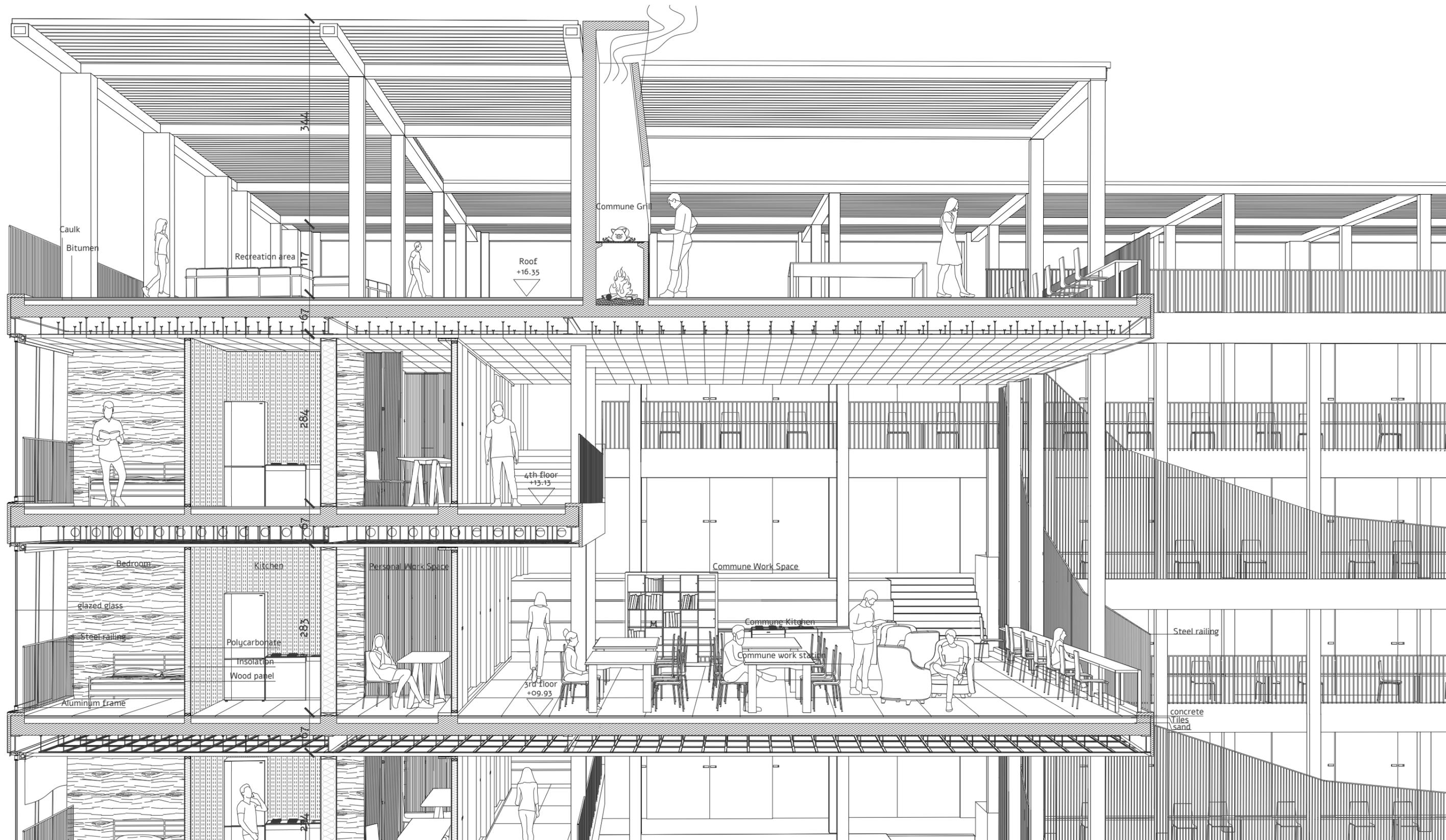


Architecture Portfolio

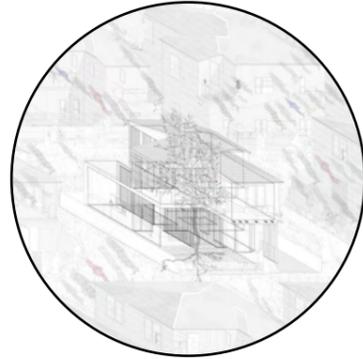
Noa Rothenstein



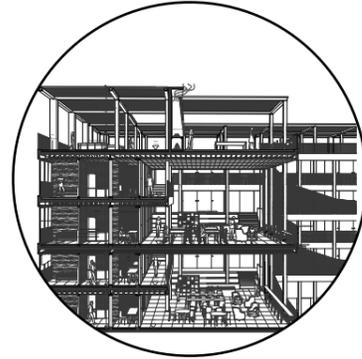
Content



01
Industrial Waters:
The Jordan River



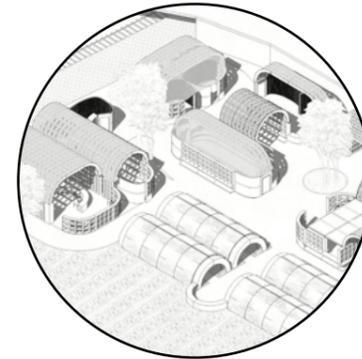
02
Akiya



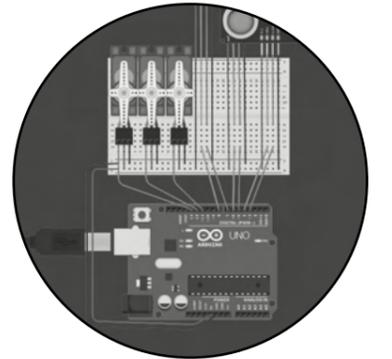
03
OmniHub



04
Building Nature



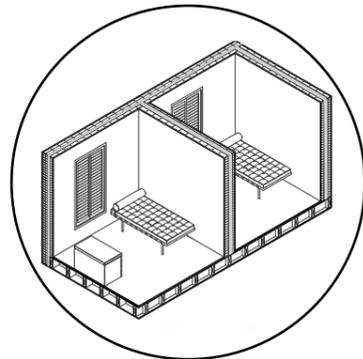
05
South To South



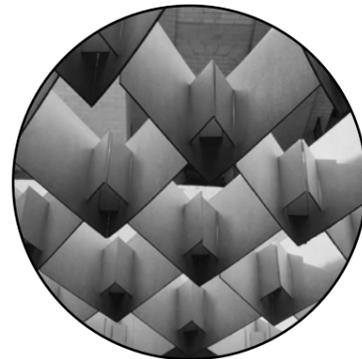
06
Let There Be Light



07
Hifa Re-Imagined



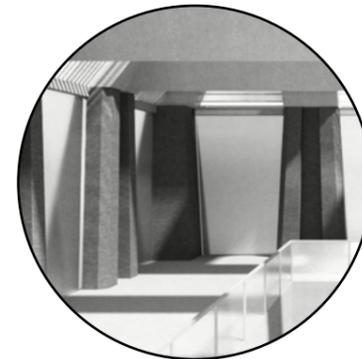
08
Wheeling Monastery



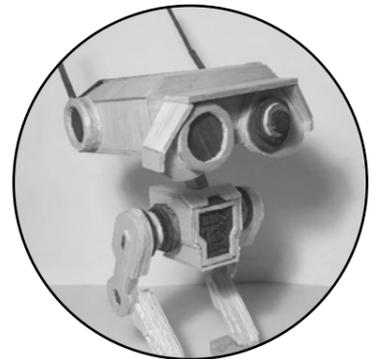
09
Modular Light



10
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Sublime



11
Library In Dimona



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Personal Projects

01

Industrial Waters: The Jordan River

Course: Studio 5 | Journey along the Syrian-African Rift

Year: 2023

Lecturers: Arch. Dan Hassson, Dr. Rachel Gottesman

Collaborators: Ofir Shachamorov

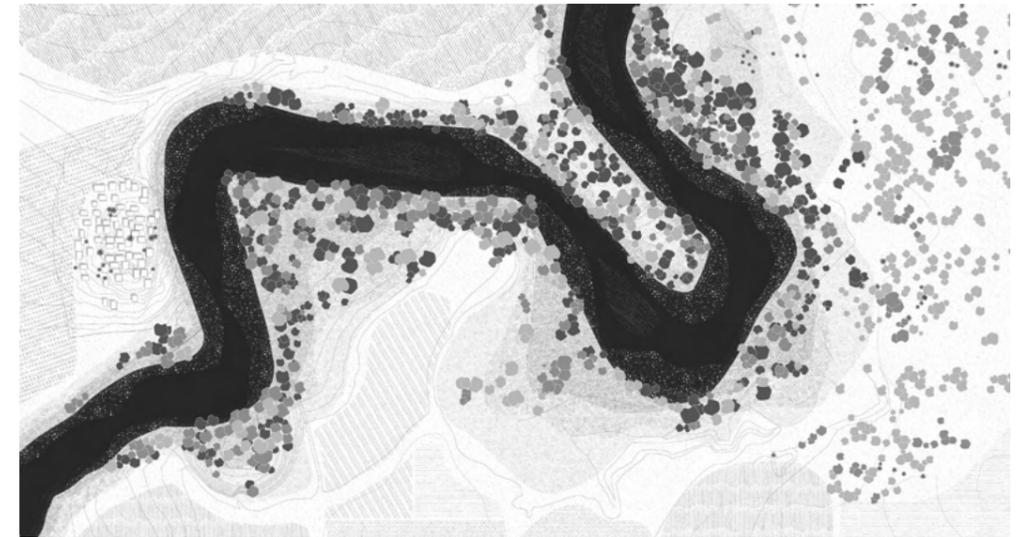


The Jordan River was once a natural body of water with a thriving ecological environment that created a pastoral landscape. But due to the growing industrialization and exploitation of the river in the last hundred years, the river became a meager stream full of polluted waters and its natural ecosystems were destroyed. This also causes great damage to the river as an important cultural asset.

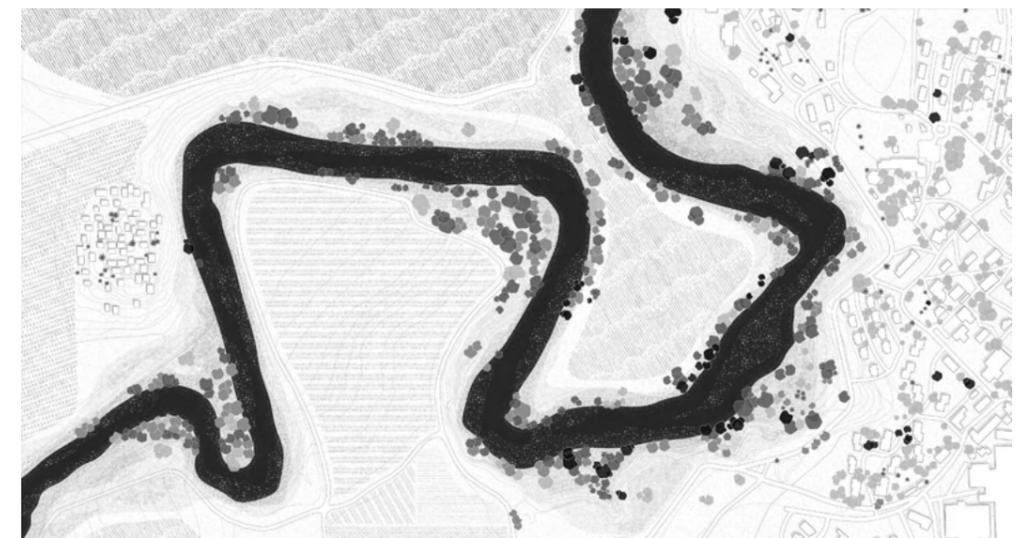
Therefore, in the planning stage it was important that the proposed design will restore and preserve the cultural and religious identity of the river, and will also take part in the ecological restoration of the river and its surroundings.

The proposed design focuses on the area that contains all the identities of the Jordan River that were identified in the analysis of it: Nahariim.

The area includes an old industrial bank of the river (the OK stream), a second natural and dying bank, in addition to a political border area.



Ecological Changes | The Jordan River | Beit Zera 1880

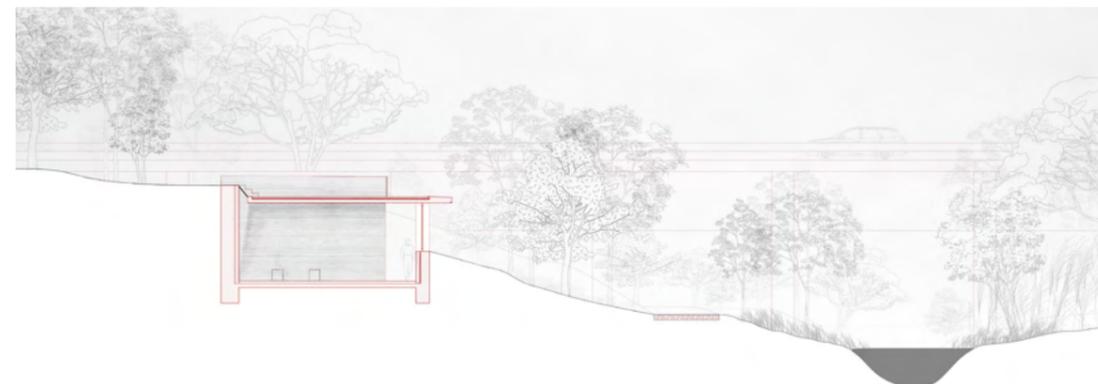
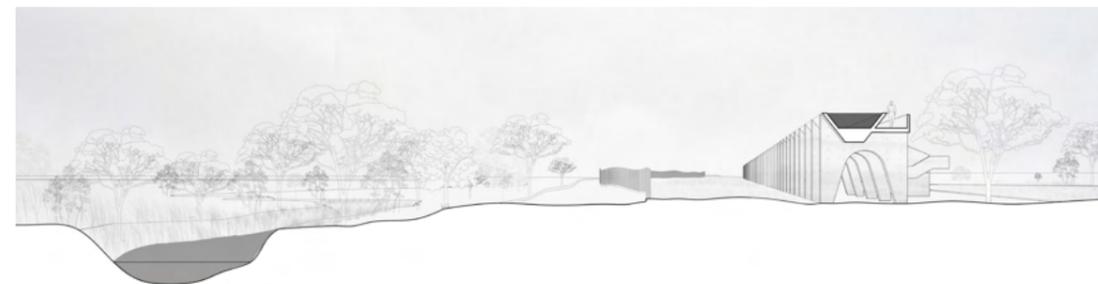
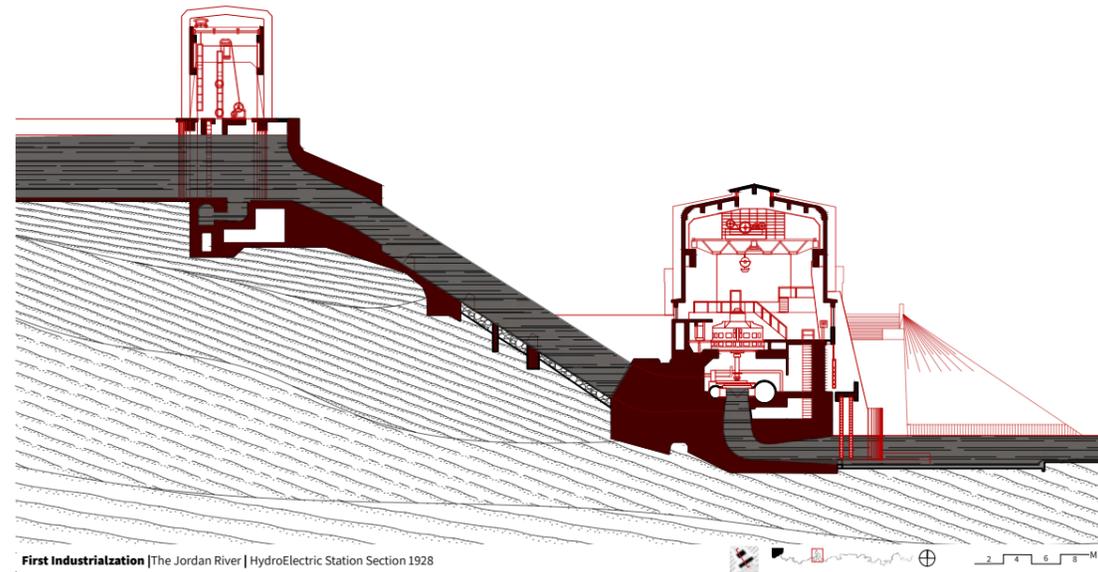


Ecological Changes | The Jordan River | Beit Zera 1942



Ecological Changes | The Jordan River | Beit Zera 2022

01 Industrial Waters: The Jordan River



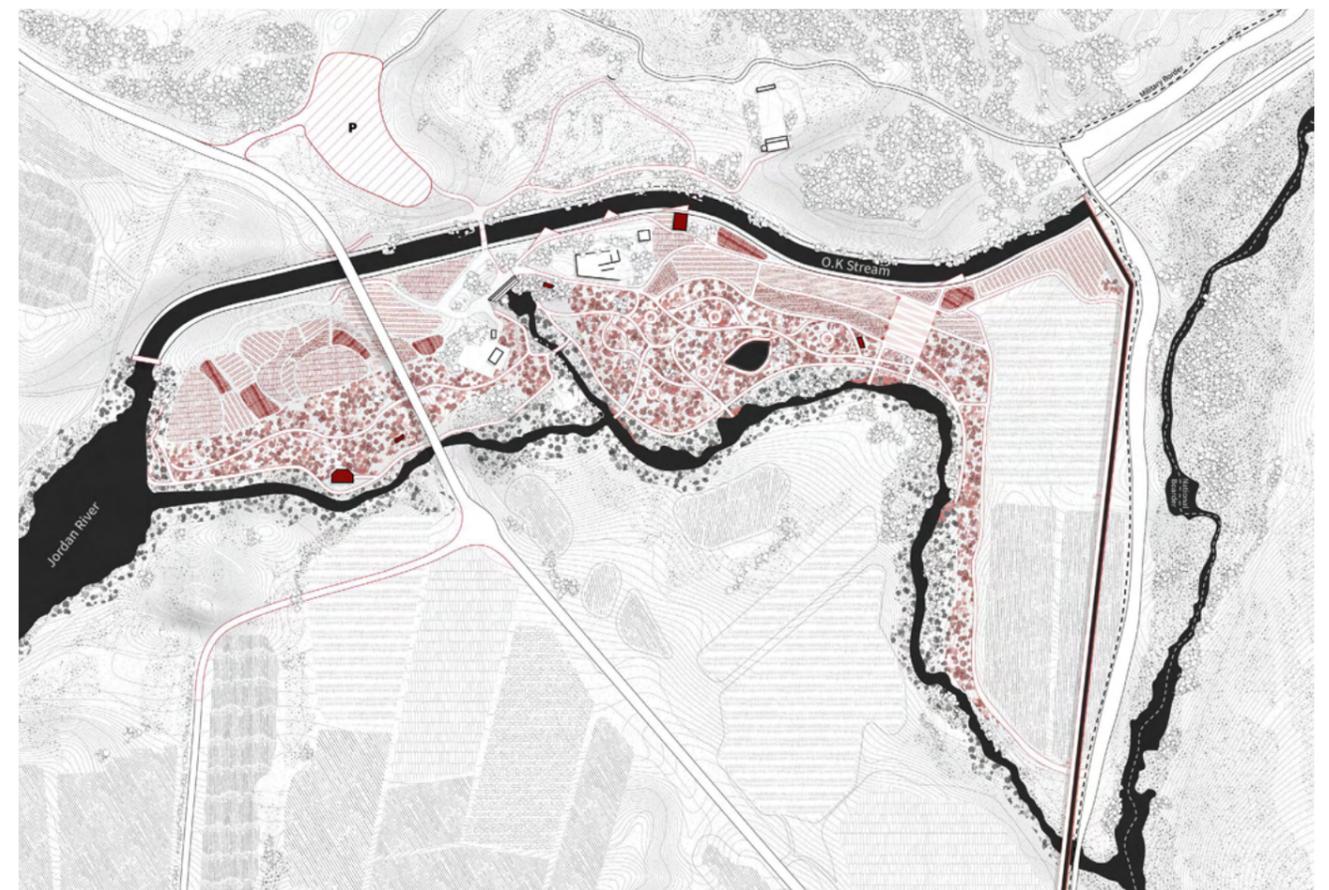
The design includes:

A Political response: Water distribution between Jordan and Israel - transportation of clean water to a pumping station in Jordan through the natural Jordan River channel for agricultural use. In addition, the transportation of water to a pumping station in Israel via the old industrial stream.

An Ecological response: transporting the water to Jordan through the natural river channel creates a new and restored channel of the river and allows new vegetation to develop in it.

A Cultural response: planning prayer houses for all religions along the river that integrate into the local topography and reconnect people to the history and culture of the Jordan River.

In the project, I was responsible for developing design concepts, creating sectional drawings and plans, researching and illustrating the historical timeline of the river, and creating the main collage for the project.



02

Akiya

Course: Studio 6 | Tokyo Summer Studio "The House Question"

Year: 2024

Lecturer: Dr. Arch. Erez Golani Solomon

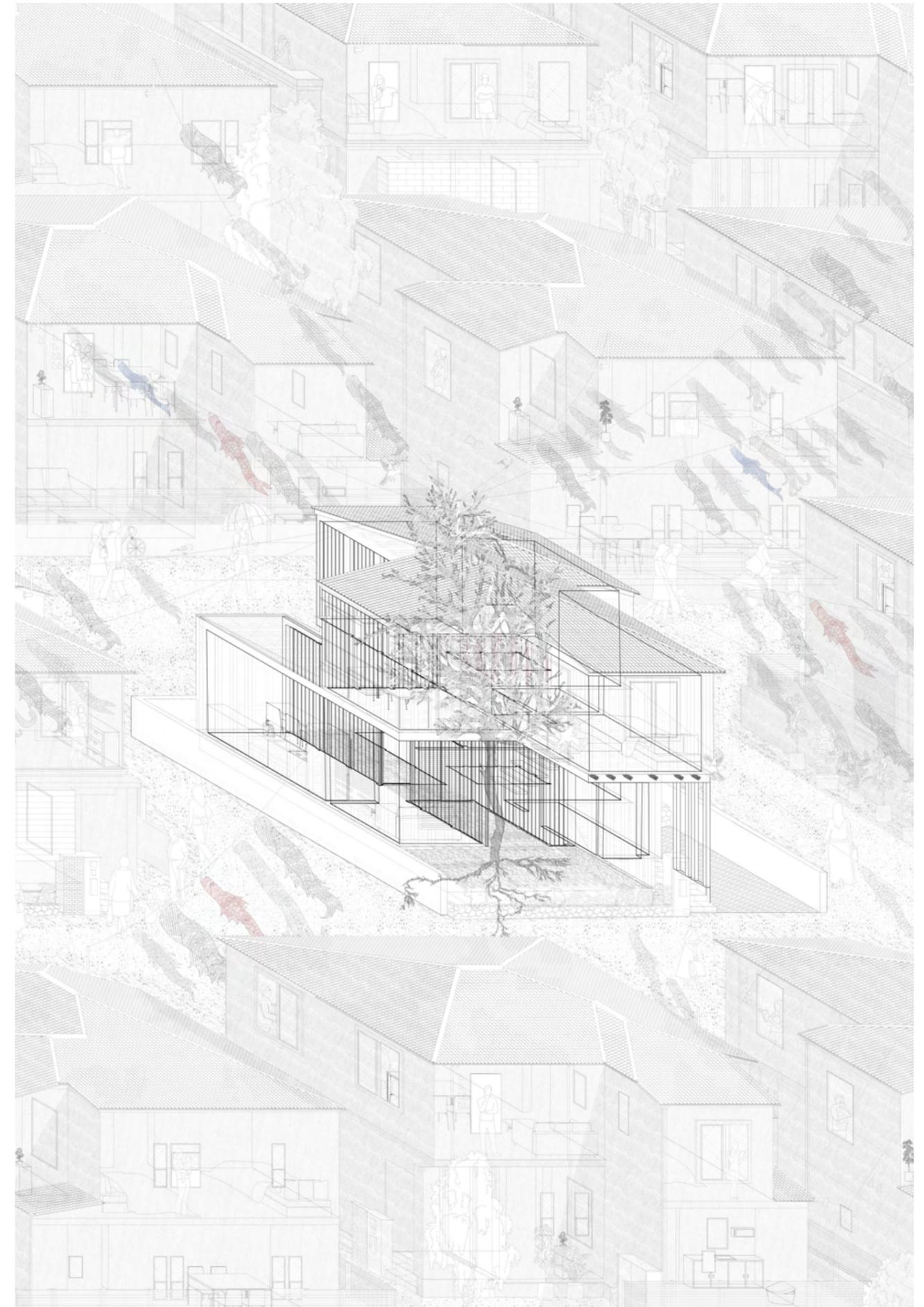
Collaborators: None



One of 26 houses built during the 1990s in Sakuragaoka, a neighborhood in the south-west of Tokyo, is currently abandoned.

In close look the house reveals outdated elements such as excessive room divisions and reduced green space, reflecting past Japanese housing trends. Demographic shifts in the Japanese population prompt a redefinition of Japanese home values, stripping away surplus rooms to showcase construction materials and craftsmanship.

The emphasis is on reintroducing gardens and fostering community life, aiming to create a contemporary Japanese house design that has a contagious quality.



03

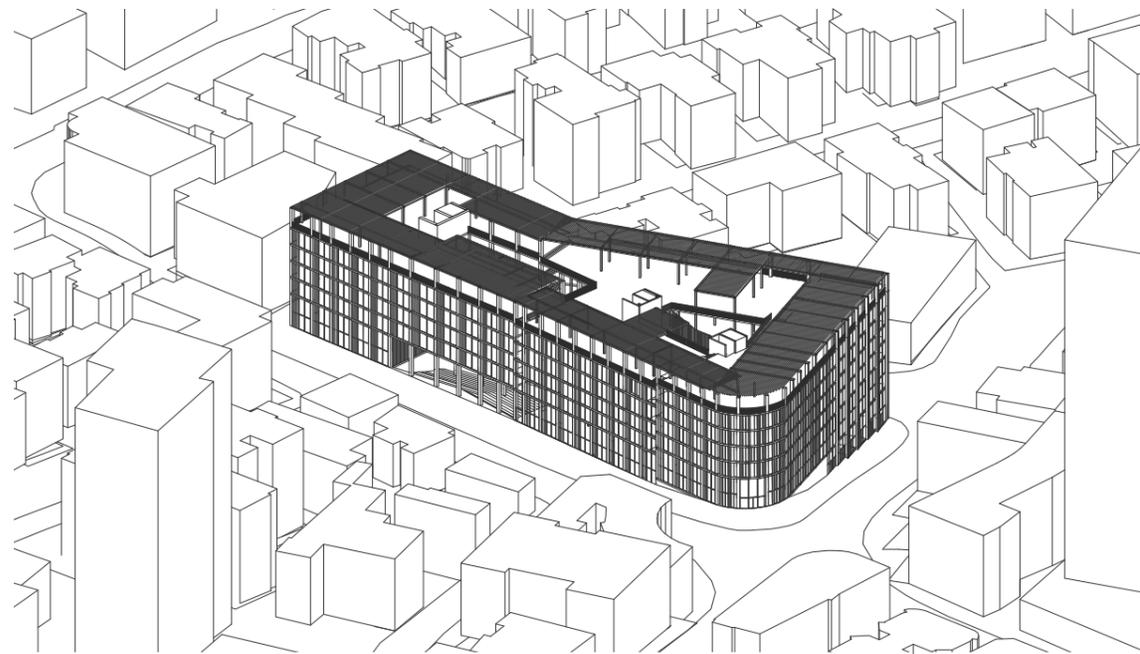
OmniHub

Course: Studio 4 | Re-use

Year: 2022

Lecturers: Arch. Alon Sarig

Collaborators: None

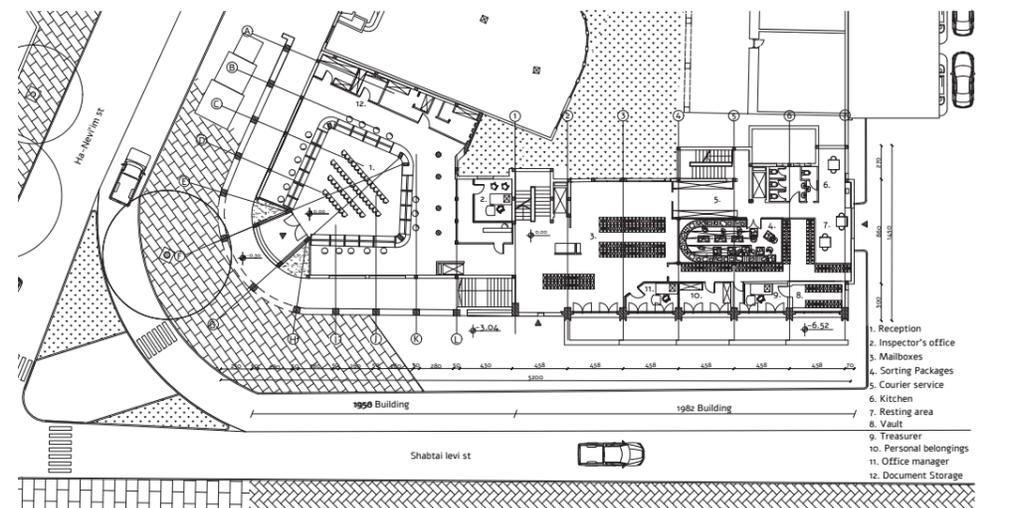
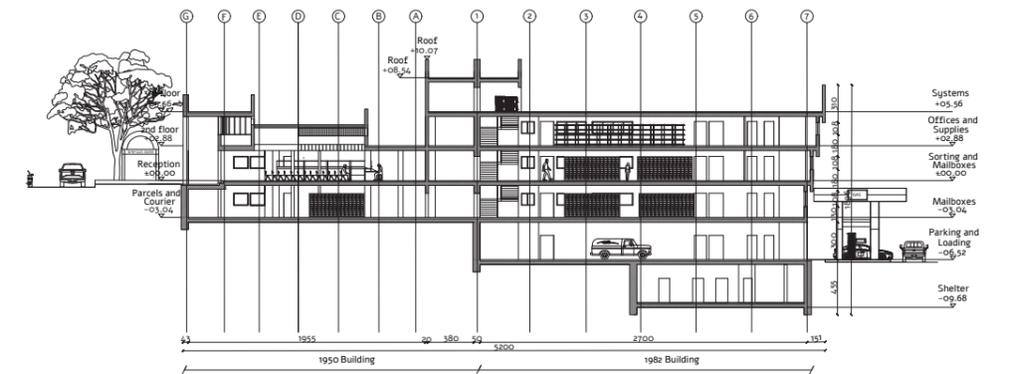
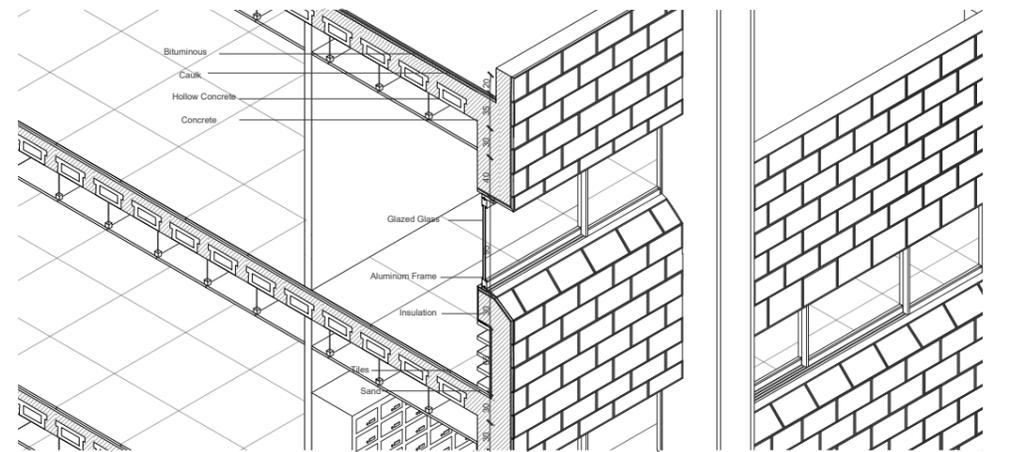
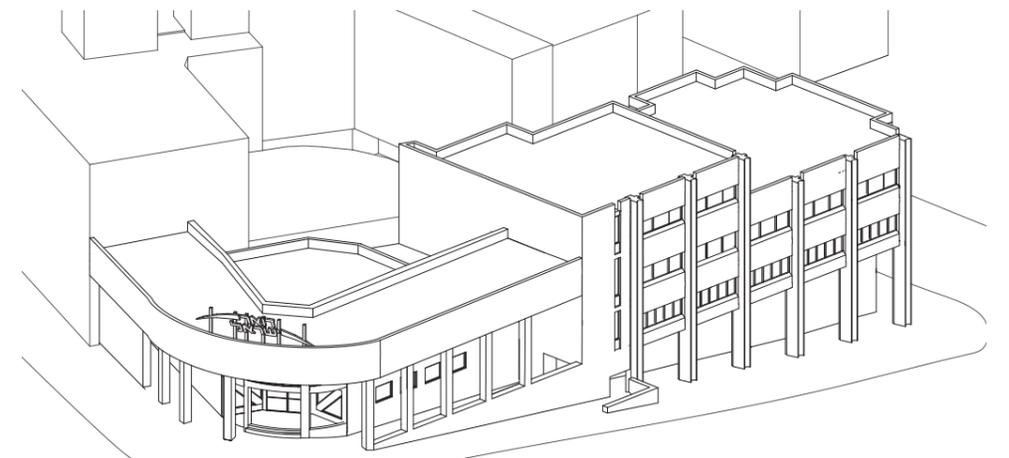


This project deals with the privatization of the post office and turning it into a network of buildings offering a series of private and collaborative spaces in different relationships between residential and work functions.

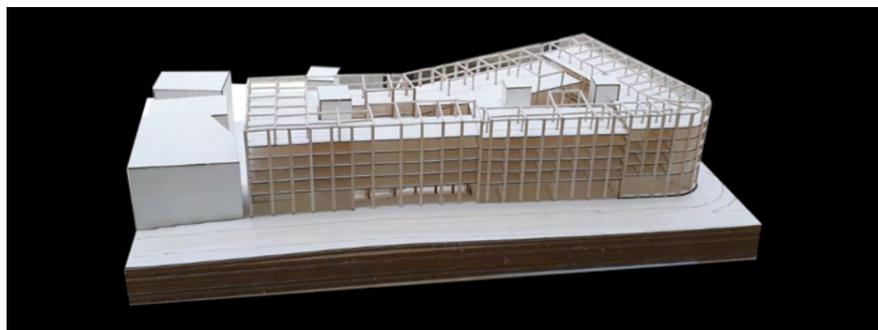
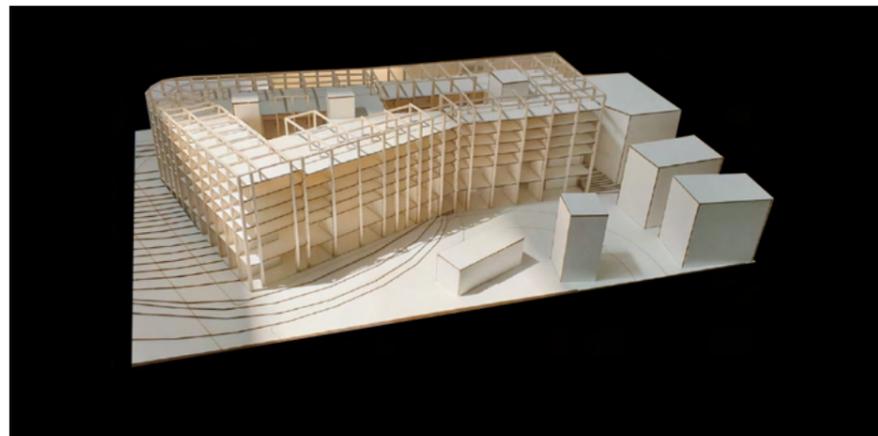
Location: The post office building on Shabtai Levy Street. A building from the British Mandate period. In 1958 it was mainly used for receiving the public and minimal storage for the mail. I analyzed its development over the years and the history of the post office and the changes that occurred due to automation and technological advances.

In 2022 it was announced that the Israeli post office will be 100% privatized. I proposed that the post office will turn into a government company that instead of providing postal and banking services, will be a real estate rental company.

This will be done by taking the Post Office's many stations and turning them into a design that allows for a series of private and collaborative spaces that combine living and working. The plan will be to conserve the original building structure in order to minimize the environmental impact. In addition, the project connects the building with the local topography.

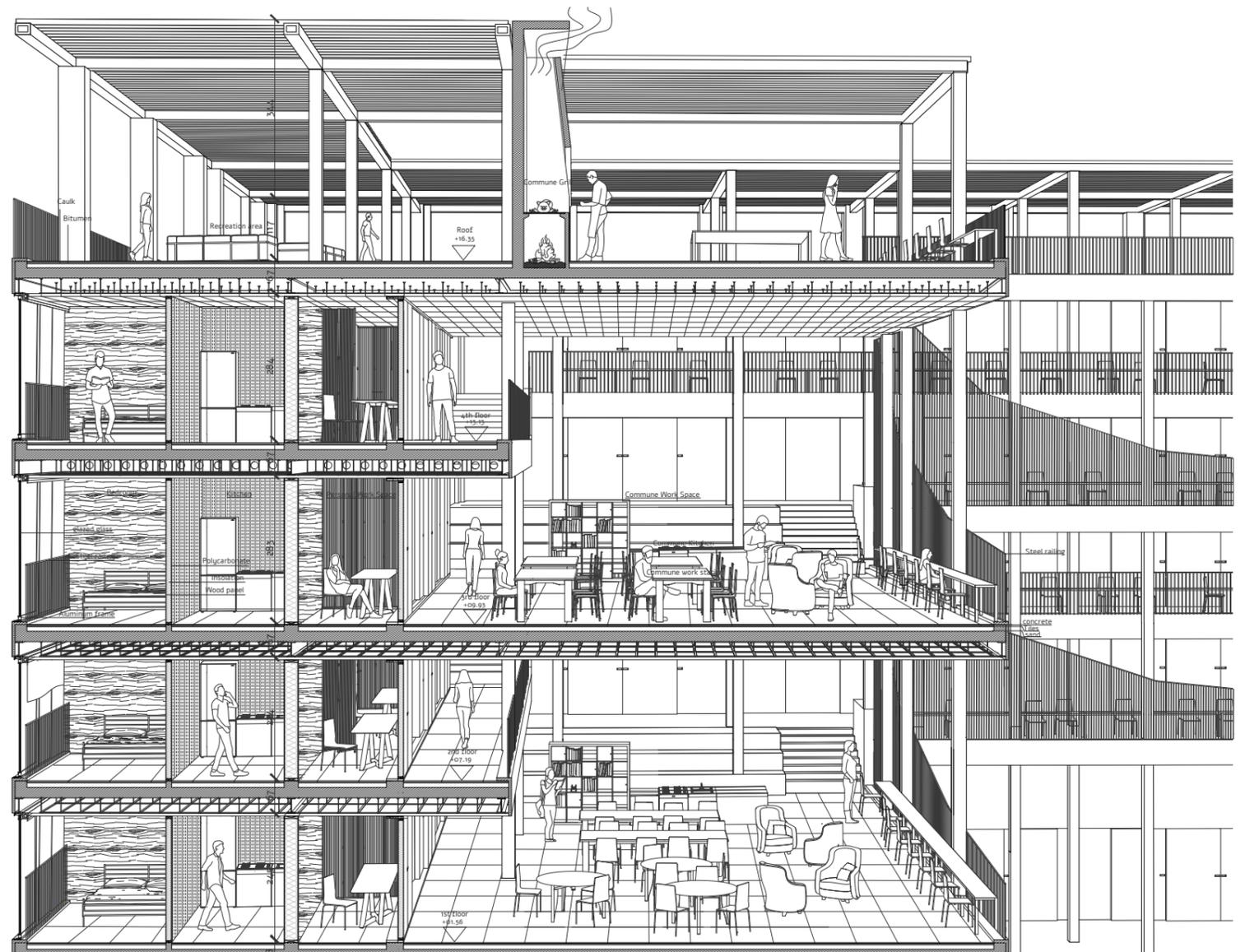


03 OmniHub



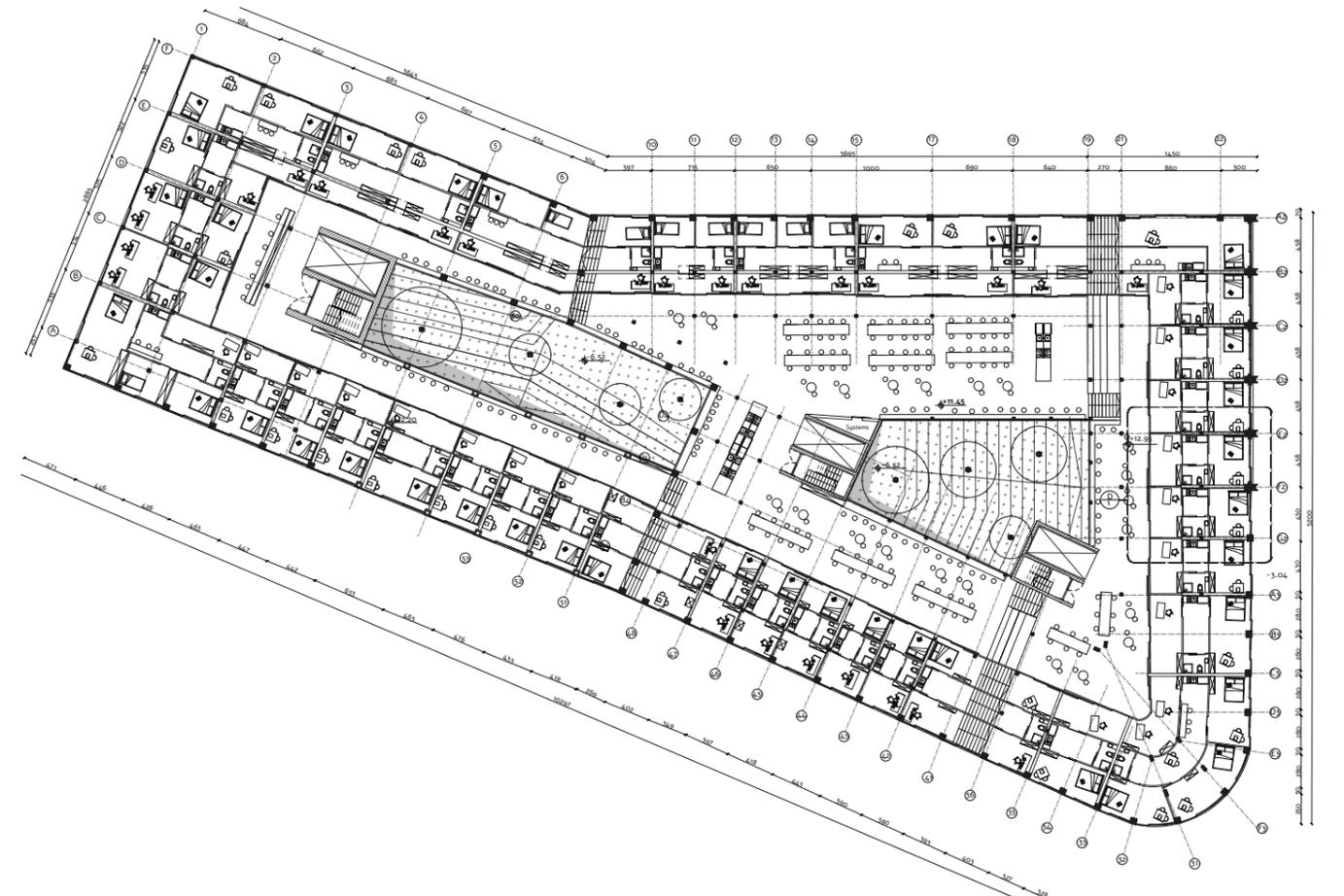
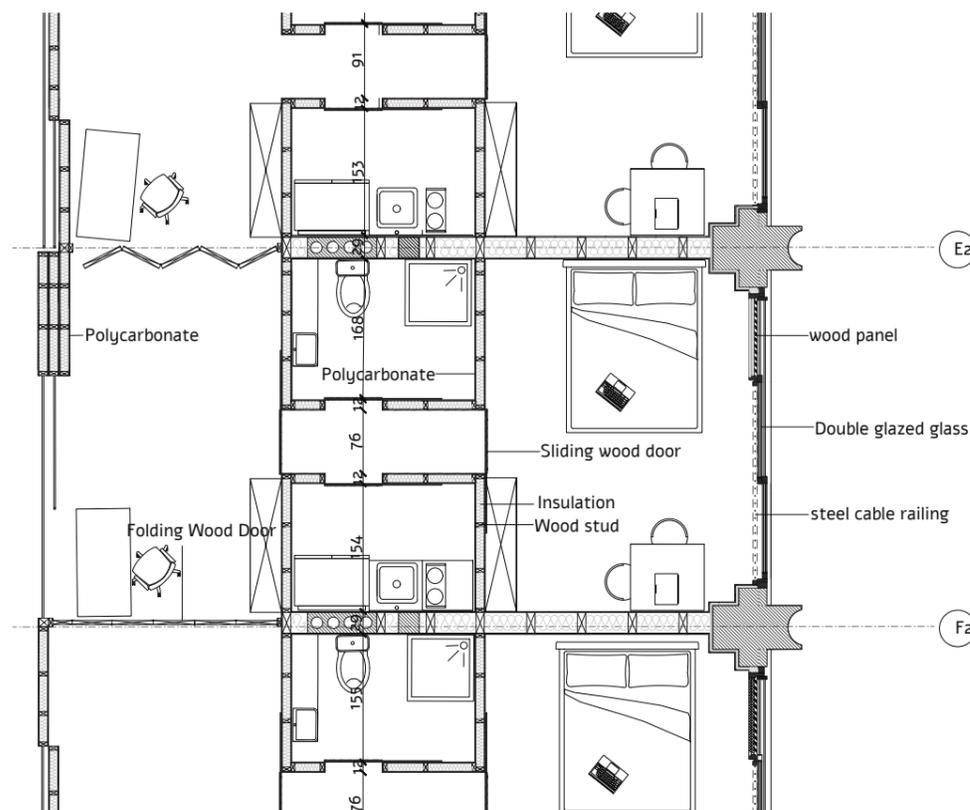
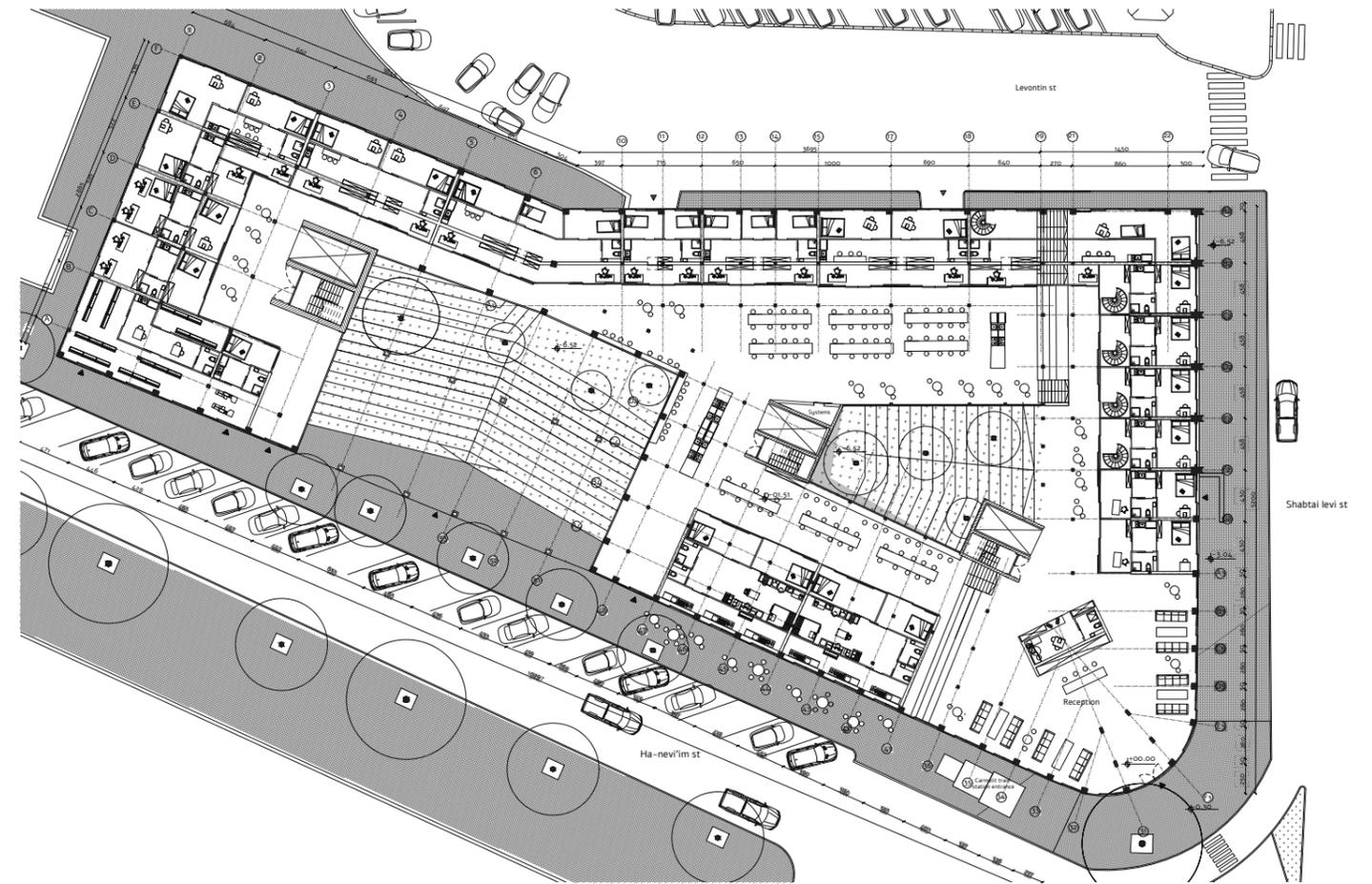
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03 OmniHub

The units inside the building can develop and change, and two units can unite and even open themselves to the public space with the help of folding and sliding doors. There are atriums that ventilate the space of the building and create a welcoming public space.



04

Building Nature

Course: Studio 8 | Exchange Program in Akademie der bildenden künste wien

Year: 2024

Lecturers: Mag. Arch. SIA Hannes Stiefel, Arch. Luciano Parodi

Collaborators: None

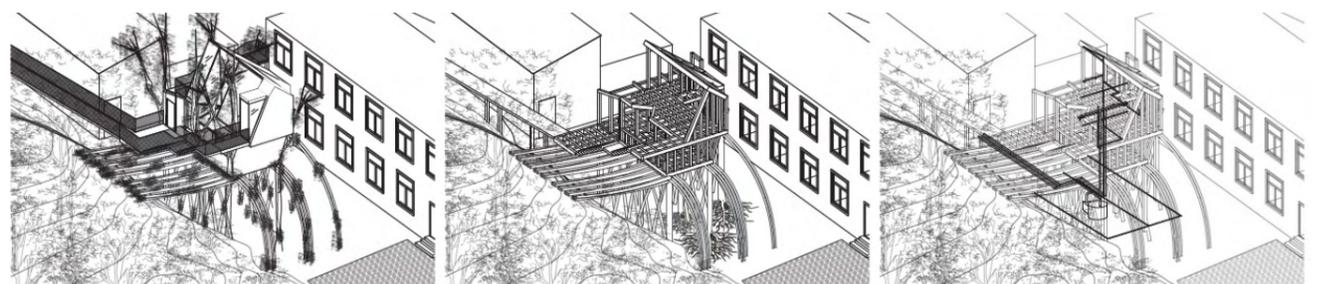


The project explores the dynamic interplay between natural and man-made elements at a wildlife research center, aiming to integrate the two. The ultimate goal is to create a symbiotic relationship that benefits both nature and human comfort.

The design aimed to create comfortable public spaces with captivating views, extending the structure's lifespan by integrating the site into the building. Baubotanic methods were employed, using living trees like sycamores as foundational elements due to their fast growth, strong roots, and resilience. The goal was to transition seamlessly from natural to built environments, emphasizing the dominant presence of nature.

The design merged these principles to establish a reforested area where nature and built structures blend together. The building's facades align with sunlight paths to create cool, shaded areas, reducing artificial cooling needs while maintaining interior-exterior connectivity and privacy. Trees cool and integrate the building with the surrounding forest, fostering vibrant views and communal spaces.

The design redefines the relationship between nature and human structures, creating a space that is shaped by nature and time, where landscape and structure converge. For nature cannot remain untouched, and life cannot endure without it.



05

South To South

Course: Studio 7 |

Year: 2024

Lecturers: Arch. Nilly R Harag, Arch. Ilana Rudashevski

Collaborators: None

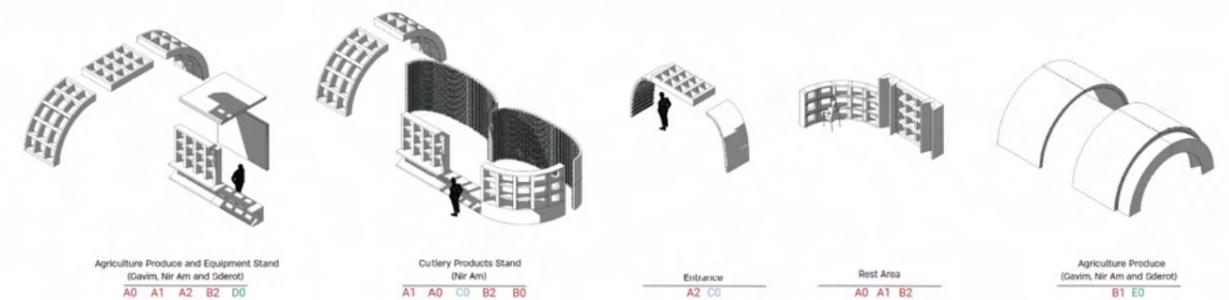
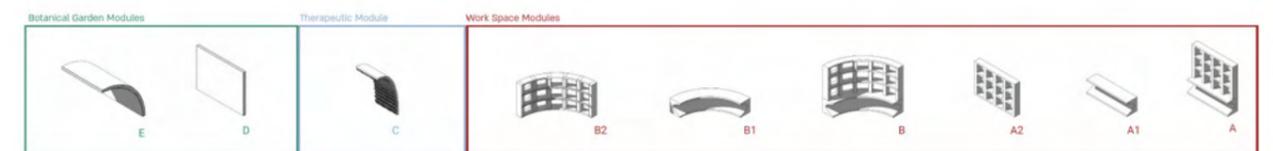
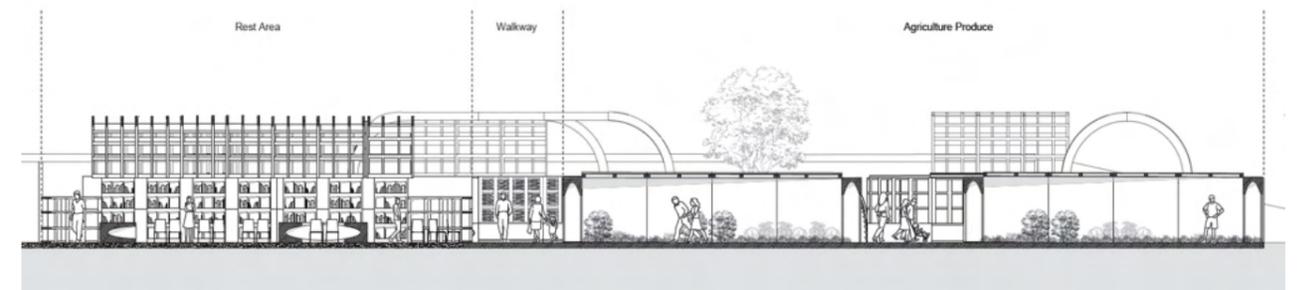
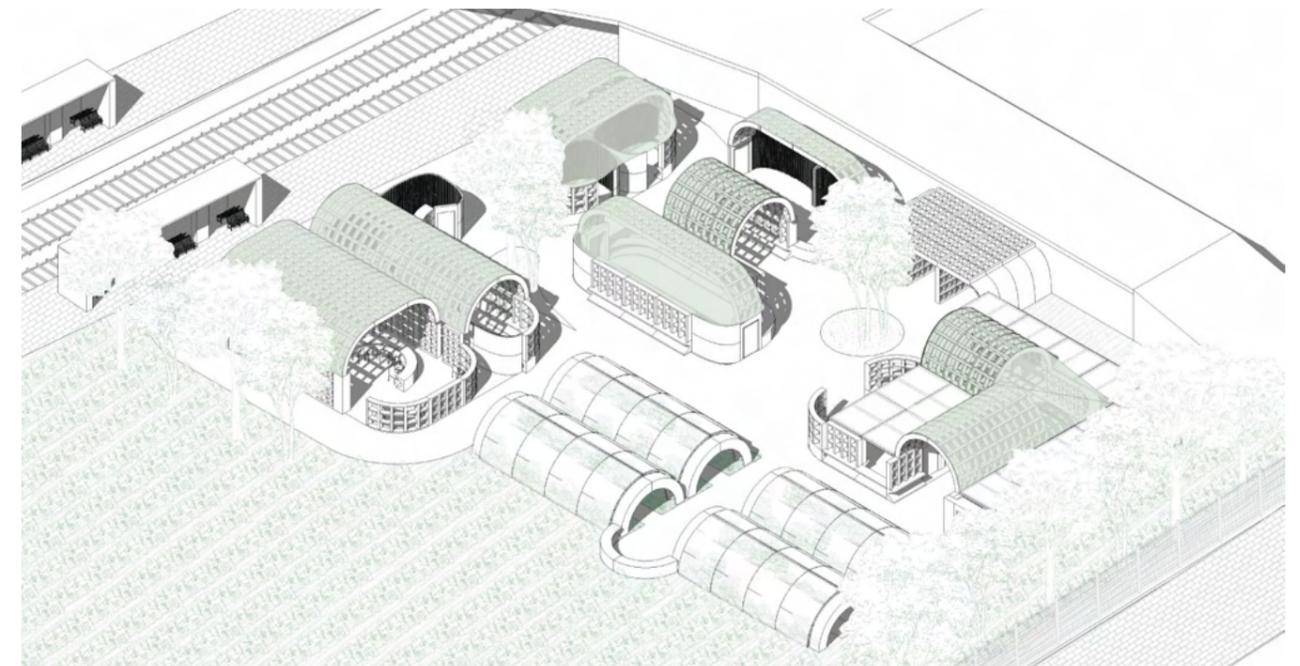


Since 07.10.24 due to the events of the war and the security situation in the south, many communities have been evacuated from their settlements to more protected areas throughout the country. One of the issues in the relative return to routine was the continuation of educational activities - in the creation of temporary study spaces that meet the needs of the evacuees from the south in the residence spaces.

The project is a space that knows how to provide a variety of programmatic options that will be possible and easy to transfer and modify. Modular planning allows for flexibility in arranging the study spaces according to the changing needs of the evacuees and responding to the public, communal, and individual aspects of the space to strengthen the evacuee community and also to give it a private space to exist in.

When these spaces return to the south they will need to recalibrate themselves to new programs since the evacuees will return to those same study spaces they left behind. These evacuees left their homes-, thus most of them left their livelihoods from their jobs and factories in their original city as well, leaving their industries, and their people's families in a dire financial situation. Whether in the kibbutzim or the city, a settlement income is important to the community and the country's economy. Therefore, The project will focus on rehabilitation and encouragement of their market of produce: whether it is Home equipment from Nir Am or agricultural products and plastic products from Gavim and Sderot.

Consequently, the new site of the market will be next to the train station that connects the three settlements with all those who come and go. Since the design uses the same modules that provided the evacuees' comfort when they were uprooted, but in different configurations- the memory of their time as evacuees will transform into a memory of their recovery to home.



06

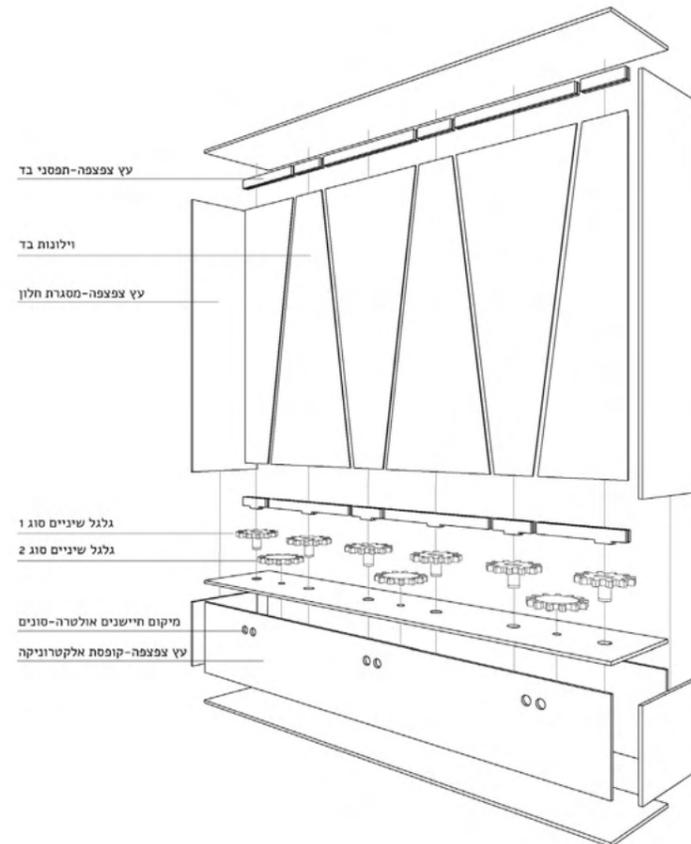
Let There Be Light

Course: Digital Tools

Year: 2023

Lecturers: Arch. Ran Shabtay

Collaborators: Keren Ziv



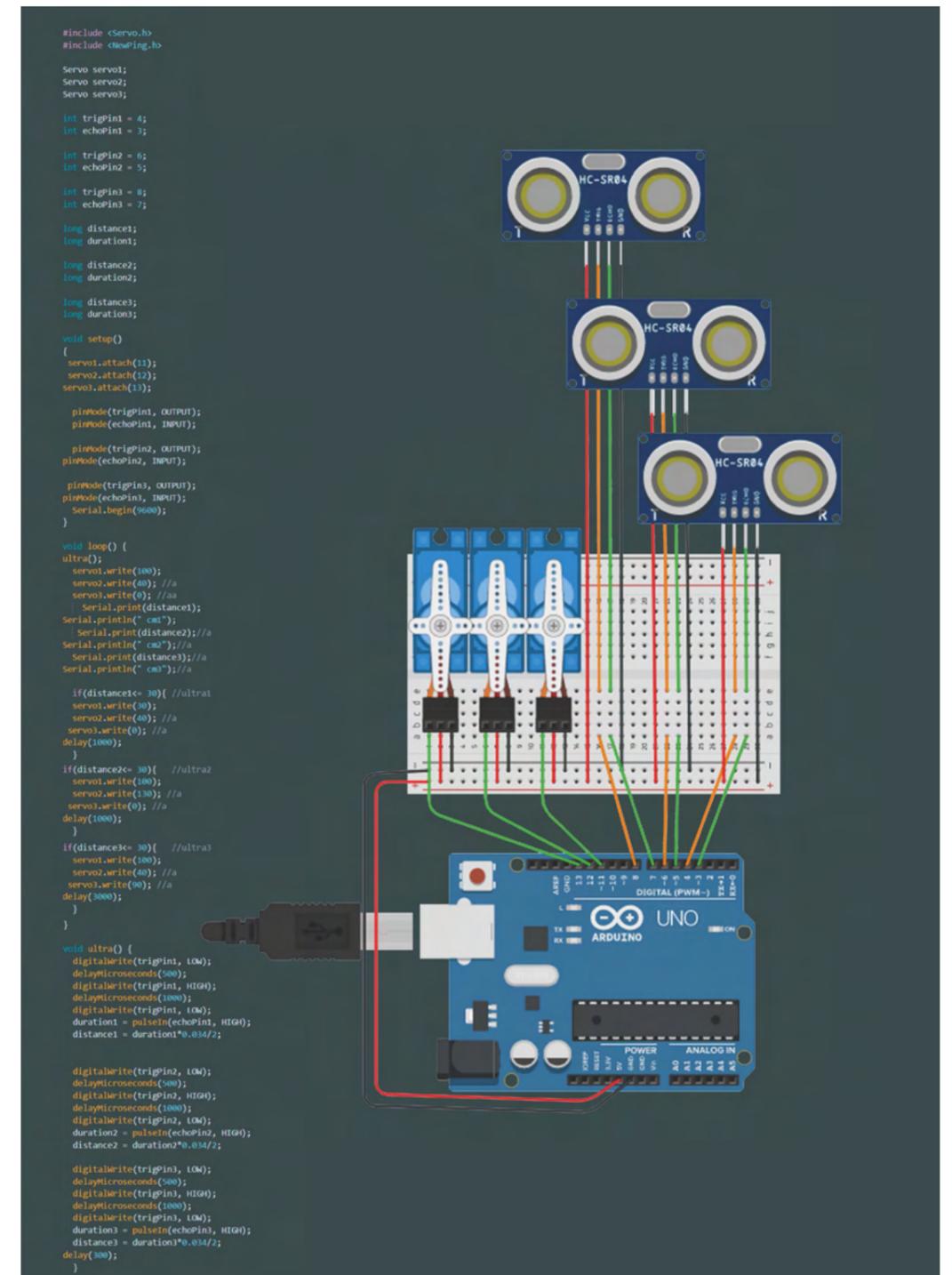
Creating an Architectural machine that allows light only when the viewer is directly in front of the view he wants to see. The system allows a certain level of privacy if the user is not near the window.

The project used ultrasonic sensors that can detect the distance of an object from the sensor by generating ultrasound energy and receiving it to convert it into electrical signals.

The Project included designing 3D printed gearwheels that were a part of the mechanical system.

Fabric was used as the shades to create a more complex relationship with the movement of light and it's reflection from the white matrial that create more depth.

In the project, I was responsible for coding and electronics, as well as designing the overall concept and mechanism.



07 Haifa Re-Imagined

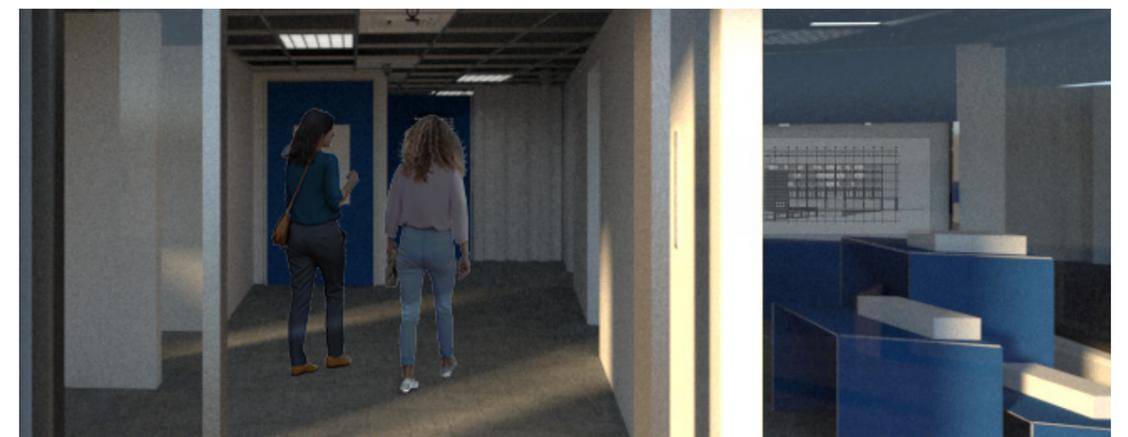
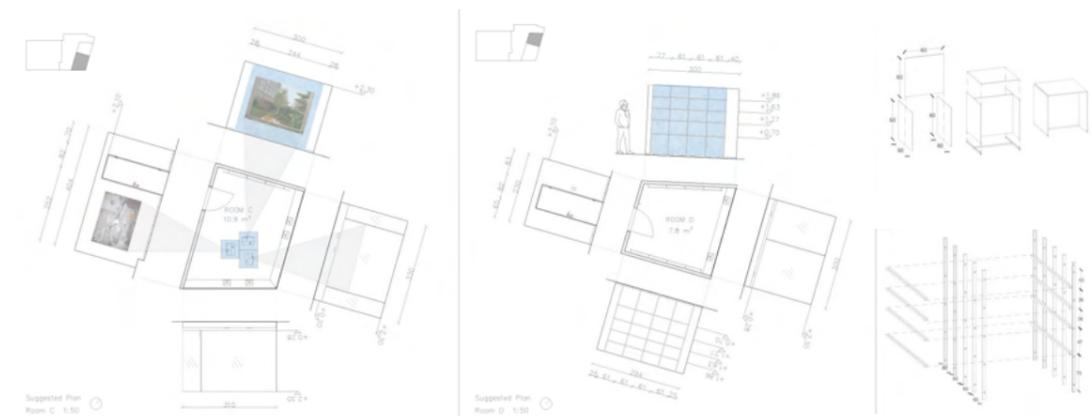
Course: Exhibition

Year: 2022

Lecturers: Arch. Alon Sarig, Arch. Liran Messer

Collaborators: Niv Rashi, Hannah Eskin, Noga Cohen, Itai Neumann

Sponsors: Tambour Company, Haifa municipality & Shapiro Beer



Co-designing and co-curating (along with participating in it) an exhibition on the industrial city of Haifa. The exhibition showcased students proposals for a new building culture of post-industrial ethical infrastructure and reusing existing sites in Haifa.

The project was in collaboration with the European union's 2020 research and innovation program(CONSIDER), and in collaboration with Tambur and The Haifa municipality.

The project included working alongside the municipality of Haifa, and experts in plaster walls in order to create an interesting exhibition space that will showcase all the studio's work.

08

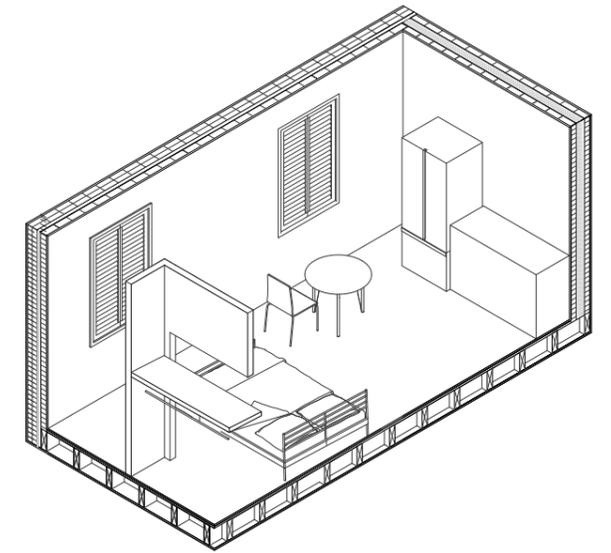
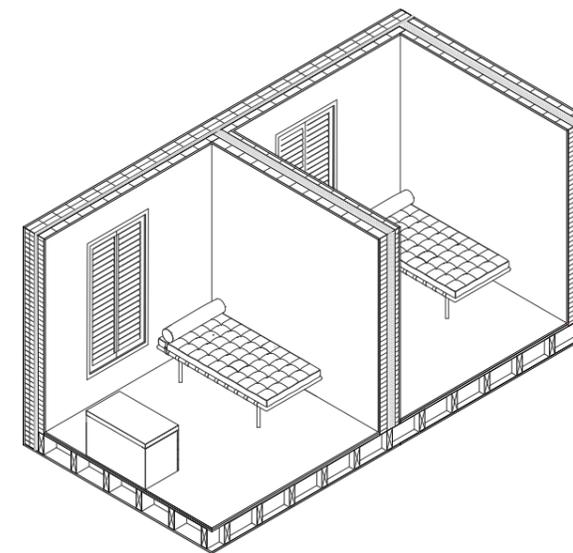
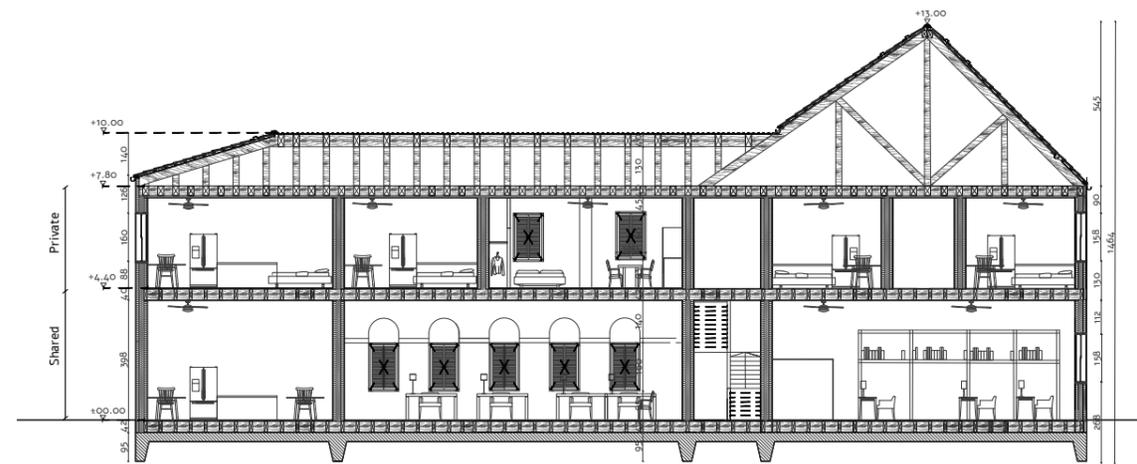
Wheeling Monastery

Course: Visual Communications In Architecture

Year: 2022

Lecturers: Arch. Alon Sarig, Michael Cidor

Collaborators: None

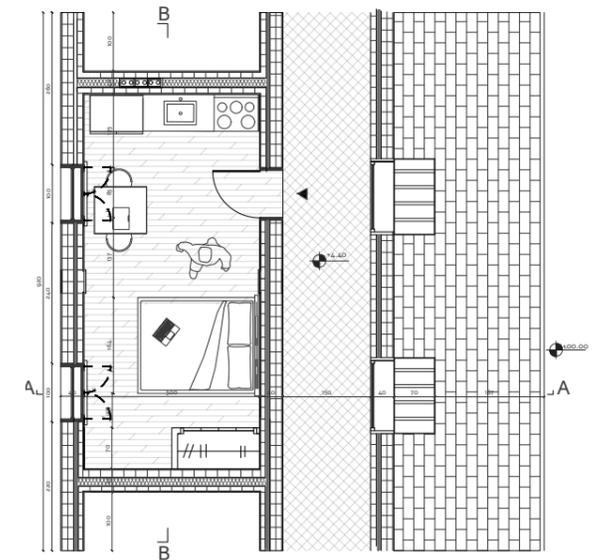
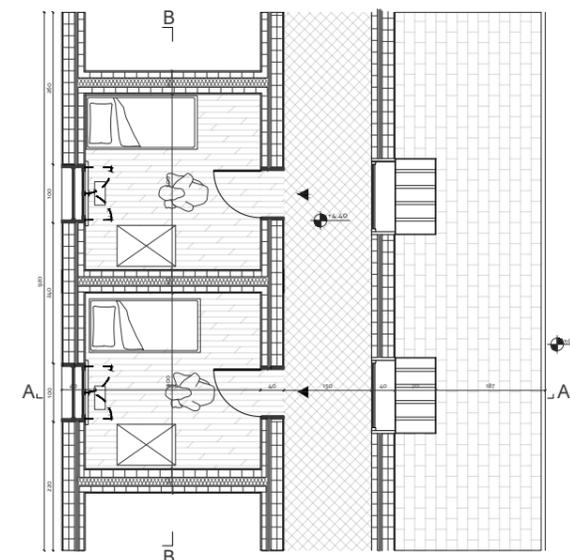


Transferring an iconic photograph of a nun's room from a photographic medium to an architectural medium.

The photographic medium is the way in which architecture is usually experienced (from photographs of buildings in other countries and even other periods). The architectural medium expands our knowledge of a space and its nature.

The drawing of the room's plan, section, and isometric illustration was done by analyzing monastery archetypes throughout history and in the US. In addition I used several photos and videos of the Carmelite monastery in Wheeling, WV in order to make the architectural drawings.

In later years the monastery was closed and changed into student dorms, and changes were made to the monastery to accustom to the different needs of privacy and collaborative work. Thus, this is a dynamic space that can be used for several needs according to the user's perception, despite the change in programs over time.



09

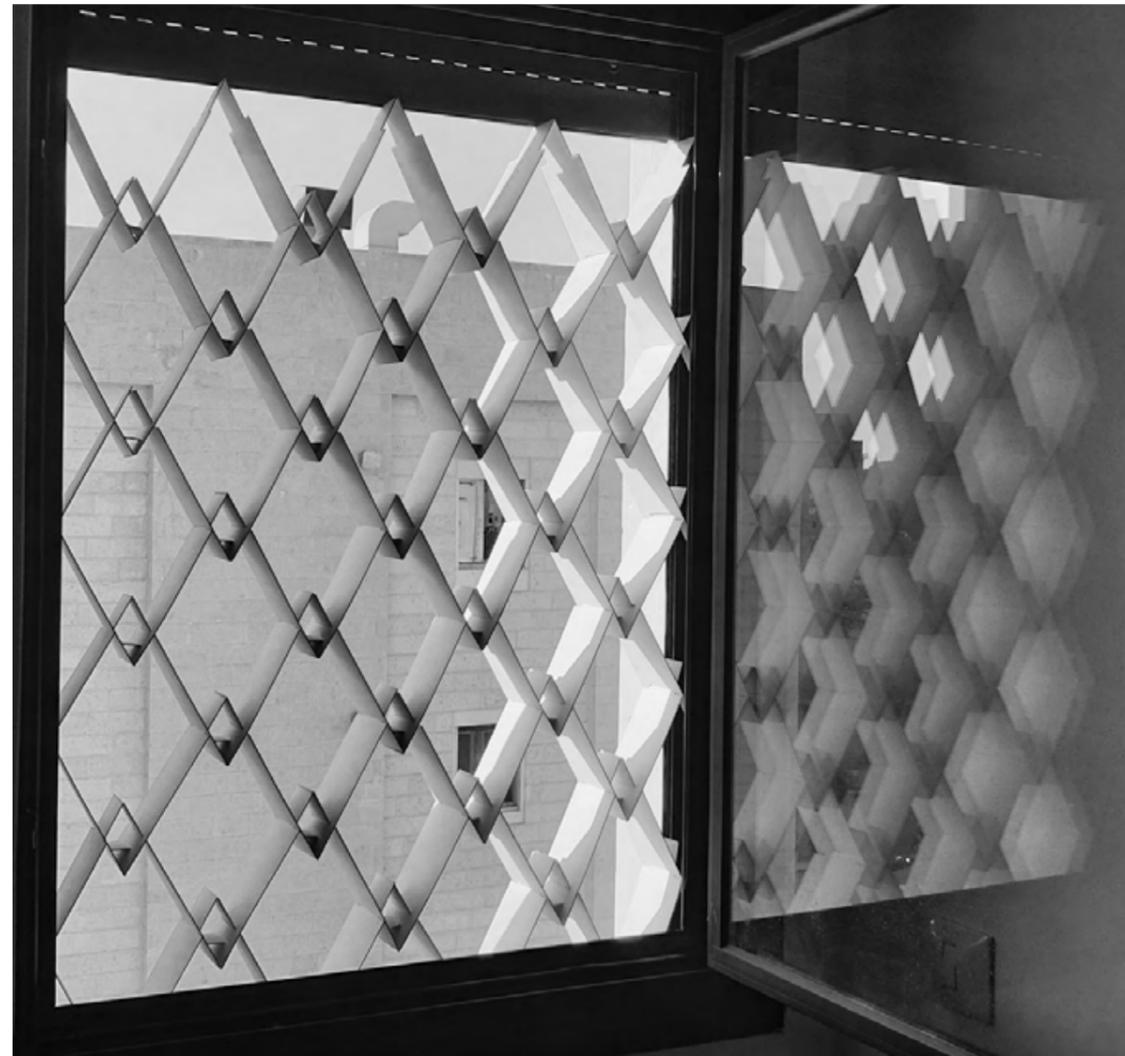
Modular Light

Course: Material Studies

Year: 2020

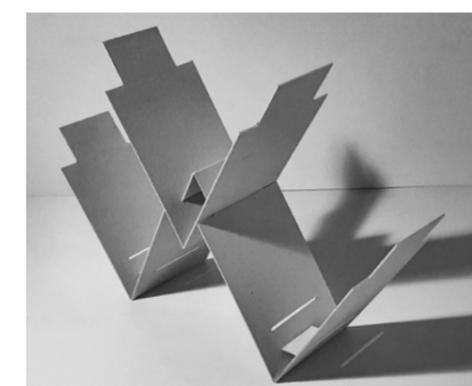
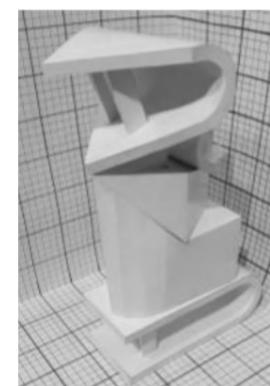
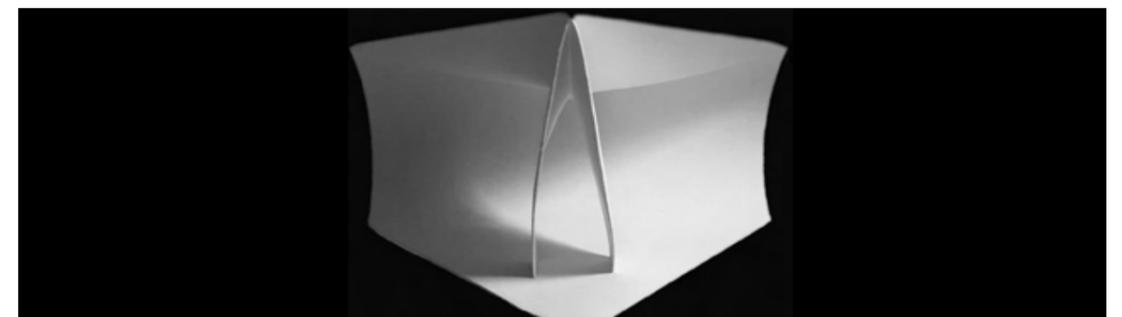
Lecturers: Topaz Alexandra

Collaborators: None



By applying various techniques and construction methods using different materials (paper, plaster, cardboard) I experienced the qualities and properties of the materials: developed the skill to work with them, tested their stability, weight, systematic production, efficiency, economics, aesthetics, etc.

The final product of the course was the creation of a light filter using modular production system of a single material, In this case- cardboard, which provided shadow and ventilation. This system can be reproduced and expanded in many places.



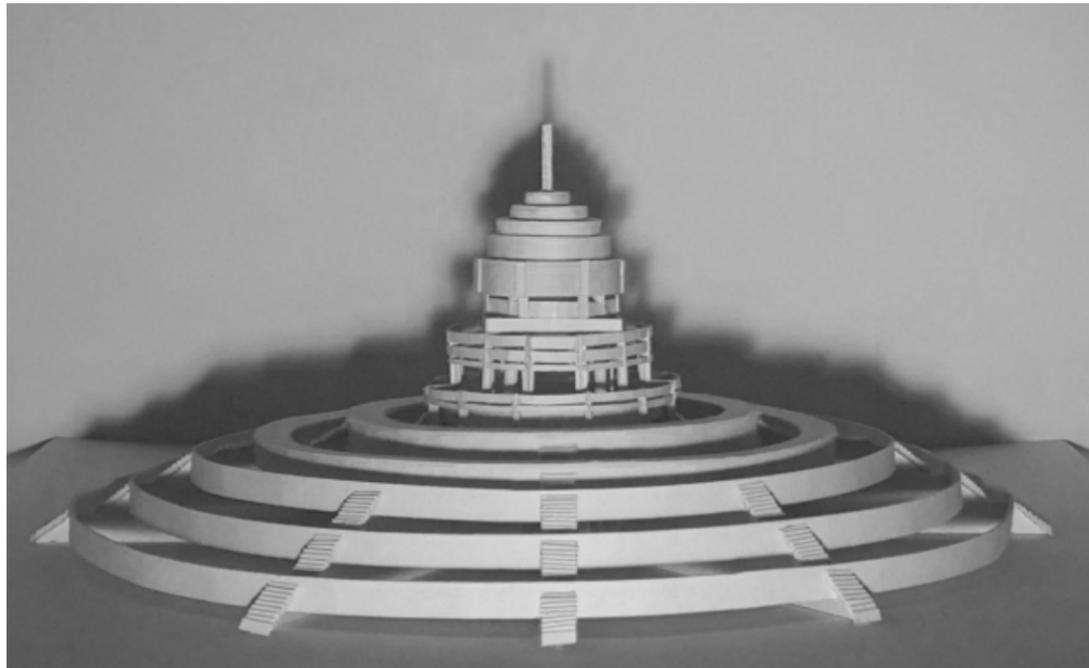
10 Earth, Man And The Sublime

Course: Building Analysis

Year: 2020

Lecturers: Arch. Rahamimoff Heli Tal

Collaborators: None

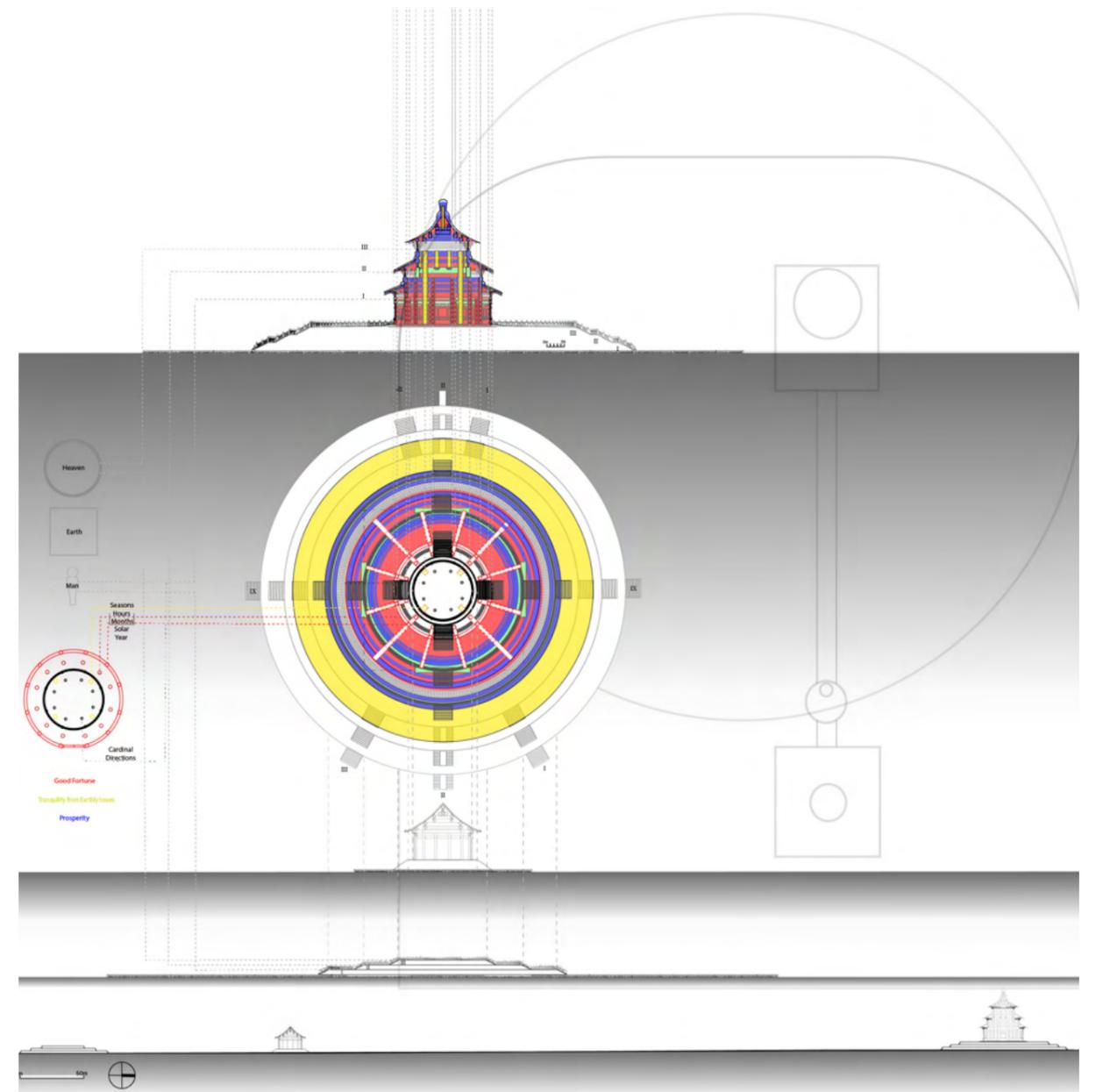


Analysis of a temple archetype by studying the Hall of Prayer for Good Harvests, Beijing, China.

The temple connects man to spirituality - to the sublime and the world above.

The project included Identifying the use of structural symbolism of the Chinese culture utilizing orders of shapes, colors and numbers to create the connection between man and spirituality.

Based on this analysis, I created two and three-dimensional compositions that indicate the connection between the structure and what it represents.



11

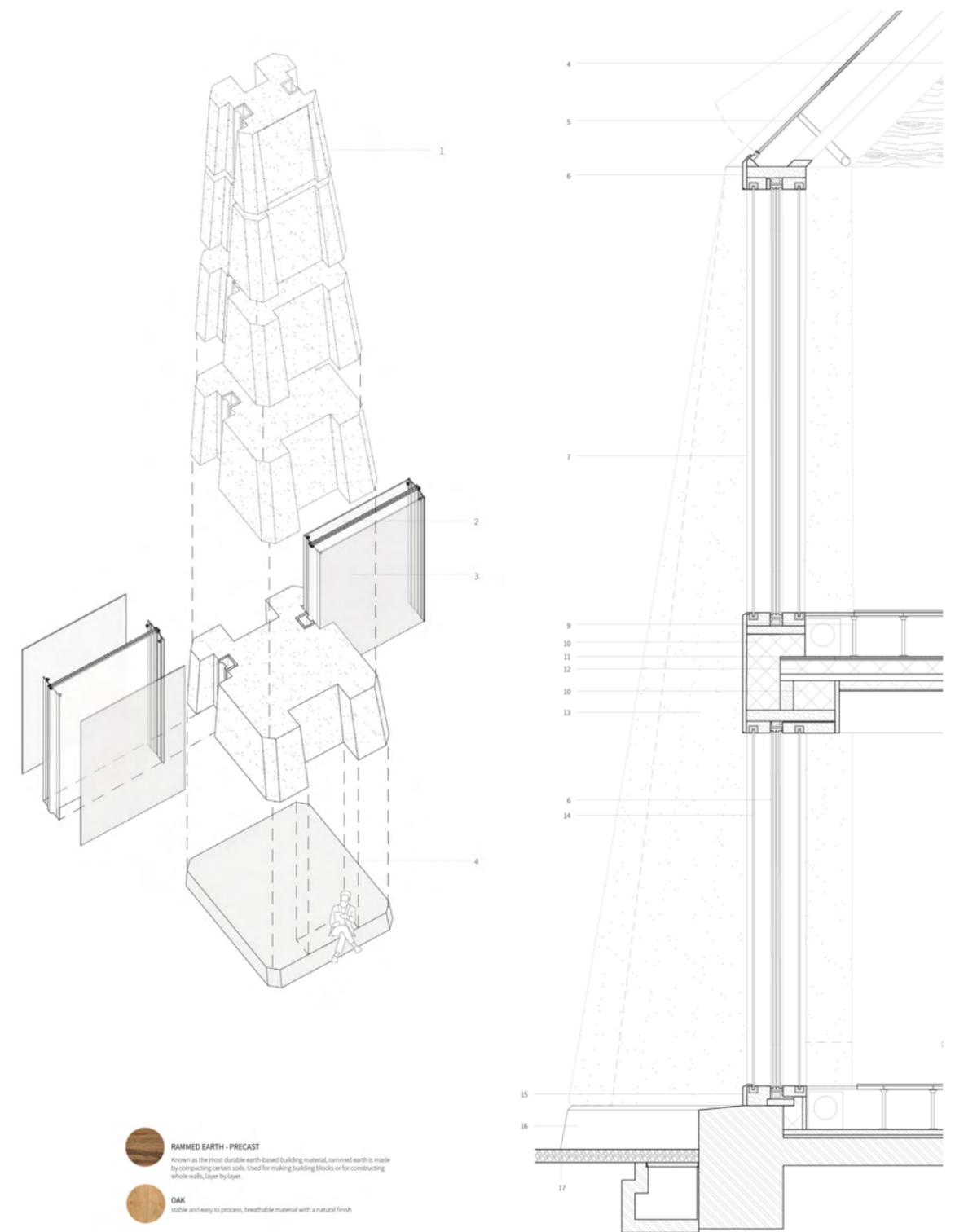
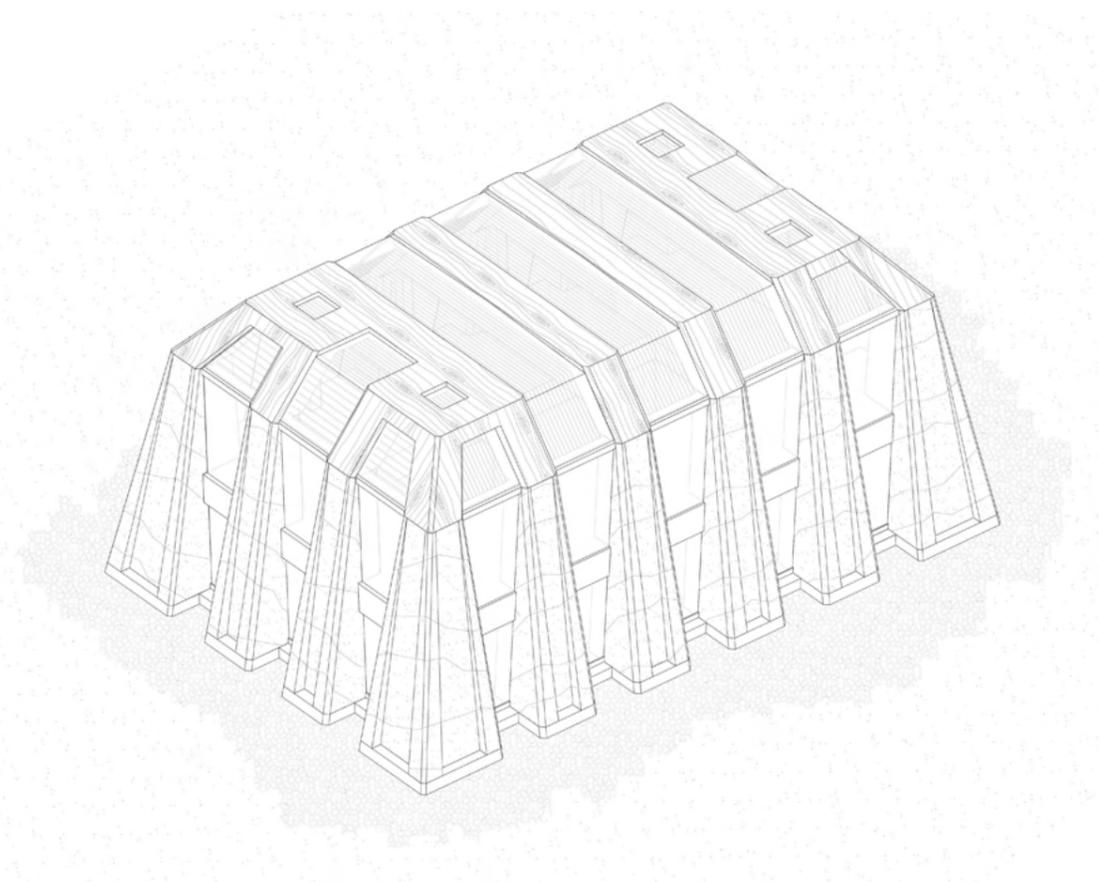
Library In Dimona

Course: Building Technology

Year: 2021

Lecturers: Arch. Gharan-Levy Saar, Ivri Eyal

Collaborators: Keren Ziv, Ofir Shachamorov



Designing a library in Dimona, a city in Israel with a desert climate, using natural and local materials. This project uses the rammed earth technique, which has many properties such as insulation and flame retardancy. In addition, there is a five-layered glass window that is made out of tripled glazed glass and two frosted glass panels. This allows for a softer light that reduces glare as the window scatters the harsh desert sun, in addition to the thermal insulation that its design brings.

This design explores these different materials, their characteristics, their production methods, and their application in design while thinking about the human scale and experience in the space.

In this project, I was responsible for concept design, creating 1:2 sectional drawings, isometric illustrations, and rendering the project visuals.

- RAMMED EARTH - PRECAST**
Known as the most durable earth-based building material, rammed earth is made by compacting certain soils, used for making building blocks or for constructing whole walls, layer by layer.
- OAK**
Stable and easy to process, breathable material with a natural finish.
- TRIPLE GLASS**
Three panels of glass within a sealed frame. Air pockets between each pane work as an insulator for both noise and heat.
- MATTE GLASS**
Glass pane treated with abrasive material, which removes its glossy finish, leaving the glass opaque.
- FIBERGLASS**
As the name suggests, is made from extremely fine fibers of glass. It is used as a reinforcing agent for various polymer products. It is highly-durable and serves as an effective thermal insulator.
- PEBBLE STONES**
A general term describing rock particles bigger than gravel (approx. 10-150 mm in diameter). A cladding material that allows liquids to seep through.
- ALUMINUM FRAME**
Aluminum carries load optimally and does not require steel reinforcement due to its structure. The internal bends in the frame form cells of thermal and acoustic insulation.
- MINERAL WOOL**
Thermal insulator, flexible and flame resistant. Due to its thick ideal acoustic insulator. Manufactured from natural materials or durable over time.



12 Personal Projects

Course: None

Year: 2020-2024

Lecturers: None

Collaborators: None

A collection of personal projects outside of the architectural scope in which I exercised certain skills such as model building, 3D modeling and printing, electrical skills, coding skills, mechanical design, product design, sketching etc.

