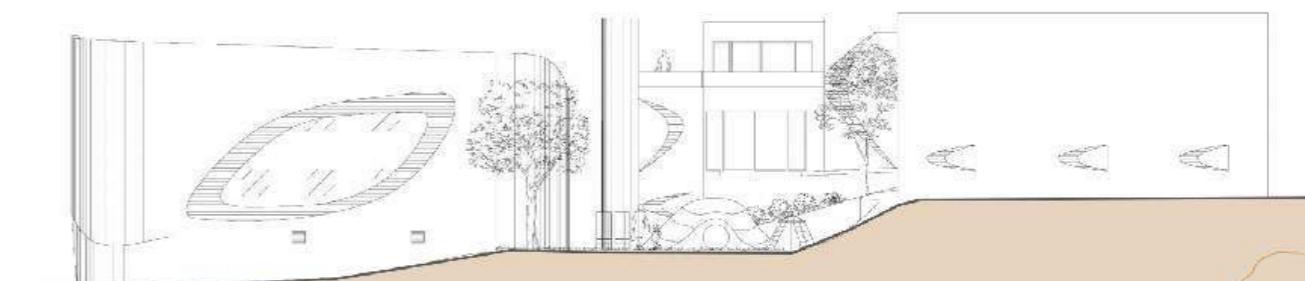
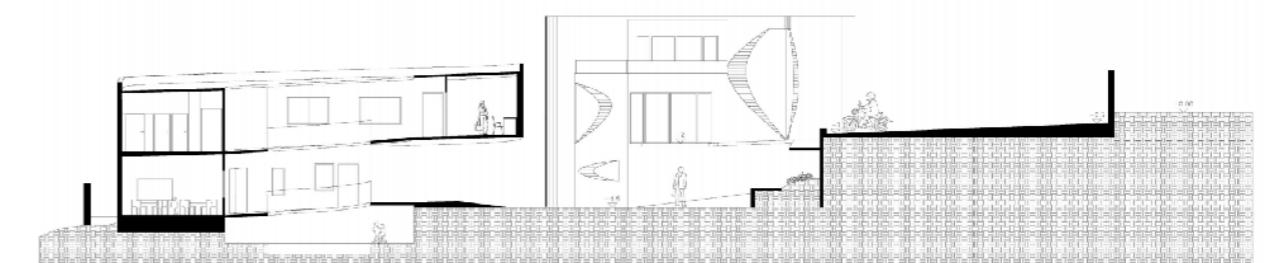
Taking into account the dynamic nature of children, the regular curve was transformed into a dynamic projected curve. Learning is done through exploratory and communal play, with a concept of 'The Third Teacher,' which is symbolized by natural daylight, good hearing, and a variety of learning environments.



## SCHOOL DESIGN

SHREYA PRADHAN, B.ARCH-18

With the motive of creating a place where none feels any different by providing universally accessible ramps, this design meets the needs of all. The curved edges of the circular spring and rectangular plan provide easy access and circulation. The parametric facade compliments the ramp and the flow created by it bringing curviness to the otherwise flat facade.





Artwork by BHAWANA BHANDARI, B.Arch-18

P R O J E C T S

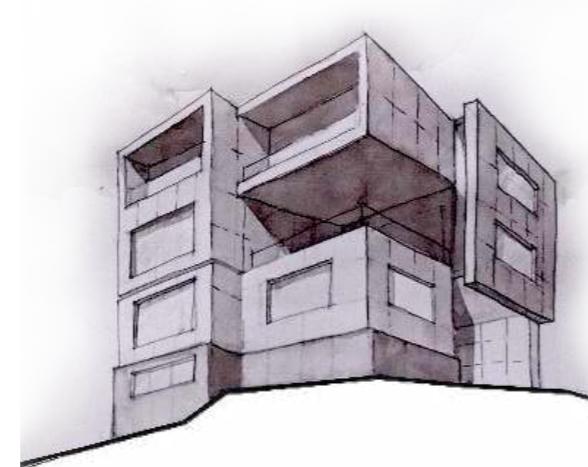
## RESIDENCE DESIGN

B.ARCH-18

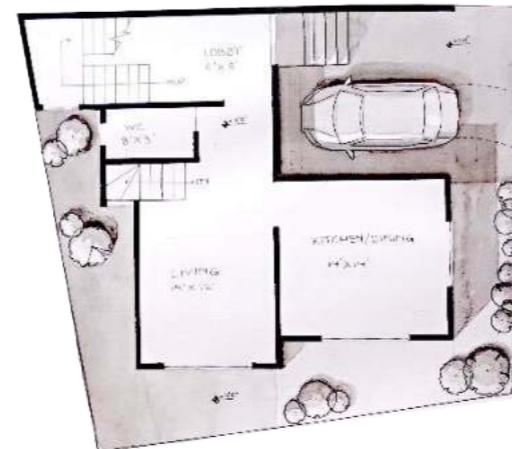
Residence Design involves students designing a house that provides full functionality according to the needs of the user while responding to the challenges of the site. For this project, the user is a family of three that requires additional spaces that will be rented out. The site for this project is located in Dhulikhel at the outskirts of Dhulikhel Medical hospital. This project prepares students for the work that they will eventually have to do very often later in their career.

## HOUSE UNDER THE SUN

AASHRAYA RAJKARNIKAR, B.ARCH-18



The idea behind this project was to enable residents to feel the effects of sunlight in the spaces emotionally. The brutalist elements used are to enhance the warm sunlight falling on the bare, harsh concrete which creates contrast and exaggerates the intensity by which it falls. The spatial aesthetics provided by the concrete combined with spaces defined by light creates a warm ambience.

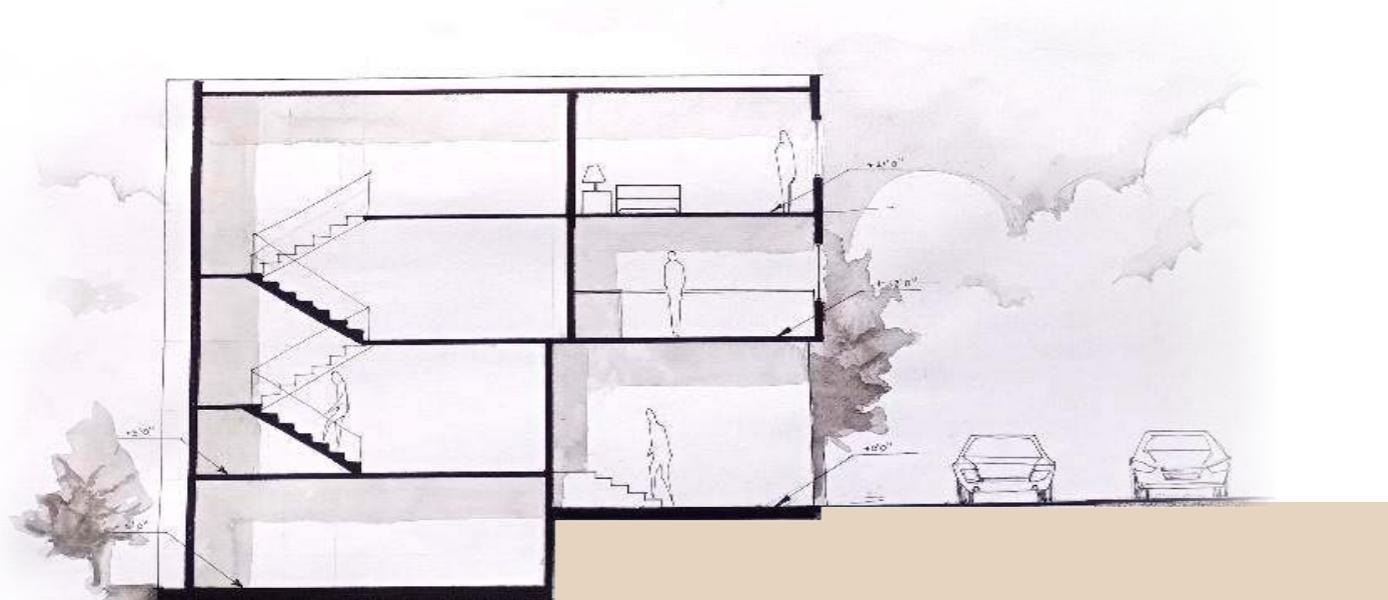


## A HOUSE WITHIN A HOUSE

ROSHAN POUDEL, B.ARCH-18



Designed for small multi-families, this residence is estimated for three residents and two tenants. It includes separated spaces for the tenant family and resident family, without impeding privacy for either family. Lower spaces are zoned for the tenants, while upper spaces are zoned for the residents. The separated entrances and control is done to maintain privacy.



# IN CONVERSATION WITH-

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**AR. JHARNA JOSHI**

She is a dedicated academic/researcher and an experienced architect with a successful track record in architecture, tourism, and planning industries, as well as academia. Her areas of expertise include building conservation, sustainable tourism, comprehensive planning, community development, urban design, and cultural landscapes. She has worked as part of multidisciplinary teams in Nepal, the United States, Vietnam, Greece, and New Zealand. She was recently awarded Doctor of Philosophy from Victoria University of Wellington in New Zealand.

**What is Architecture for you and why is it fundamentally important for the world that we live in?**

For me, architecture is a part of the world we live in, it's part of nature and part of society. The most important question is "Who is it for?" Mostly it's for people, but it's also for all the living beings or even non-living beings that are here on Earth. Earth and culture are what comes with people so it's a blend of two.

**What are the crucial or necessary skills and qualities that are needed to become an Architect?**

I would say you need patience as it is a time-consuming subject. The other thing is to be observant. There's so much more to learn all around you. As designers we need imagination, we need to dream, we need new ideas. You can try out new ideas and that's the beauty of architecture. Be creative, be innovative.

**Is there anyone in the community that you admire or look up to and why?**

There are too many, I cannot name one. There's so much good around and so much great talent around and work around that, I cannot just follow one. An example is when I met Charles Correa, I learned so much from him. The most important thing is to understand whom we are designing for. We're designing for people, not for ourselves. So I like the architects who design things that are part of the Earth knowing that what we create is going to be here for a while.

**What inspired you to work in the conservation sector, and what are the challenges while working at Bandipur?**

When I first came back after I graduated, I came back with Western philosophy, which puts a lot of emphasis on material conservation. Conservation here in Nepal is not a priority. Coming back and working in the community, it was difficult for me to communicate with people around me. It's a lot harder to work here than in the West but when you are working with communities it is much more satisfying.

**How would you describe your recent project Parajuli Residence Renovation? What did you do to ensure the project was a success?**

When Mr. Parajuli approached me with this project. He wanted to preserve or restore the house that his father had built. It was the only building built in stone in the area. The brief for the project was to make it compatible for the family to spend more time there and to make their house such that it could be cleaned in an hour. We are almost done with the project and we want it to be an example for people around the area as well.

**How do you deal with difficult clients and how do you handle the situation?**

You'll always be learning this as you are meeting new people every time. I inform my clients that the time and the cost of construction may go above the expected time and expected price. Never talk to clients if there has been a heated debate, since you may say something you will regret later. Yes, it is hard at the beginning. I listen to the views of the people. The important thing is to be flexible, learn to work out situations, and be patient.

**How do you balance function with the aesthetic appeal of a building?**

Yes, there will be some problems as you build the building, but if you do your research well and you think it through, make your client understand, then there will be minimal compromises you have to make. It has to be both, what is functional must be aesthetically pleasing and what is aesthetically pleasing has to be functional.

**What do you suggest to the people whose vernacular houses are located in the city centre, as building new RCC buildings with many stories would profit them monetarily due to commercial uses?**

The first thing I would do in circumstances like that is to talk with the person about what they want out of their properties and try to convince them that I can give them the same facilities, from restoring the vernacular building. If you just start to show them solutions and many good examples of good restoration work, there is a growing appreciation of that. A lot of people just say that conservation is expensive. It's not. It's about how you build it, the concept of it, the scale of it, the layout of it.

**As a Ph.D. holder in Tourism Management, how do you think we can tackle the problems and promote tourism in Nepal as an Architect?**

For a country like Nepal where we depend a lot on tourism and we are still struggling. We are still not known for architecture. In tourism, architecture can be used in accommodations, hotels, and other tourism facilities as well. It's both the historic and contemporary that comes into play where architects can contribute to tourism and tourism can also contribute to architecture.

**What are the differences in the architectural practices and education in different countries from your experience?**

The way we work is more professional abroad. The architectural firm you work in and the architects you work with are bound more so by law. On the other hand, working here in Nepal, we spend a lot of time convincing people. It is easier abroad for students as there is a lot of research and resources abroad which is lacking in Nepal. However, the situation has improved and is still improving.

**How do you organize, plan or manage your work as an architect, and how can one be efficient?**

Not everyone is the same. Know yourself first, know your limitations, know your strong points. Do not go against what you are. Make a plan, know how much a certain assignment will occupy your time, and work it out accordingly. When you are not feeling creative, clean your design and your drawings. Do not push up everything to the last minute. Even small things can save up a lot of time.

**What are your plans in the field of architecture and where do you see yourself in five years?**

In the future, I want to focus more on research and article writing. I'd like to spend more time with my students and collaborate with them. I intend to improve my research methodology. I'd like to engage more with the local communities and work on projects that would allow me to do both research and practical work at the same time.

\* \* \*



Artwork by ROBIN PANDAY, B.Arch-20



Artwork by NISHA RANA MAGAR, B.Arch-17

P R O J E C T S

## ARTIST STUDIO

B.Arch-17

Highlighting the greatest utilization of space, this design consolidates all the attributes of a modern-day private building inside a constrained area. The economic dwelling for an artist couple, meets their prerequisites of incorporating a gallery and studio in a hot and dry climate.

## THE AAYAT GALLERY

SIMRAN PIYA, B.ARCH-17

The name "Aayat" derived from the narrow rectangular shape of the site plays a crucial role in the design. The funnel-shaped facades act as passive shading with varying sizes of openings for proper light and ventilation for each space along with the use of skylight.



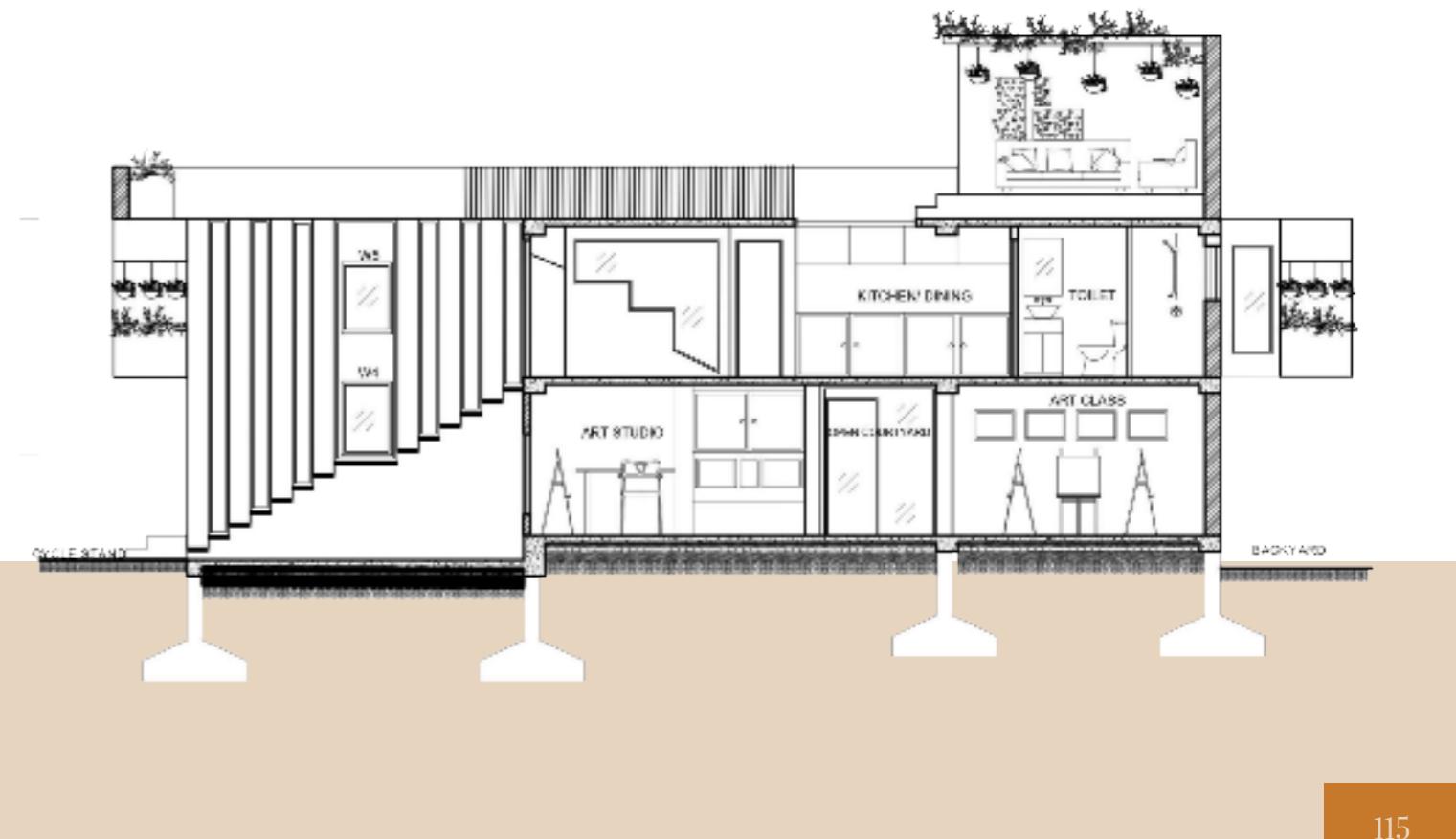
## NARROW HOUSE

SUDIPTI GIRI, B.ARCH-17

Respecting the lifestyle and creating a clear work-life balance for the artist couple, the design concept is inside-out allowing one to connect with nature. The balance between mass and void imparts the sense of larger space



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## THE ART ADOBE

KINJALK NEUPANE, B.ARCH-17

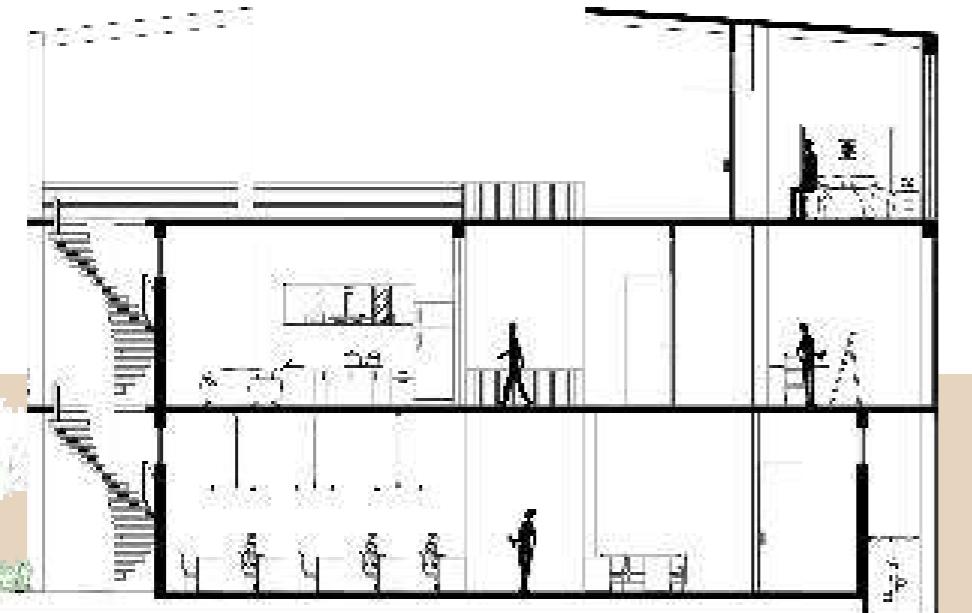
Considering the location and climate sensitivity, the design meets all the needs of the artist couple. The space division is done by allotting the public space to the confronting street in the north whereas the private space towards the south gives the building a distinctive character.



Taking after the site characteristics and surrounding environment, a cuboid was sculpted in the shape of the site to create a final design flawlessly expressing the concept. One of its major conveniences is the balance in structure created by sloped roofs and terraces.

## DOMICILE STUDIO

KANCHAN BASTOLA, B.ARCH-17





Artwork by AASHRAYA RAJKARNIKAR, B.Arch-18

P R O J E C T S

## COMMUNITY PROJECT

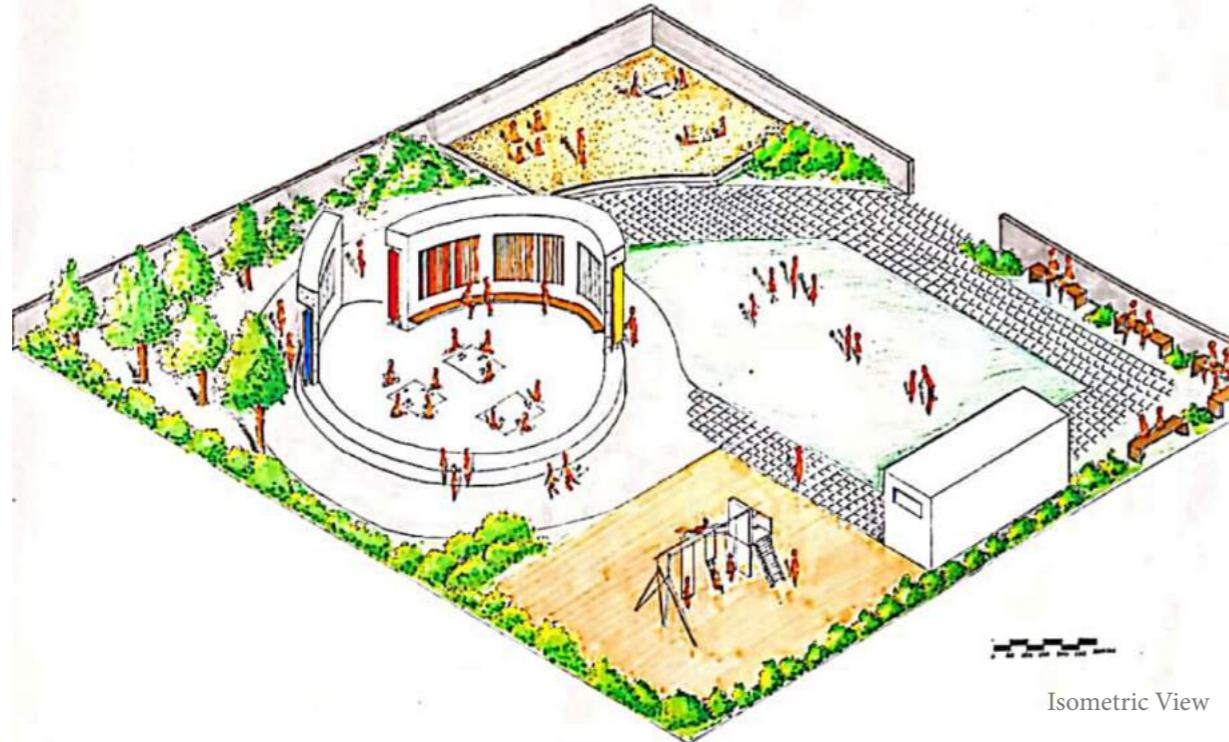
B.ARCH-17

This need-based design project required the students to select a settlement around Dhulikhel, various aspects of the locality were surveyed - settlement pattern, population, number of families, age distribution, gender distribution. The social changes and economic changes in the community were also studied. This led to drawing out a need analysis and ultimately a proposal was drawn based on this study.

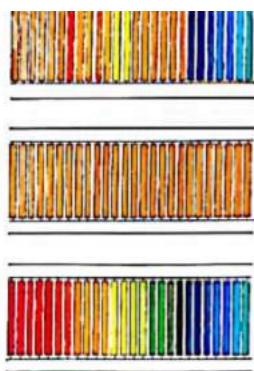
## THE SWIVELING FACADE

LOCATION: CHANDESHWORI, BANEPA

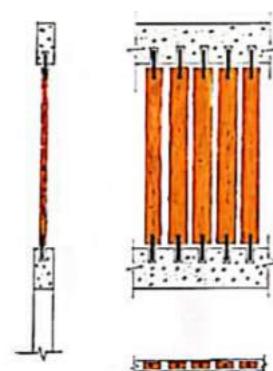
PROJECT BY NANDITA SHRESTHA, NISHA RANA MAGAR,  
PRASHANT RASILI, PRATIKSHA BHUSAL



Isometric View

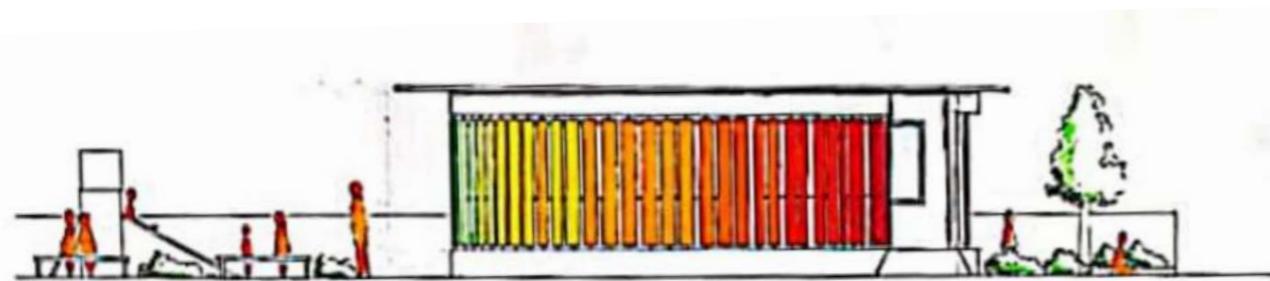


VARIATION IN FAÇADE



DETAIL OF THE PANEL

With declination of extended families and congestion of unplanned urbanizing areas- there's an inclining need for spaces to play. This project is a communal play space that conceptualizes to foster the development of a child- physically, intellectually, socially and emotionally, with the structure itself as a play element.



North Elevation

## KATIGAL HUB

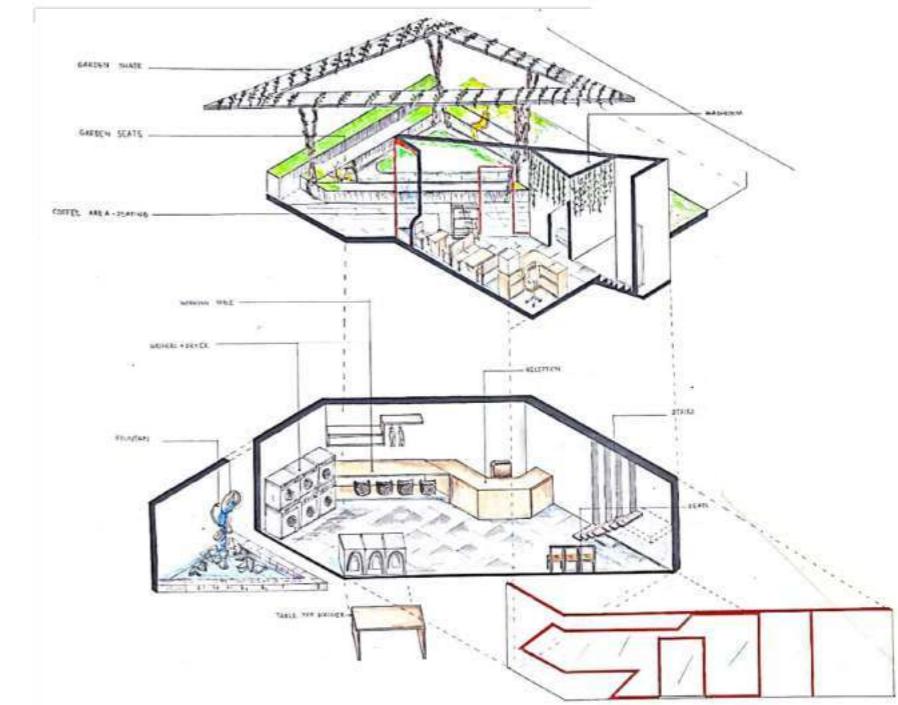
LOCATION: DHULIKHEL

PROJECT BY PRASAMSA POKHERAL, SURAJ SHRESTHA,  
ILAM SHRESTHA, UNISHA KIBACHE



Exterior View

Kaltigal hub is designed as a socio-commercial space with a laundry, coffee shop and garden for the community. It aims to act as a medium to reconnect people with nature amidst their busy urban lifestyle, to keep the place natural and interactive.



Exploded Axonometric

## INDRESHWAR ART GALLERY

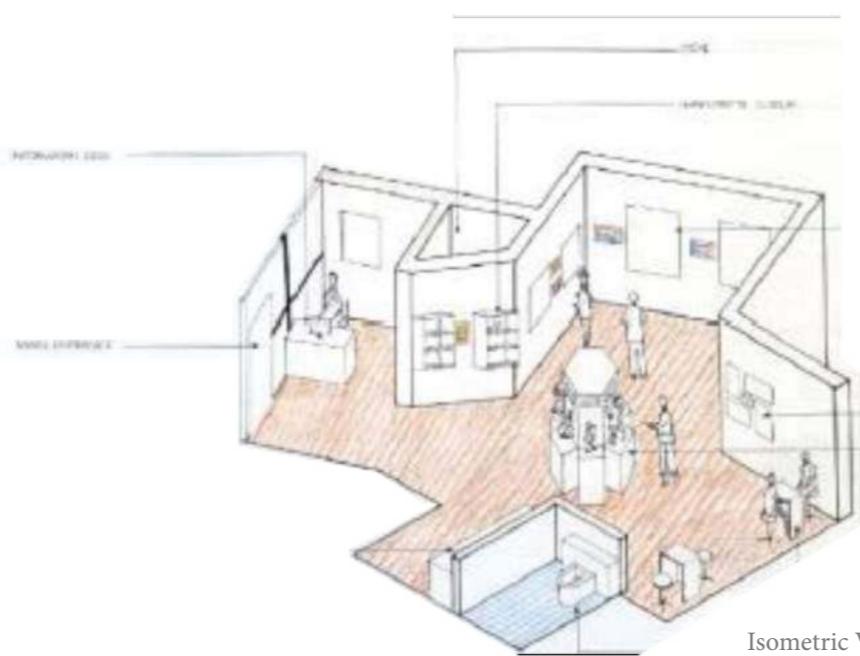
LOCATION: PANAUTI

PROJECT BY UJJAWAL SAPKOTA, KINJALK NEUPANE, RAKSHYA K.C.  
ROJINA KAFLE, SANJEENA JHA



Exterior View

Panauti is a town with intangible heritage and religious value with history dating back to the 13th century. By designing an art gallery, this project aims to hold the ambience of Panauti in all of its antique charm in the form of art that has been bypassed by history.



Isometric View Of Interior

## SURYADAYA

LOCATION: DHULIKHEL

PROJECT BY ANUP POUDEL, ADITI POUDEL,  
SANSU SHRESTHA, SIMRAN PIYA



Interior View

This communal space integrates three socio-commercial spaces- a cafe, mini library and a farmer's market. Depicting the process of germination of a seed, it is designed with the idea of providing a platform for farmers' products to reach a wider spectrum of consumers.



Exterior View

## DHULIKHEL ARCHIVES OTTOL

LOCATION: DHULIKHEL

PROJECT BY SHEELA KARKI, DHIRAJ BHANDARI,  
SMRITI ADHIKARI, KRITINA PRAJAPATI



Interior View

Ottol Community reflects the culture of the Newari settlement in Dhulikhel. This project is a museum, housing artifacts and documentation of Newari houses in the locality. This vernacular design is inspired by Newari windows- Tiki Jhya and Gajhya.

## CHIYA SATHI RA GUFF

LOCATION: DHULIKHEL

PROJECT BY KANCHAN BASTOLA, SUDIPTI GIRI,  
BIDHYA GUPTA, BIKALPA POUDEL

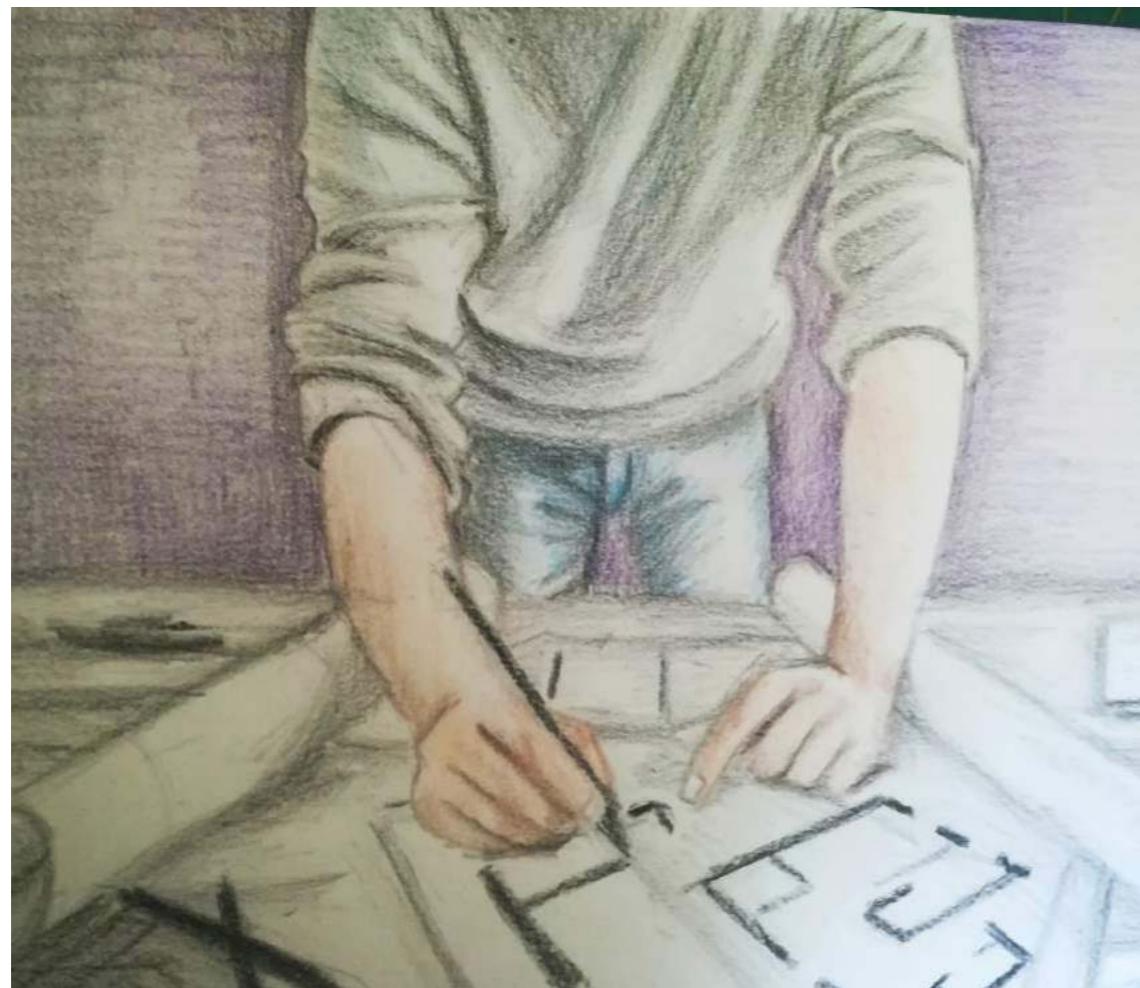


Exterior View

With a theme that 'People make places more than places make people', this project embraces traditional vernacular architecture by considering the existing knowledge and tradition. It houses a courtyard, pati and a typical tea shop with a design that blends in within the community.



Sections



Artwork by ANURAG KAFLE, B.Arch-19

P R O J E C T S

## MIXED-USE DEVELOPMENT

B.ARCH-17

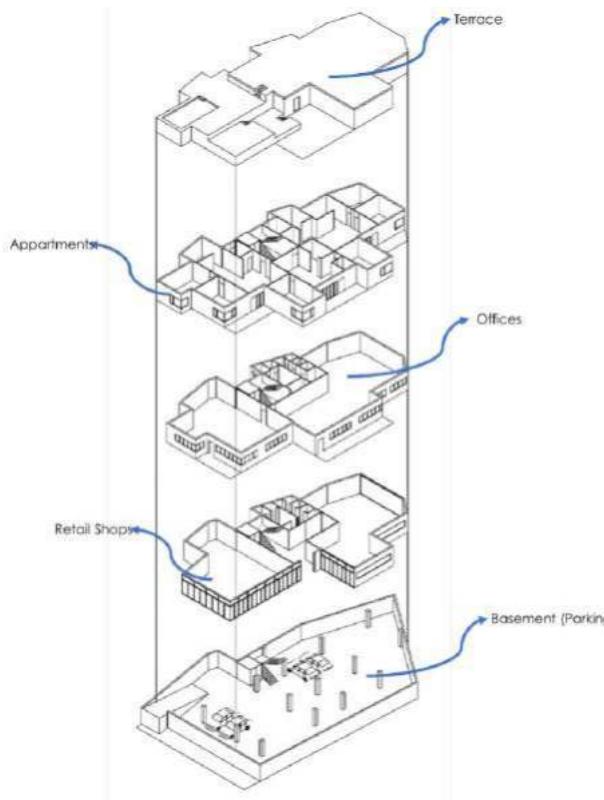
With the boom of urban populations, the pressure for buildings to “do” more with less increases. A mixed-use building aims to combine three or more uses into one structure such as residential, hotel, retail, parking, transportation, cultural, and entertainment. Whatever the combination, it brings together several uses within either one building or a small area.

## IN OUT COMMERCIAL APARTMENT

LOCATION: MILAP ROAD, SANEP  
PROJECT BY ANUP POUDEL, B.ARCH-17



Exterior View



Exploded Axonometric View

The site orientation and sun-path shaped the building into a scattered form with recessed terraces at various levels. This is done to gain sunlight in all the spaces of the building.

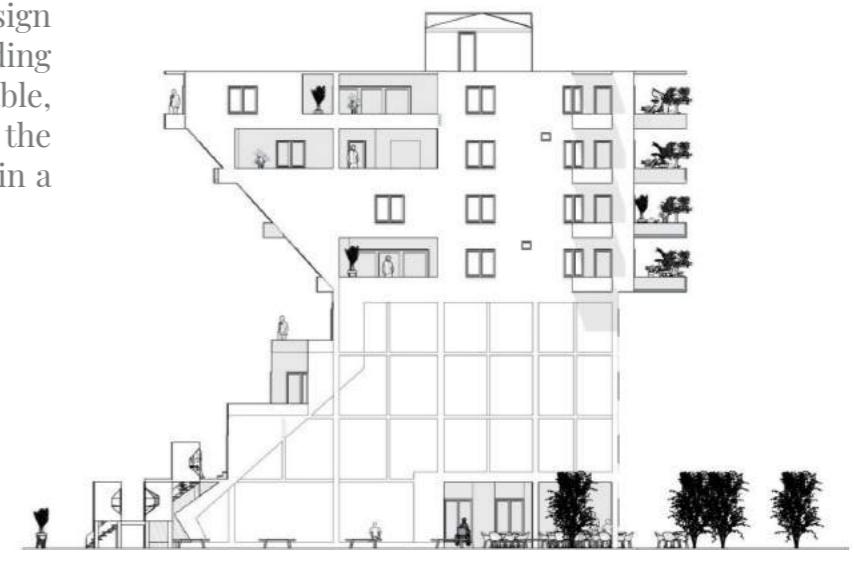
## THE ARCHITECT'S BOX

LOCATION: MILAP ROAD, SANEP  
PROJECT BY BIDHYA GUPTA, B.ARCH-17



Exterior View

The dominating vertical promenade in this design not just makes the building more commercially viable, but also increases the outdoor hangout space in a seemingly narrow site.



Soouth Elevation

## LIVE-WORK BALANCE

LOCATION: MILAP ROAD, SANEPHA

PROJECT BY PRASAMSA POKHAREL B.ARCH-17



Exterior View

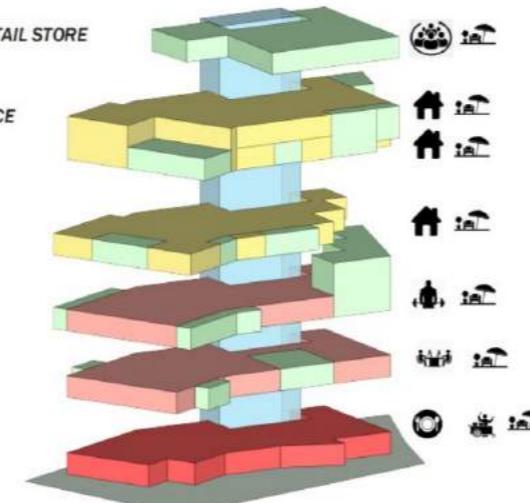
With a form that follows the principle of balance, this design aims to create a live-work balance following the 3 P's- Priority, Privacy and Purlieu.



Sectional View

### LEGENDS

<span style="color: darkred;">■</span>	RESTAURANT / RETAIL STORE
<span style="color: pink;">■</span>	OFFICE FLOOR
<span style="color: yellow;">■</span>	APARTMENT SPACE
<span style="color: lightgreen;">■</span>	GREEN SPACE
<span style="color: lightblue;">■</span>	CIRCULATION

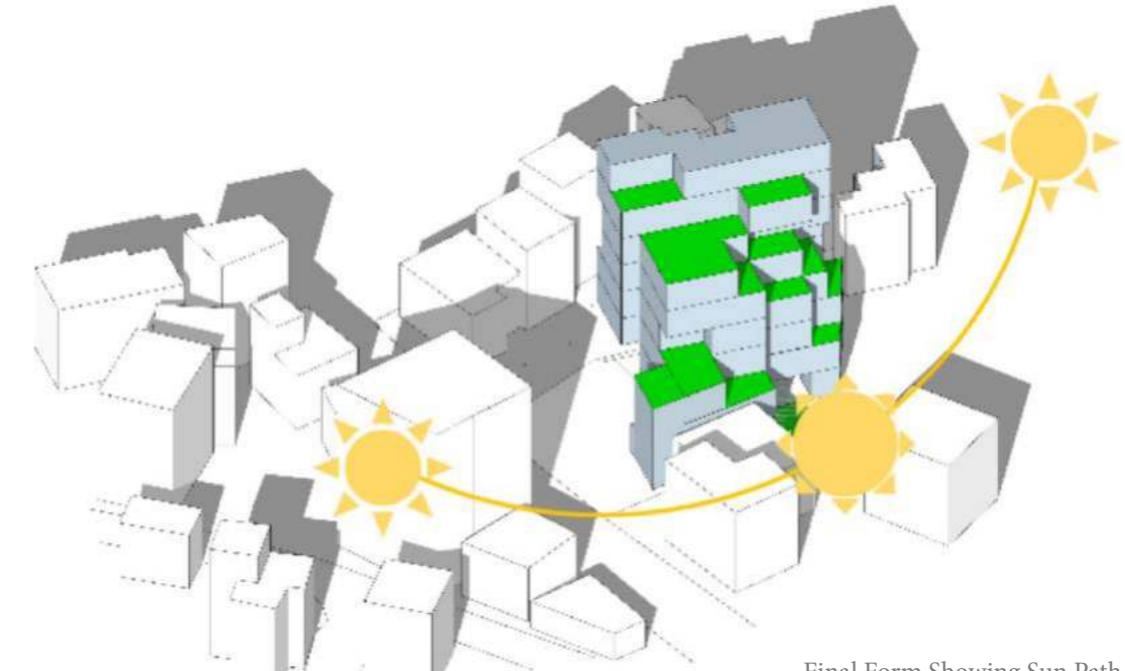


Program Allocation

## INTEGRATING ARCHITECTURE FOR A LIVE-WORK LIFESTYLE

LOCATION: MILAP ROAD, SANEPHA

PROJECT BY DHIRAJ BHANDARI B.ARCH-17



Final Form Showing Sun Path

By analyzing the impact of the sun on the site, location, spatial arrangement, orientation, window placement, and daylight access, passive solar design features have been fully taken advantage of to increase the energy efficiency, comfort and financial value of the building. Vertical functional unit division and connection are the pivotal concept of the design.



Conceptual Diagrams

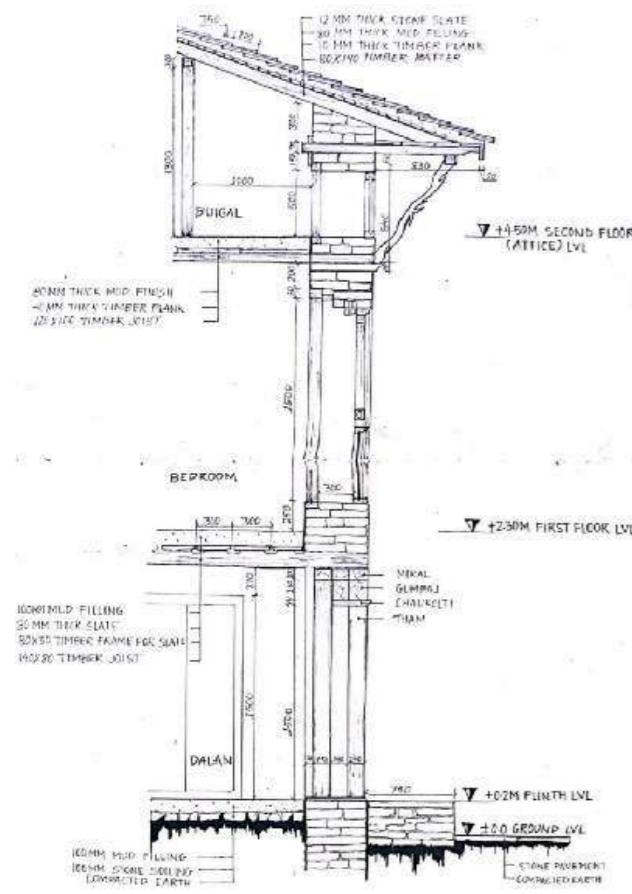


P R O J E C T S

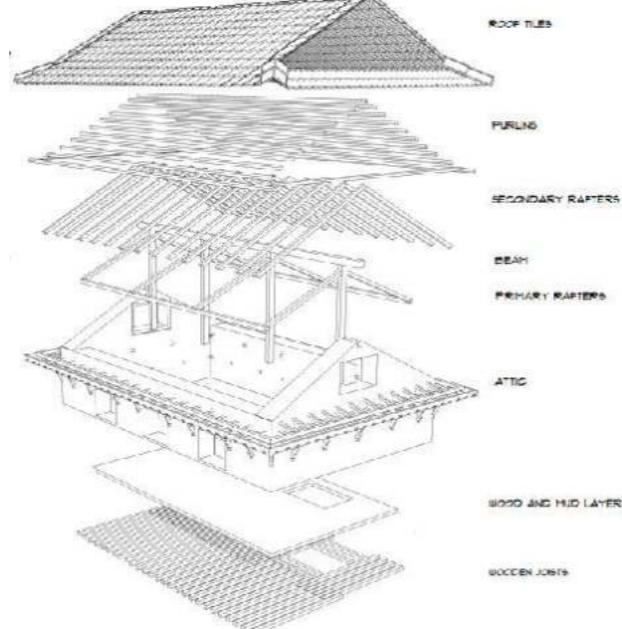
## DOCUMENTATION OF THE VERNACULAR

B.ARCH-17

Nepal's diversity is evident with heights ranging from 60m to 8848m, temperatures ranging from subtropical to arctic, and vernacular architecture varying with the location. The students of Batch 2017 are equally fascinated by the diversity of their hometowns, they have explored the vernacular aspect of the nearest neighborhood in their respective hometowns. Here are numerous vernacular buildings measured and documented all over Nepal.



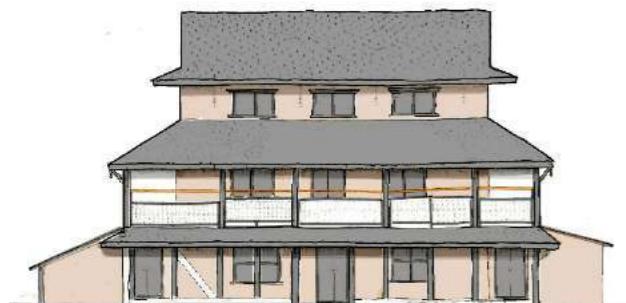
Dhiraj Bhandari, B.Arch-17  
Rukum, Karnali



Ujjwal Sapkota, B.Arch-17  
Panauti, Kavre



Aditi Poudel, B.Arch-17  
Gaidakot, Nawalpur



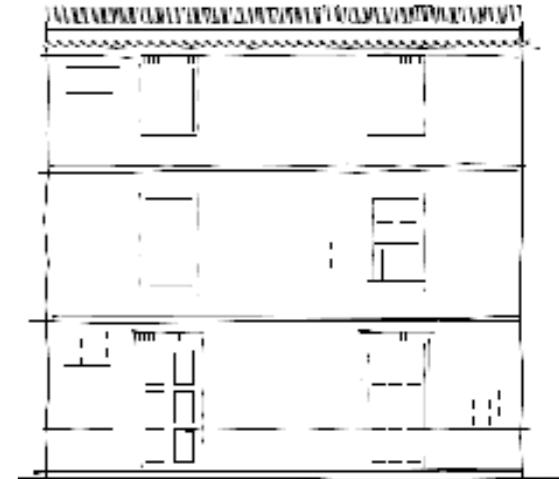
Nisha Rana Magar, B.Arch-17  
Kawasoti, Nawalparasi



Simran Piya, B.Arch-17  
Tungara, Chitwan



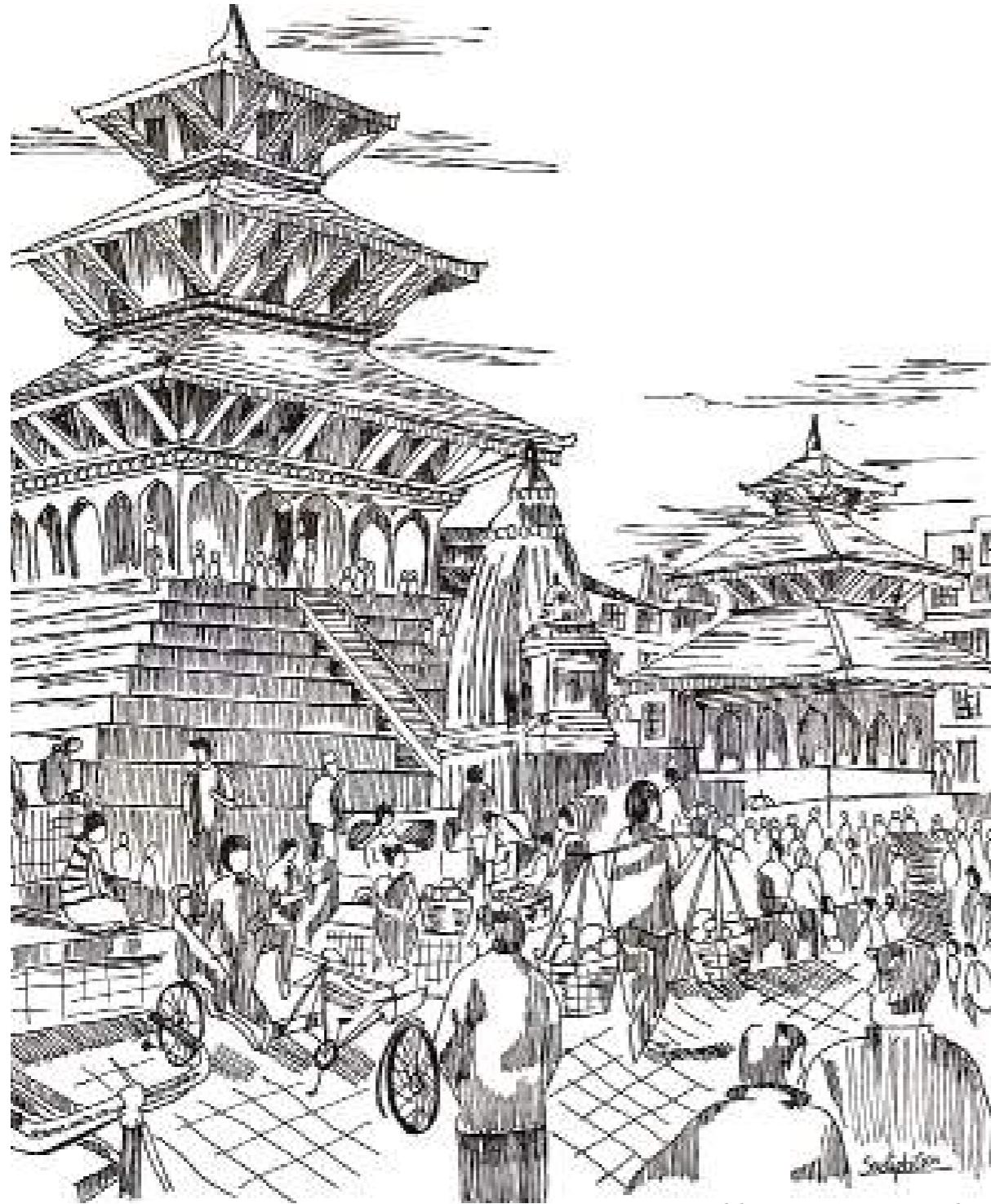
Kanchan Bastola, B.Arch-17  
Purano Bazar, Pokhara



Bidhya Gupta, B.Arch-17  
Tokha, Kathmandu



Anup Poudel, B.Arch-17  
Batauli Bazar, Butwal



Artwork by SUDIPTI GIRI, B.Arch-17

P R O J E C T S

## VERNACULAR DESIGN

B.ARCH-17

With the COVID-19 pandemic and lockdown, the task requires studying the nearest vernacular neighbourhood and measuring at least one vernacular building in detail. The main motive was understanding the local context and incorporating relevant innovative design and construction methods that address contemporary requirements based on the need of community.

# TECHNICAL TRAINING CENTRE

LOCATION: KAWASWOTI, NAWALPARASI  
PROJECT BY NISHA RANA MAGAR, B.ARCH-17



Coexisting with a 50-year old vernacular structure, this design takes inspiration from the local houses in Nawalpur. Each with a different function, the blocks are zoned being mindful of the noise they could produce and the need for privacy.



This design, harmonious with traditional architecture and nature, is designed to incorporate interactive space in the settlement. The interplay of greens with the main lines of circulation guiding the access, brick-built structures in the sloped terrain, creates a balanced ambience overall.



# NANGKHEL COMMUNITY CENTRE

LOCATION: SURYABINAYAK, BHAKTAPUR  
PROJECT BY ILAM SHRESTHA, B.ARCH-17



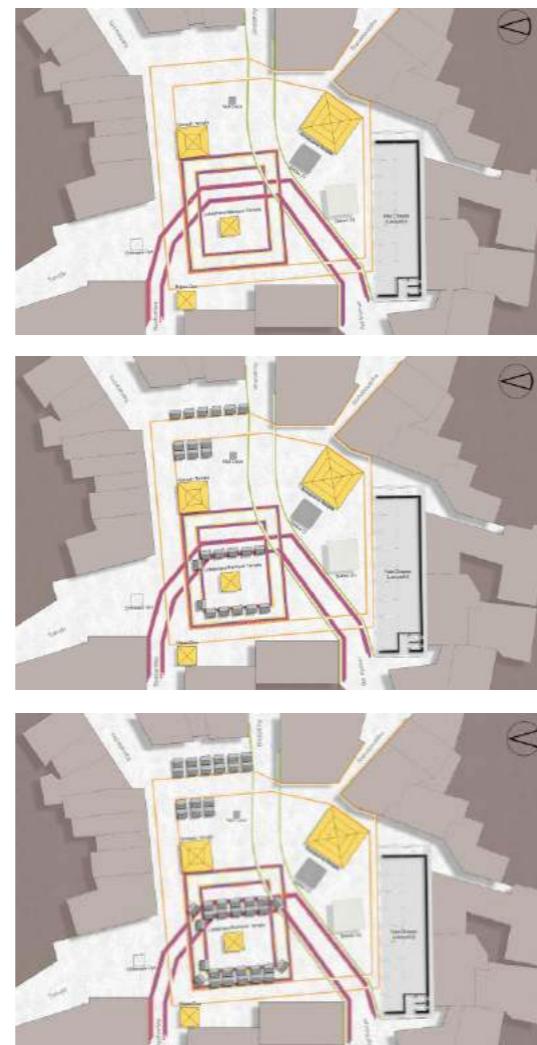
The first thing that springs to mind when we think of Asan is its lively and vibrant ambience. It is well-known for its market, shops, gallies, and other amenities. Due to unmanaged street vendors and waste disposal, the lively atmosphere can sometimes devolve into chaos. Asan is in a dilapidated condition and this proposal offers to rethink the street market in Asan along with renovation of Yata Chapaa, without disrupting the current atmosphere ensuring that Asan retains its essence while also being better and properly maintained.



## RETHINKING STREET MARKET

LOCATION: ASAN, KATHMANDU

PROJECT BY AABHUSHAN MAN SINGH TULADHAR, B.ARCH-17



## TUKHYA CHAKU PRODUCTION CENTRE AND CAFE

LOCATION: TOKHA, KATHMANDU

PROJECT BY NANDITA SHRESTHA, B.ARCH-17



Having been known for its sugarcane cultivation and Chaaku production, the town of Tokha gets its name from the words Tu (sugarcane) and Khya (field). With the growing population, sugarcane cultivation and Chaaku production culture are declining. Since the identity of Tokha is so closely linked with Chaaku, the main concept of this proposal is re-identifying identity: to incline people towards the production of Chaaku.



# ARCHITECTURAL DOCUMENTATION CENTRE

LOCATION: PURANO BAZAAR, POKHARA  
PROJECT BY SHEELA KARKI, B.ARCH-17



In a site that holds history from the past, representing the design contexts from nearly three centuries ago, a documentation centre would widen the historical findings and highlight the importance of vernacular architecture. This would be a place to learn about history as well as preserve it. With traditional aspects in terms of planning, design, materials and certain technology, the design embraces innovation in terms of access, energy efficiency, sustainability and expansive spaces.



Artwork by AABHUSHAN MAN SINGH TULADHAR, B.Arch-17

# IN CONVERSATION WITH-



AR. SIRISH BHATT

Ar. Sirish Bhatt is an independent conservation professional. She graduated with a bachelor's degree from Tsinghua University. Rather than commercial designs, her areas of interest include conservation works. She has been playing a vital role in conserving the architectural heritage and sites after the catastrophic 2015 earthquake. She is a dedicated architect who has been preserving the character of buildings in Upper Mustang since 1996.

## What is Architecture for you and how has the definition changed over the years?

I cannot define Architecture in a word. For me, architecture is not just buildings. It includes so many human and social aspects. It is related to many things in our daily lives. Everything evolves, similarly, the definition of Architecture has also evolved over the years.

## What are the crucial or necessary skills and qualities that are needed to become an Architect?

For me, there is no particular skill to become an architect. You need to be passionate about your field. You need to be curious and ready to learn.

## Is there anyone in the community that you follow or admire for their architectural ability or someone you look up to and why?

I am more involved with restoration works. Most of my projects are not designed by an Architect, they are all designed by craftsmen. So I cannot say I admire anyone but I have great respect for carpenters and stonemasons who are crucial to put the building together.

## As you're an independent conservation professional, we're curious to know what got you so interested in pursuing conservation architecture?

While I was in my third year, I came back to Kathmandu. During that time my University told me to click the photos of the traditional architecture of Kathmandu valley. I went around and took many photographs and that was the moment when I realized that the architecture of Kathmandu valley is so unique yet I didn't know much about it. The traditional architecture here was completely different from China. They were also not properly maintained. So I wanted to learn more about traditional and historical architecture after I graduated. That is how I got into conservation architecture.

## What were the major challenges that you faced in working for the restoration of architectural heritages after the catastrophic 2015 earthquake?

Working in restoration is very different from commercial design. You have to learn and research a lot because every site is different. There is so much unknown about the site. Every building is different. Every time I walk into new restoration work, it is always a learning process about the building, materials, people, and culture for me. There are a lot of challenges but it also allows you to explore more.

## The recent case of demolition of late poet Laxmi Prasad Devkota's home? Your thoughts on?

I was quite shocked but at the same time I am very happy that there is awareness about this, people are raising voices. You cannot evaluate a building just by its age, it is more than that. Laxmi Prasad Devkota is an important person in our literature field. It is about who lived there. In the past, you would not even know if such important things disappeared. I am happy about the awareness that is there amongst people.

## How difficult do you think it is to balance the needs of the local community with tourism for a successful city?

I think it is a tricky balance. There are two things, one is the need of local people. We all want to live in a comfortable space. The demand for tourism is not a direct issue in terms of destroying the old houses. I think it also depends on the choice of people.

## As an architect, could you tell us more about how you implement Green Building Practices?

I have hardly built a commercial building. I am more into restoration and conservation work. But Vernacular Architecture from every aspect is like green architecture. We can learn so much from vernacular buildings. I hardly design buildings but when restoring a building, I respect all the green aspects too.

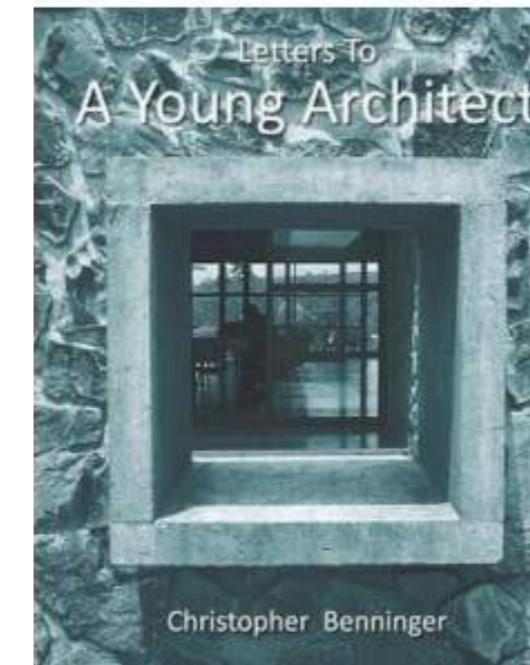
## There have been so many changes everywhere in the world due to COVID-19. So, how do you think the pandemic will shape design?

Architects have started to realize walkability and human-friendly architecture. Covid is linked to health, people are now more conscious about health. People have started to think more about greenery. Parks have come up with open spaces for people. I think Covid made us more conscious about these aspects.

\* \* \*



Artwork by VISHAKA PRADHAN, B.Arch-20



## LETTERS TO A YOUNG ARCHITECT

-CHRISTOPHER BENNINGER

ples and criticizes pre-existing cliches.

In conclusion, the book presents a short biography of Benninger's life in such a way that leaves one wondering, is this a biography or a self help book.

Aaditya Raman Singh  
B. Arch-2020

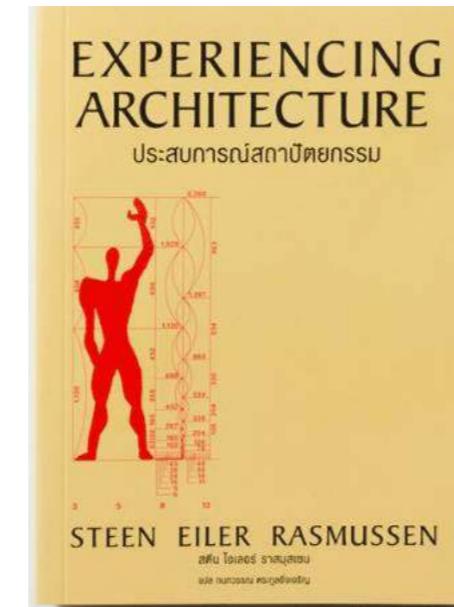
**L**etters to a young architect is the first book that I read about architecture. Written by Christopher Charles Benninger, this book explores not only the technical aspects of architecture, but also other social and moral aspects. It provides a guideline for young architects as to how they should proceed with their career.

The first few chapters of the book focuses on the few principles that Benninger has outlined. These principles are the backbone of the book and almost all of the other chapters are explanations of these principles, as to how they have been integrated into his life.

Throughout the book, Benninger proceeds to describe events in his life and how we can learn from them.

He talks about his childhood and how he came to become an architect; how noticing minor details in almost everything made him realize how beautiful they are, and at the same time made him question those everyday things. He expresses his grief at the loss of his friends, recalls the long life he has spent with them; presents prin-

## EXPERIENCING ARCHITECTURE



The author Steen Eiler Rasmussen, born in 1998, was a Danish architect and urban planner. Also he was the professor of Architecture at the Royal Academy of Fine Arts in Copenhagen and lectured widely at Universities in Europe and the United States. The book was first published in 1957 and translated into English in 1959. The book "Experiencing Architecture" is categorized into 10 chapters covering different aspects of architecture. The author has given an amazing introduction to architecture and tried his best to help readers get an idea on how to experience architecture. Every sentence or the notion expressed in the book is beautifully supported with pictures.

The book is full of light and compassion. It really changes the way you look at the buildings and how you perceive light, sound, texture, color, rhythm, etc. He opens the reader's eyes to the beauty of Architecture and its various aspects. The author has illustrated various examples of historical architecture to help readers get an exact idea on the subject. Sadly, the book does not have any conclusion. It would be much better if the author had summarized the main theme of the book in a paragraph. Also, it seems that the au-

Shreeja Shrestha  
B. Arch-20

thor is against the Japanese style of architecture. He seems to be dominating their architecture which I find extremely wrong.

This book can give a clear idea about architecture. Architecture is not produced simply by adding plans and sections to elevation. It is something else and something more that cannot be well defined. It cannot be judged only from the exterior of a building. Architecture cannot be explained, it must be experienced. Different individuals can experience it differently at different times. It is always created with a special spirit and conveys that spirit to others. I like the way the author states that it is possible to get as much pleasure from architecture as the nature lover does from plants.



## SMALL SCALE BIG CHANGE

Andres Lepik is director of the Architecture Museum at Technical University of Munich (TUM) and professor for architectural history and curatorial practice. He is an architectural historian. He is an expert in the field of socially engaged architecture and participatory structures.

The book 'Small Scale Big change' talks about eleven different architectural projects around the world. The projects are small-scaled. Lepik focuses on these small-scale projects and displays their influence in communities or societies. He has shown how these small projects have contributed to the betterment of such a large society. Projects listed in the book are all designed and built-in under-served/underdeveloped communities around the globe.

The book also notes the social engagement of Architects. According to Lepik, Architects are the ones who can fulfill or serve the greater needs of society. The role of the global architect in society is changing and is very crucial. Engaging projects such as METI handmade school, \$20K house makes anyone studious.

The book gave a clear idea that the archi-

## A LIVING ARCHITECTURE

Architecture is related to life and it is life itself. The book "A Living Architecture" describes this fact from every aspect: physical, mental, social and emotional. Written by John Rattenbury, it simply teaches us the importance of architecture and Frank Lloyd Wright's perception and practices towards organic architecture. John Rattenbury was a principal architect and planner for Taliesin Architects until 2003. A former Wright apprentice, Ruttenbury has made efforts to educate the public about organic architecture. He worked and studied with Frank Lloyd Wright for eight years and currently teaches design and professional practice at the Frank Lloyd Wright School of Architecture and also lectures throughout the United States.

"I believe in God, only I spell it Nature." Frank Lloyd Wright says. For Wright, his greatest inspiration was nature. He is considered to be a man in the right place, at the right time. His mother imbued him with love for nature. It is said that his mother had decided that he would become an architect before he had been born. Whatever he had achieved in his life, his mother had a great impact. He was a multitalented and thoughtful person with a kind heart who always had a love for nature and humanity. He was a man with new and great thoughts. He proclaimed that the United States should have its own form of architecture. He then came up with organic architecture yet he did not claim to invent it.

The concept of organic architecture was flourished by Frank Lloyd Wright. His proj-

ects and concepts were continued even after his death by the Taliesin Fellowship developed and expanded by him. Taliesin was the name he gave to the studio and school that he decided to build in Jones Valley. It took forty-five years building and expanding Taliesin, including rebuilding it twice after fires destroyed the living quarters.

After he was married to Olgivanna Lazovich Hinzenburg his wife said to him, "You have built many buildings and many more will come. Why not build people, build architects? Educate young men and women in the philosophy and principles of organic architecture?". Hence, the Taliesin Fellowship started. The Taliesin Fellowship was largely a self-sufficient community and during the years of the Second World War, operated the Taliesin farm and grew its own food. In addition to work in the studio, construction and the farm, the fellowship included cooking, shopping, cleaning, landscaping and cultural and social activities. Everything was related to architecture and architecture became a way of life. It was not a course that was to be completed in a certain time with some certain criteria, it was a lifelong learning process. It was an experience and inspiration that a person would get through practice. According to them, the main aim of architects should be to design architecture that inspires people to become better human beings and to make a contribution to the future of civilization.

"A principle", Wright says, "is a marvelous thing. It never changes. It is elemental. You

first apprehend the nature of the principle, then you begin to realize the limitations, the felicities and the force of the principle." There is an example given to show the principles of designs. It is an example of a plant. The structure of the plant has integrity, from the roots that anchor the plant to the ground and gather moisture and nutrients from the soil to the stems that extend into the air, bringing leaves and blooming in the sunlight. Their design is in harmony with their particular environment, adapted to the specific climate and soil conditions. The patterns of nature are an architect's great source of inspiration, not to be copied, perhaps not to even be interrupted, but to be used as a great teacher. This principle of design should be followed by every architect for creating harmony between architecture and nature. Taliesin Architects follow this principle for each of their projects.

There were many projects that were completed by Taliesin Architects. Some were by Wright and some weren't but all of the projects became great examples in the field of architecture. The projects were of various purposes: cultural, hospitality and recreational, commercial, civil, educational, health care, religious and residential. A few projects are the Gammage Memorial Auditorium, the Arizona Biltmore Hotel Expansion, the Lincoln Tower and Liberty National Bank, Monona Terrace, The Prairie School, Corinne Dolan Alzheimer Center, St. Mary's Catholic church and Benton Residence. The architecture of the buildings differs according to their functionality. Each building should give a sense of its purpose. A bank should give the sense of commercialization, a hospital should give the feeling of healing, a school should give the feeling of knowledge and a temple should give the feeling of faith. This does not mean that each type of building should have its own definite pattern or formula to be built but it should show its function.

The purpose of the structure should be felt. So, architecture is both a need and desire.

In conclusion, organic architecture is an exploration by architects to design and build beautiful structures that serve our needs, make our lives better and lift our spirits higher. Every part of architecture should be for mankind and be in harmony with its environment. Architecture should be felt as if it is in the lap of nature. Architecture should be able to define nature and also relate to everything. Architecture is not only related to design, it is related to our physical state, mental state, soul, ethnicity, culture, etc. It is not just structured; it is our feelings. If the architecture doesn't relate to life and the environment, it cannot be considered true architecture. So, architecture can be taken as life and thus, can also be called living architecture.

-Bibha Devkota  
B.Arch-19

## BUILDING A LIFE CAPSULE: THE FUTURE FOR ARCHITECTS?

Can you imagine being able to survive in a space of 8m<sup>3</sup> and work With ease in that volume?

On being questioned about this by our design studio mentors, we had mixed feelings- awestruck, confused and excited. While some of us had a clue about this, others were quite confused as to how we can create a small space where the user does not feel like the walls are caving in. However, as first-year architecture students, we were quite concerned whether or not we could come up with a satisfactory design as it was a major assignment of the semester. We were divided into a group of five; our group included me (Shreya), with my friends, Bibha, Sandhya, Sarad and Manjil. For our first presentation, we completed three case studies (Nakagin Capsule Tower, Ecocapsule and Quartz Tiny house), which gave us some inspiration for a head-start. From this we learned how choosing to live in small spaces can impact urbanization and help reduce the ongoing human and environment-related problems.

Basically, a life capsule is a confined, yet properly utilized space, which can fulfill the basic requirements of the occupier, using multi-functional furniture. To start, we chose a fashion designer as our user and listed the necessities- large storage area for clothes, sewing machine, kitchen and its utilities, bathroom, bed and most importantly, an organized working area. Unlike our seniors' experience, we were required to make a life-size model (1:1 scale) for

The tallest member from each group, fulfilling all the requirements adjusted in that space. We started with a linear structure with a slanted roof, but it was rejected. We were disappointed, yet we knew where and how we lacked and we were perseverent to switch our view. Investing more time into the project, we tried out other forms. We studied different ways small spaces are optimized using multi-purpose furniture and integrated this into our design. After working collectively for days our design was approved on our second attempt.

But that was not the end of it all, in fact, that was when the real battle began. Making a 1:1 model out of cardboard scraps and materials other than wood, cement and steel was one of the most difficult parts. Not only that, searching for materials was equally difficult. We were not funded by the department so the cost of the materials solely relied upon us and we had a tight budget. First, we collected some materials from around the university, then we went to Banepa in search of a recycler.

Fortunately, we encountered a recyclable collector, he led us to a place where we collected the materials, but the way there was extremely littered. After a fatiguing time, we got hold of a bunch of cardboard pieces and decided to walk back to the university via the farmlands. Soon enough, carrying the cardboard for an hour or two of hiking only to reach a dead-end (a polluted river), we realized it wasn't the wisest decision. Foot-slogging on the long muddy way with team-

mates, I noticed how being in a group had multiplied my strength. We didn't expect that the trails we left behind were building up wistful memories for us. At the end of the day, we reached our classroom, rested for a while, and let the cool breeze recharge us. The next day awaited with a great challenge of putting down our ideas on sheets of paper.

Adding to our panic, our internal exam was scheduled for the day before our submission. Pulling all-nighters making the model, and studying for internals, we were hanging by a thread. Thankfully, our design studio mentors spared us some more time for model-making but the sheets needed to be presentable by 9 a.m. in the morning. Albeit tired, with dark circles under our weary eyes, listening to music and having silly conversations in the studio munching noodles and biscuits helped soothe the anxiety.

After submitting the sheets and taking a day or two of rest, we proceeded with base and furniture making. The piles of cardboard in the studio were now being erected into six life capsule models. As expected, the materials were insufficient, so we headed to Banepa to get more. This time it wasn't as difficult as before.

The following night, we assembled the model and supervised the minor details, overlooking miscalculations. On the day of the final presentation, feedback from the jury and encouragement from our seniors felt rewarding.

In the end, we dismantled those models and cleaned the studio, wrapping up the project that made us feel a rollercoaster of emotions and taught us more than just design. We went back to our rooms, acknowledged all the effort we put in, the time we spent, and the unity that made this possible. We felt a sense of accomplishment as we sighed a breath of relief.



-Shreya Tuladhar  
B.Arch-19

## MY TAKE ON ARCHITECTURE

Architecture is a philosophical art. As much as it comprises art, there's an equal technicality to it. It is imagination and creativity, designing and construction techniques, so much more than just art. I always thought architecture to be just art, if you had asked me what architecture was a year ago, I'd have said art and design. But six months in an architecture school has completely changed my opinion and view and also my perspective toward every physical building around me.

If you ask me how I got here and about my choices then no, architecture was not my first choice. I loved art and always got fascinated by it. I don't mean architecture wasn't my choice at all, it was but just not my first. But somehow I got in here and I am glad I did. If you ask me if it is easy then I will definitely say no or perhaps the dark circles under my eyes will speak volumes. I can't perform under pressure and I am a procrastinator. These two make up a deadly combination. As much as I struggled with myself I had so much fun too. I met so many amazing people, four gorgeously talented and amazing friends, all I can be is grateful. The late-night studios and sleepless nights and the dreadful presentations, I hated them but also count it as one of the good moments of my life. Also, my studio teachers made my batch mates and I work in a group too, to show us it's easier when you are working as a group. The load and the pressure exist but it's comparatively lesser than while we are working alone. Each class is distinct from the other yet they complement each other,

er, concepts from one course developed in another. If you ask me how difficult it is, then I'd say the structure of the workload is thought of and assigned by the faculty but this doesn't work if you are a procrastinator like me. If you are diligent and versatile then all it takes is dedication and willingness and a strong black coffee to keep you thinking about your design and sheet the whole night, obviously. The other thing I learned was to be open to criticism. I also learned to take them and convert them into something productive. And the first project or draft we do is always rejected, for good. At first, I felt bad about it but later when I looked back, I myself called it trash.

Well if you don't question your existence once or twice a week and go through an existential crisis there's no point in joining architecture school. I have it too and by now I have normalized it. Also, power naps are my savior and coffee has become my ultimate best friend. I have learned so much about art and architecture, the difference and also have developed an interest. I no longer know about correct posture, my back hurts while I am still 18 but I also know about the history of architecture and so many things that I always wanted to know. Here I felt the proverb "No pain No gain" but it's fine as long as I keep on improving myself. Not going to lie, I have wanted to quit it but seeing people around me struggle the same keeps me going, the image of a better tomorrow holds me tight and I find myself waking up the next day and working twice as hard as I did. I know there are 24 hours in a day but we have

to work like there are 72 or more. And also, make every hour count. I have made several mistakes but I have also wanted to correct them. Having such wonderful faculty has always motivated me to do better. There will always be critics but by now I've somewhat been prone to it since I know it's for my good. Here is when I found my friends crying too. But hey the submission is due and we don't have time, even to cry. So let's just put a minute timer and cry and get back to work. It's important to have supportive friends, who will not only have your back but also give constructive criticism and are brutally honest about the ideas and design.

And all the myths that I use to hear about all-nighters are absolutely correct and good music has become my companion. And crying every day is also a level that I have unlocked in my life. We are taught to take criticism from the beginning but there comes a point when it will be very hard to inhale. I felt like my entire world crashed down when my life capsule project, which me and my friends had spent so much time on, probably thought we aced it and faced criticism. And sleep deprivation plays a major role in mental breakdowns because when you haven't slept the whole night and worked so hard and yet face criticism, you are not left with any other option but to sit and cry your heart out. Sometimes we try to think extremely out of the box but end up making mistakes in basic things.

Despite all the hardships, I have learned. Our tutors are not only critiques but also our source of wisdom. The more we ask for advice, question, and communicate, the more it will be beneficial to us. In addition, my tutors are really helpful and I can just call and ask but sometimes me and my friends are so anxious that we call too much and then just get left with "the number you are trying to call did not answer, please try again later." Also, my design tutor once said, "Your

final grade isio you build every year, your creativity and technique is your asset, not your grades. Don't be disappointed by your grades." And I tend to think about it a lot. It's all about dedication if we stop procrastinating. Getting rid of a habit is very tough and doesn't really go away but if we try to focus and be dedicated nothing can stop us, and we'll eventually fall in love with our work and whatever we do. This is the ultimate level of success and a dream place to be. I am very new over here and I have so much to explore. By the end, I wish to learn a lot while having fun, to have a broader sense of imagination and creativity, and obviously to not look older than my age because of sleep deprivation.

-Tamanna Bhattacharai  
B.Arch-19

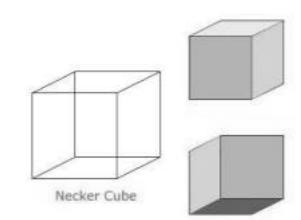
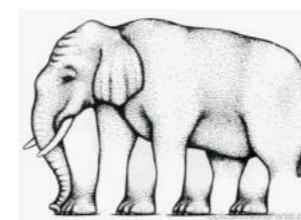
## AMBIGUITY AND ARCHITECTURE



Ambiguous stimuli are important tools to science because physical reality can legitimately be interpreted in more than one way. . Often, the viewer sees only one of them, and only realizes the second, valid, interpretation after some time or prompting. When they attempt to simultaneously see the second and first interpretations, they suddenly cannot see the first interpretation anymore, and no matter how they try, they simply cannot encompass both interpretations simultaneously- one occludes the other.



Illusions are experiences in which the physical reality is different from our perception or expectation.



What do you see in the picture? What's the immediate image you got in your mind? A lady looking slightly back or an old woman? Well, if you look clearly you see both of them. Ambiguous right? After some research, I came to know that even architecture has ambiguous creation. But first of all, we should know what's the difference between ambiguous and illusion.

The Necker cube is an ambiguous line drawing, first published in 1832 by Swiss crystallographer Louis Albert Necker. You see a face on the basin, but that doesn't make it ambiguous.

Ambiguity in architectural critique is too

elastic to be of theoretical interest. First of all, ambiguity should not be confused with the discrepancy between what something is and what it seems to be: The mere fact that a bank looks like a church does not make it ambiguous. Neither should ambiguity be confounded with mere multi-function. Many buildings simultaneously symbolize in different ways- they denote, exemplify and allude at the same time. But that doesn't make them ambiguous. That a

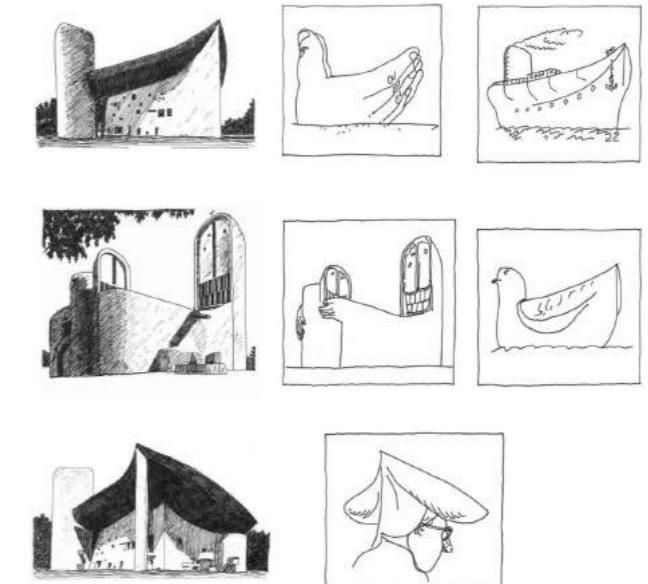
Hotdog stand in the form of hotdog simultaneously denotes hotdogs, exemplifies its practical function and alludes to the American way of life does not turn the stand into ambiguous. According to Rudolf Arnheim "Ambiguity can make one and the same building look tall when it is perceived in one context and small when it is perceived in another." "The ambiguity, profound in both idea and form, the equivalent conjunction of the temple front and domestic block." (Colin Rowe)

The building can be interpreted as ambiguous only if:

- It does not only have to admit several rival denotational interpretation but also to rule out certain interpretation as wrong.
- The interpretation concerns a view of the building from one side, they do not have to concern the views of the building one side, they do not have to concern the views of the building from every side.
- They have to be maximally satisfying, though conflicting, resolutions of the indecision concerning the denotation of the building which assign different denotations. If there is no such resolution the building is not ambiguous, but only vague. (cf. Scheffler 1997, 53)

You might have heard about Le Corbusier's chapel Notre-Dame-du-Haut at Ronchamp. Charles Jencks proposed the following interpretations which may be understood in the sense of denotation.

- Praying hands
- A ship
- A duck
- A head-covering of a cleric
- Two brother embracing at each other



Thus, the chapel fulfills the three conditions, because it does not admit of every interpretation; each of the admitted interpretations concerns a view of the chapel from one side and several (if not all) of them are satisfying in a given context. It does not matter that they gain their pervasiveness only through the drawings by Hillel Schocken which accompany Jencks Interpretations. It does not have to be obvious what a building symbolizes, and drawings, as well as descriptions, may help us to see what it symbolizes.

-Puja Silwal  
B.Arch-19

## TWENTY OVER EIGHTY

"Design is a veritable treasure trove of knowledge." Aileen Kwun and Bryn Smith wrote the book Twenty Over Eighty collecting insightful interview portraits of 20 key figures over the age of 80 who inspired the existing creativity in the field of design and architecture. The conversation of these architects and designers (Ralph Caplan, Seymour Chwast, Bob Gill, Milton Glaser, Michael Graves, Charles Harrison, Richard Hollis, Phyllis Lambert, Lora Lamm, Jack Lenor Larsen, Ingo Maurer, Alessandro Mendini, Jens Risom, Richard Sapper, Ricardo Scifio, Denise Scott Brown, Deborah Sussman, Jane Thompson, Stanley Tigerman, and Beverly Willis) has collected compelling voices in the field of design from the past. Thinking about design is hard but not disastrous. In the past, the design was merely taken as a marketing tool. Manufacturers only needed designers at the end of the process but they had always wanted to be involved from the beginning. One should be interested in the process of learning rather than be a competitor and must be enthusiastic in the concept instead of the rendering. It is a fact that a concept is a big idea and people seldom have ideas as big but whatever you do, you should have original ideas although there aren't any formulae and tricks. Whenever you draw something, it should strike a chord. Either for yourself or for the people looking at it. Today's world is divided into two lines: designers are in the first and illustrators are in the second one. In design, you don't have to follow anyone's order like you would if you were illustrators because most people are attracted to designing. You can be a designer knowing drawing skills which is the complex art of your brain.

Art and design are like sex and love. Both are fine independently; the design is good, art is good, sex is good, love is good, and can be obtained quickly but not often. Nobody is talking about architecture in past except in schools. Design is for everyone and making money should never be a primary goal. You grab a piece of paper and start designing just to satisfy yourself. You should present your design to your client without confusion. Your eyes should be open to even the smallest of things and be ready to absorb what you observe. Creativity doesn't come without practice as the mind can play games that can be rationalized into a concept. You shouldn't plan too much yet you should keep your feet on the ground and never give up even if you fail. When all the furniture is of good quality, one has to relate quality with sustainable design. The work of an architect is like jumping off a tall building without a parachute hoping to figure out how to land safely on the way down. No two architects are alike even when they are husband and wife. To know about a site, you have to walk around a site to get a sense of it but you can't walk and memorize a 100-acre site. Design isn't something that can be remembered by listening to lectures. To understand it, you must do it yourself. Only then can you know how architects can think broadly and how it is different from engineering

For everyone, work is not a burden but a necessity but that doesn't mean that these golden-agers are not burdened by frustration. For each of them, their daily labor is a rich source of passion, pride, and identity. Architects mainly talk about how to get clients, materials, manufacturers and

## THE EYES OF THE SKIN

**H**ow are senses related to architecture? How do the five senses of vision, touch, sound, scent, and taste help humans in a deeper understanding of space and architecture? Perhaps, the writer Juhani Pallasma provides some critical answers to these queries in his book 'The eyes of the skin':

In contemporary modern architecture, the eye is the most dominant sense organ. However, according to Pallasma vision is the sense of separation, detachment, or distance. He states, "architecture at large has become an art of the printed image fixed by the hurried eye of the camera. Instead of experiencing our being in the world, we behold it from the outside as spectators of images projected on the surface of the retina." Modern architecture tends to focus more on visual pleasure disregarding the other essential sense organs. Experiencing the world mainly through eyes leaves us as distant observers. While the eyes distance us, the other senses create intimacy and nearness. So, he seeks for architecture to integrate all the senses in it. He adds the other two senses as skeleton and muscle i.e. sense of movement.

For instance, a walk through a forest or A Japanese garden is invigorating and healing because of the essential interaction of all sense modalities reinforcing each other. Imagine, you are walking through a forest. You inhale the fresh air breezing through the gaps between the trees. You see the reflected sunlight through the twisted branch of leaves. You can hear the insects

and birds chirping fearlessly. You feel the contour of land beneath you. This certainly connects you with the environment and makes you feel energized and satisfied.

Moreover, it is a delight to move from old realms of odor to the next in the narrow streets of an old town; the scent sphere of the candy store makes one think of the innocence and curiosity of childhood; the dense smell of the shoemaker's workshop, the fragrance of the bread shop projects the images of the health and physical strength, whereas the perfume of a pastry shop makes one think of bourgeois felicity.

There is a beauty at that moment with lacquerware removing the lid, lifting the bowl to the mouth. The gaze alone cannot give joy with silent liquid in the dark depths of the bowl, its color hardly differing from the bowl itself. What lies within the darkness one cannot distinguish, but the palm senses the gentle movements of the liquid, vapor rises from within forming droplets on the rim and a fragrance carried upon the vapor being delicate emancipation.

Hence, the timeless task of architecture is to create visible existential symbols that structure man's being in the world. Buildings and towns should enable us to structure, understand and remember who we are. Nevertheless, architecture is the art of mediation and reconciliation.

-Jyotika Shrestha  
B. Arch-19

## FEEL GUILTY OR ALLOW CHANGES?

We have always been fond of our ancient art and architecture whether it's in rural or urban areas. We should agree on the fact that whatever we like in the country was built centuries earlier, buildings that reflect our identity can hardly be seen being built in the present day. Where did we lack in between the road of architectural development? Should we feel guilty about the change in society or should we allow this change as a part of our tradition?

The architecture of a place is shaped by lifestyle, culture, and tradition. Whether it's in Terai or the Himalayas, the building material of a house was defined by the geography, type of farming, or husbandry they did. The cultural landscape varied from one ethnic group to another of the same place. Every community has its own public space and sense of place.

As soon as Nepal took a step forward in infrastructure development, imaginative human beings did look beyond for their better opportunity and lifestyle. People began to be fascinated by imported technology and monetized living. The occupation, which used to bound the architecture is now found varying in each home. Their demand is changing in dynamic ways, so is the appearance of their homes and perception towards public space. Somewhere between globalization and technological advancement, we have sought our eyes on the west for design inspiration without the matter of context. We lack to express our identity in architecture.

Present-day is not as exciting as before. We find no difference between a house in Kathmandu and that of Pokhara nor that of Mustang. We lack to build the essence of a place in a building. No building looks connected to its place nor does it support the climate-responsive approach to design.

Can we rethink the idea of regionalism and cultural identity? The benefit of vernacular architecture has to be realized not later than a few untouched communities in Nepal get spoiled. It is never too late to arrange proper approaches to revive the modern neighborhood with communal spaces.

Having said that, we also have few places like Bandipur which are revitalized successfully. However, change is inevitable, demands are ever-changing to humans. Modernism and tradition are two sides of the same coin. Even practice that looks modern today becomes tradition a few generations later. It is up to us how we shape our tradition to fit with the futuristic world.

-Prasamsa Pokharel  
B. Arch-17

## INTERRELATION OF MATHEMATICS AND ARCHITECTURE

The word architecture in English has a Greek descendant that is 'architekton' which means master builder. Architecture is the process and product of designing, planning, managing, and constructing the building and structures along with the surroundings nearby. It uses the blend of two distinct disciplines: arts and science. And mathematics simply is the science of numbers and their operations, interrelations, combinations, generalizations, and abstractions and of space configurations and their structure, measurement, transformations, and generalizations. Mathematics comes under the category of formal science.

The application of mathematics is very wide and used in the majority of the field from physics, engineering, finance, computer science to industry, where architecture is no exception. It has been reported that since ancient times, intentionally or unintentionally, architects, builders, and construction workers have been using mathematics as the most basic but valuable tool in almost all stages of the construction process from the inception of an idea to project completion. Geometry, algebra, trigonometry, calculus, linear programming, probability, and statistics are prominent branches of mathematics that play a crucial role in architectural design.

From site analysis to façade design, calculation of structural load to an analysis of building performance, require the implementation of mathematical principles. Mathematics is used by architects to express the design images on a drawing that can then be used by construction workers to build that image for everyone to see. Mathematics is needed to analyze and calculate structural problems to engineer a solution that will assure that a structure will remain standing and stable. The sizes and shapes of the elements of a design are possible to describe because of mathematical principles such as the Pythagorean Theorem.

Apart from the necessary use of mathematics in the engineering of building, mathematical principles are used for several reasons, such as computer modeling, defining the spatial form of a building, creating symmetry and proportions, use of mathematical objects such as tessellations to design beautiful and harmonious buildings and structures.

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Since ancient times, architects and designers have used geometric principles and trigonometry to plan the shapes and spatial forms of buildings. Calculation of the size, shape, and angle of a structure was possible due to the aid of the Pythagorean theorem formulated, in the 6th century. The most astonishing ancient architectural marvel, the pyramids of Egypt, constructed between 2700 BC to 1700 BC with such precision and accuracy signifies the importance of geometrical principles in architecture. Without the exhaustive understanding of geometry, these architectural wonders would have not been built. The base of the Great Pyramid at Giza is approximately 227 meters square, accurate to within 20 centimeters on each side. The sides of the pyramid slope at an average angle of  $51'55''$ . This is evidence of geometrical knowledge possessed by Egyptian architects like Imhotep.

In 300 B.C., the Greek mathematician Euclid defined a mathematical law of nature called the Golden Ratio. For more than two thousand years, architects have used this formula to design proportions in buildings that look pleasing to the human eye and feel balanced.

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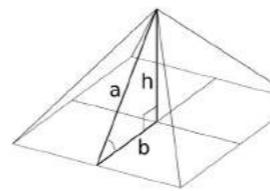


Fig: Kepler triangle concept in the construction of Pyramids



Fig: Use of the golden ratio in Parthenon

The classical orders of Greek columns can be interpreted based on the diameter of the column. Similarly, the size of the rooms used to be designed based on simple proportions such as  $1:\sqrt{2}$ ,  $3:4:5$ , etc.

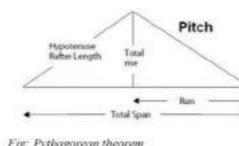


Fig: Pythagorean theorem

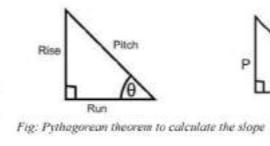


Fig: Pythagorean theorem to calculate the slope

In fact, in history architects were mathematicians and some mathematicians were architects too. The world-famous Roman architect Vitruvius was a mathematician too. Similarly, Italian mathematician, Filippo Brunelleschi has designed the Basilica of Santo Spirito in Florence, Italy. He used his mathematical skills to redesign many churches, interiors of buildings, design of fortification and also had a contribution to urban planning. The very well-known polymath Leonard da Vinci was an architect too. Similarly, American architect Buckminster Fuller used his mathematical knowledge to invent the Geodesic Dome. Richard Padovan, Isidore Miletus, others names who were infamous mathematicians cum architects. The 21st-century architect Nikos Salinganis and Zaha Hadid had a mathematical background

before they had left the humongous contributions in the field of architecture.

‘The architects of the Renaissance, believing that their buildings had belonged to a higher order, returned to the Greek mathematical system of proportions. Just as the Greeks conceived music to be geometry translated into sound, Renaissance architects believed that architecture was mathematics translated into spatial units.’ (From the book Francis D.K Ching, Form Space and Order)

Religious principles of the building design are the derivation of mathematics. It can be explained as follows.

Islamic decoration makes great use of geometric patterns which have developed over the centuries. Based on Vaastu Shastra, ancient canons of architecture and town planning employed symmetry, directional alignment, geometric patterns, mathematics of fractals, etc. For eg: the gopuram gatehouses of Virupaksha temple at Hampi, Kandariya Mahadev temple at Khajuraho, etc the parts and the whole structure have the fractal dimension range of 1.7 to 1.8.

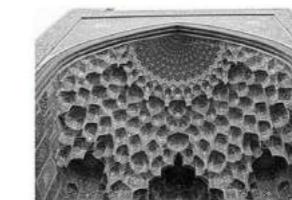


Fig: Muqarnas Vaulting in Shah Mosque, Iran



Fig: Gopuram gate based on fractal dimension

Though architecture marvels such as Pantheon, Aqueduct, Acropolis of Athens, etc. have mathematical foundations, later over time, during various architectural movements such as Baroque, Palladian, and

Mannerism, mathematics was barely consulted. In contrast, the 20th and 21st-century movements like Constructivism, Futurism, Modernism and high-tech architecture, etc. again recognized the essence of the noteworthiness of mathematics in design, hence started embracing it.

Every building where we spend time in houses, apartment complexes, schools, libraries, movie theaters, forts, palaces, temples, airports, museums, and even our favorite restaurants is the product of mathematical principles applied to design and construction.

Not only in the architecture of individual buildings and structures but also architects use the mathematical approach in finalizing the arrangement, appearance, and functionality of towns and cities. Mathematical modeling is quite essential to forecast the future needs of cities.

Mathematics is used in the two-fold function, the first one is a key segment of design like determining the proportions, size, the height of the structures, design elements, spatial organization, area division, etc. Secondly, it serves to solve the proposed design by assisting in quantity estimation of building material required for construction, determining the budget of the projects, structural calculations, mensuration, computer modeling, etc. It plays the vital role of overviewing and monitoring the performance and functionality of the building in terms of thermal, acoustic, seismic, and sustainability aspects, etc. The two fields of architecture and mathematics are inextricably linked. With an analytical approach from mathematics

and a creative approach from the arts, architects would be able to give the best solution to the most complex architecture problems. In today's high-tech world, architects must have a sound knowledge of mathematics. The future in construction is computer-aided design, parametric design, 3D printing, and the use of artificial intelligence, all of which have their roots in mathematics. As a result, mathematics plays an indispensable role in the fields of design, construction, and engineering.

-Bikalpa Poudel  
B. Arch-17

# The Architecture Family

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Architecture, Batch 2019



Architecture, Batch 2017



Architecture, Batch 2018



Architecture Students



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