SCIENCE-WEEK

SCHOOL OF ARCHITECTURE, PLANNING AND DESIGN

ORGANIZES : WORKSHOP/ EXHIBITION

COMPLEXITY AND ARCHITECTURE

20TH - 26TH FEBRUARY 2023

STUDENTS:

Doha AMMAR
Mouad BASSIM
Ikram BENRQIQ
Fatima Ezzahra BENTABET
Maryame EL-FRIAKH
Confiance DUKUZUMUREMYI
Oussama FARSSI
Bilal HASBI
Roumaissaa OUCHANNOUK
Loujaina SAADALLAH
Kenza SOUINI

FACULTY: PR. Hassan RADOINE, DR. Mustapha CHAFIK, DR. Omar SAADOUNE

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Concept note
Prof. Hassan RADOINE

Simplicity and complexity in architecture

"Designing a simple building has become a very complicated problem" – Vittorio Gregotti

There is perhaps no debate as empirical to architecture as that of simplicity versus complexity. Numerous architects have over the centuries argued for an architecture of simplicity or an architecture of complexity putting forward arguments, manifestoes and projects that have indeed shaped the discourse and practice of the profession. From the likes of modernists like Mies, Breuer, and Le Corbusier on simplicity to others like Venturi, and Johnson on complexity, the debate forges on today.

On the one hand, the proponents of a minimalist architectural aesthetic of simplicity like Breuer argue that it is clarity - an expression of a building's purpose and a "sincere expression of a building's structure". Others like Gregotti see simplicity as a holistic approach to architecture, one that adheres to the essence of use, to mimesis.

For complexity, Venturi couples it with contradiction to describe the eternal and pervasive nature of this duo in our human experience. He argues that the complexity of the world is perceived as simple through human perception engaging thus in a contradiction of simple irreality.

With the complexity of contemporary design and global challenges such as climate change and resource scarcity, and recent advances in technology, digital design tools and advanced materials, this age-long debate is foregrounding.

Simplicity and complexity being a critical dichotomy for architectural creativity remains a catalyst to dismantle complex problems of the built environment specifically in the Islamic world. This dichotomy that may ignite an embedded antagonism, seeks to pursue global innovative resolutions in order to remedy the existent architectural and urban situation and to prospect future innovations while being local and contextual.

In this workshop, we intend to explore with our students, simplicity and complexity as a vehicle to reveal the mental and material construction of the contemporary built environment in the Islamic world.

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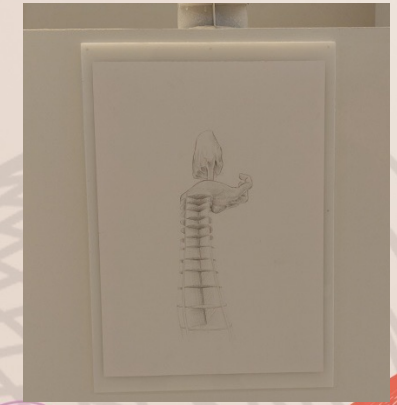
The cycle of Architecture and the complexity of life



- Bilal HASBI

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The cycle of Architecture and the complexity of life

- Bilal HASBI

Simplicity and complexity are often perceived as contradictory concepts as if they are simplicity versus complexity. But in architecture, they are not. They coexist for the same goal and purpose: supporting and containing the complexity of our life; the life of the being.

We see and use our hands every day, so we perceive them as simple. The same applies to the architecture we live in. Simplicity appears effortless, simplicity is efficient, is sustainable, values craft, rejects excess, invites reflection, and says much with less.

On the other hand, the layers of complexity in architecture reside in the interaction of architectonics with itself, context and environment, feelings and emotions. Architecture takes its roots from life, from the beings needs in every aspect of her/his life and experiences. All these resources are condensed in the center of their purpose, and while it grows, it raises the being with it to make her/him live in the sky as she/he has always dreamed to do. And surely, architecture is not the only thing that grows, but the being and the complexity of her/his life also grow in the process; given the gift of sustainability, the being develops with new experiences which make her/him flourish her/his mind. This flourishing becomes the next resource for the development of architecture, and the cycle repeats itself, a cycle of growth, development and sustainability of the container and the contained.

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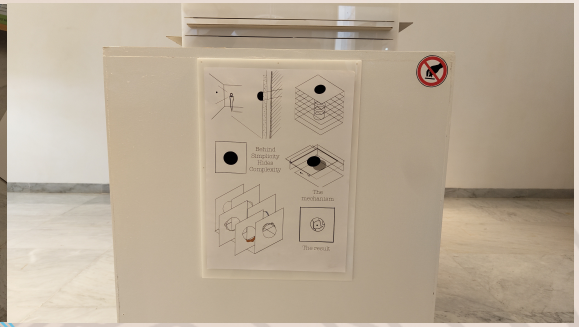
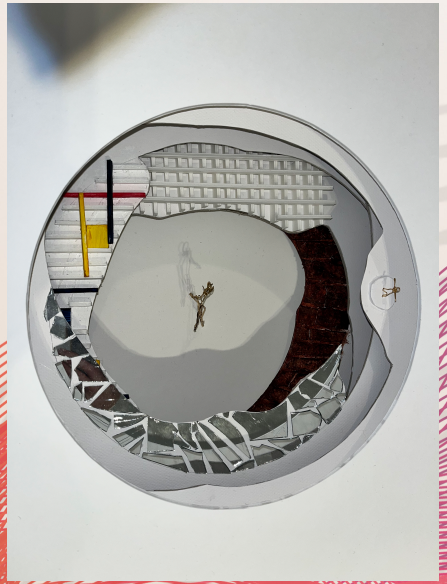
Layers of complexity





Doha Ammari, Roumaissaa Ouchannok

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Layers of complexity

The project consists of creating an original model that represents the five major parameters of architecture using two basic shapes, the square and the circle. Each layer of the model represents one of the five parameters: material, structural, scale, context, and human being. The movement of each layer expresses a particular parameter, starting from the most elementary to the most complex, until the final form of the model, which synthesizes all the parameters. The objective of the project is to demonstrate that architecture is not limited to a formal appearance but integrates more complex aspects. In this, it testifies to the ambition to go beyond appearances to reach the essence of things and make visible realities that are not always apparent at first sight.

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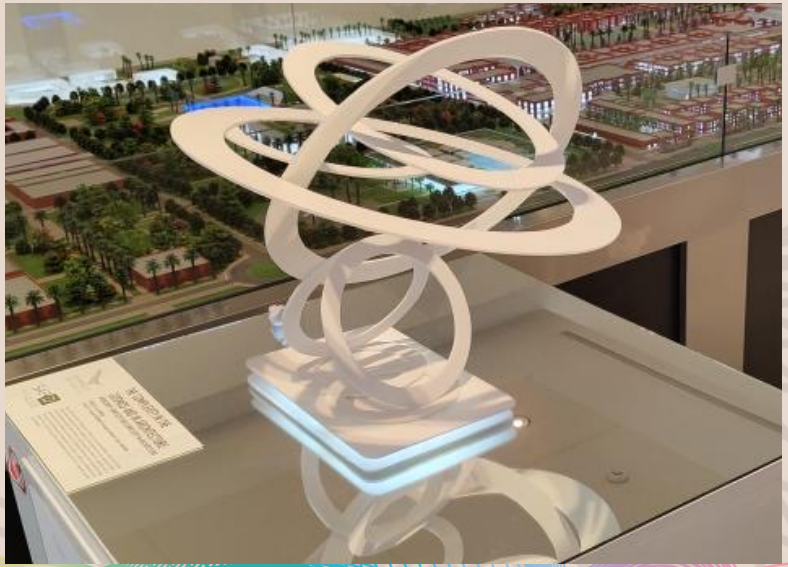
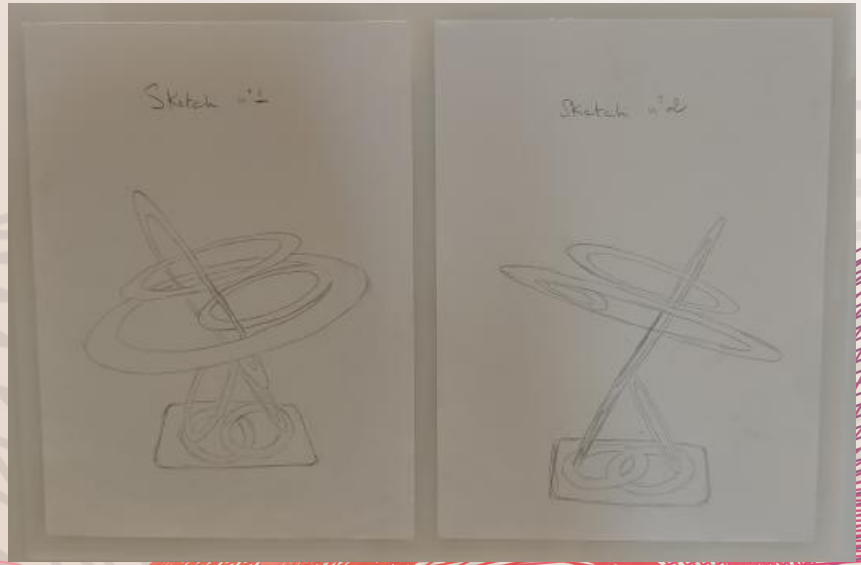
The complexity in the Cosmos architecture





Ikram BENRQIQ

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The complexity in the Cosmos architecture

We often see that architecture is linked to our surroundings, more specifically nature which ranges from the subatomic to the universe. As the cosmos widens, its complexity becomes more obvious. Since we got the chance to express such phenomenon, we wanted to connect between its different elements. We started by using the most simple looking yet complex form, the circle in order to be faithful to the theme. The universe was built by challenging gravity and that's how my project was initiated

Ikram BENRQIQ

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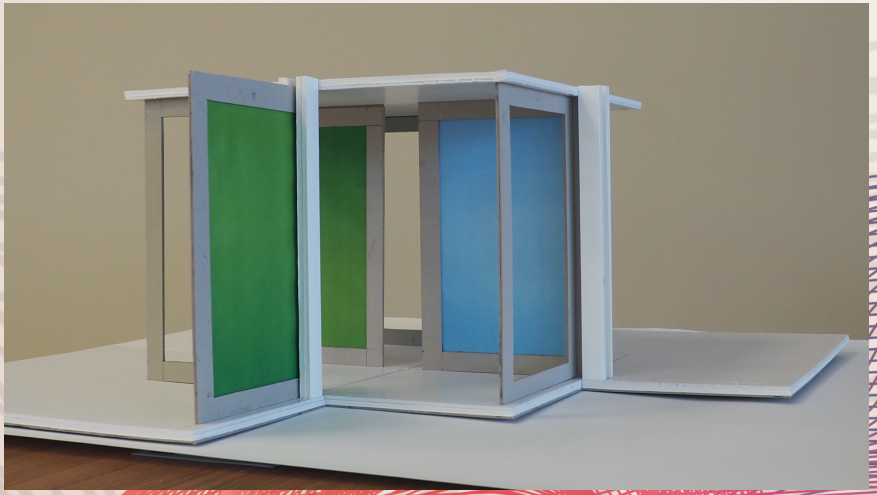
SIMPLICITY AND COMPLEXITY



Confiance DUKUZUMUREMYI

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SIMPLICITY OF COMPOSING ELEMENTS AND COMPLEXITY OF EMBEDDED SYSTEMS

As brought to light by my project, it is impossible to talk about complexity in architecture without talking about simplicity since architecture combines simple fragments or elements to make a functional, complex system to support life.

My project is a combination of really simple elements-pillars and glass doors- but it is able to carry out contrasting functions due to the complexity and functionality of its flexible system.

Confiance DUKUZUMUREMYI

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PROCESS OF CREATION

MARYAME EL-FRIAKH

Process of creation

Complexity in architecture is very often misunderstood by people who are not in the field and sometimes even by architects. The complexity of a building does not always lie in its complex structure and its forms extravagant; these two aspects can sometimes be an architectural weakness of the building. So, what is complexity in architecture? The complexity in architecture is exceedingly difficult to perceive because it is the process of creation and reflection that leads to the creation of a space that is simple to the eye of the inhabitant but that provides him with the greatest level of comfort. So, the complexity in architecture is hidden.

In this project my goal is to bring out this complexity and to show it to the world, while explaining the process of creating an architectural project.

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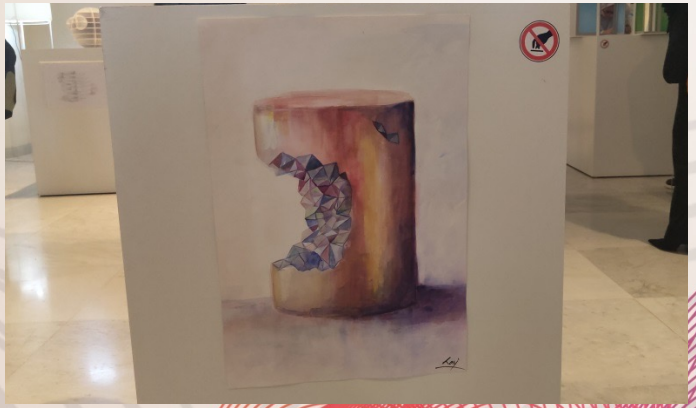
UNIVERSAL EXPRESSION



LOUJAINA SAADALLAH – BENTABET FATIMA EZZAHRA

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UNIVERSAL EXPRESSION

The wooden cylinder expresses humans as a language the universe uses to express itself: first, the external simplicity and the expression of sustainability, and how we all share the same basic features that make us a species that survived throughout time. Then, the internal complexity that gives each human its unique existence, and how the closer you look, the more different someone seems. However, even the complex intern of the cylinder is based on the repetition of a simple shape, a triangle. By intertwining them, the complex intern of the cylinder expresses both stable and unstable aspects of the human experience, and how both shape who we are and how we perceive the world. From a physical perspective, the triangles express the substantial simple parts that bound complexly in order to give the whole its persisting nature.

LOUJAINA SAADALLAH – BENTABET FATIMA EZZAHRA

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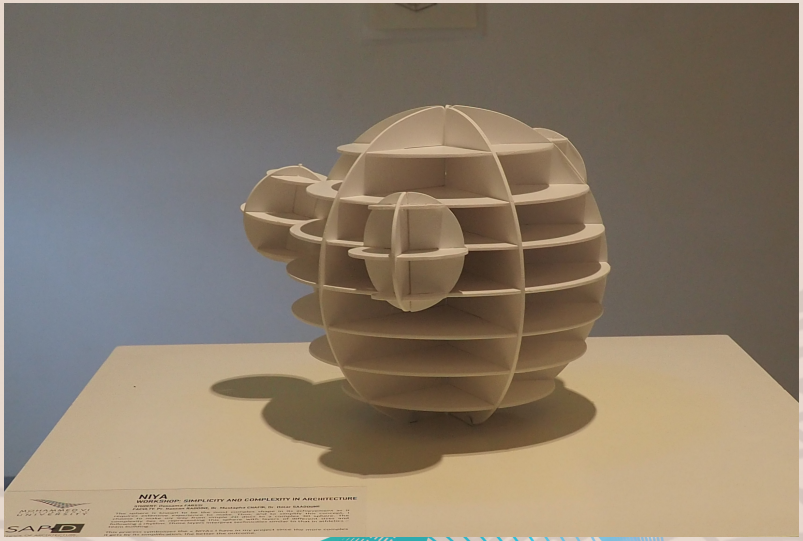
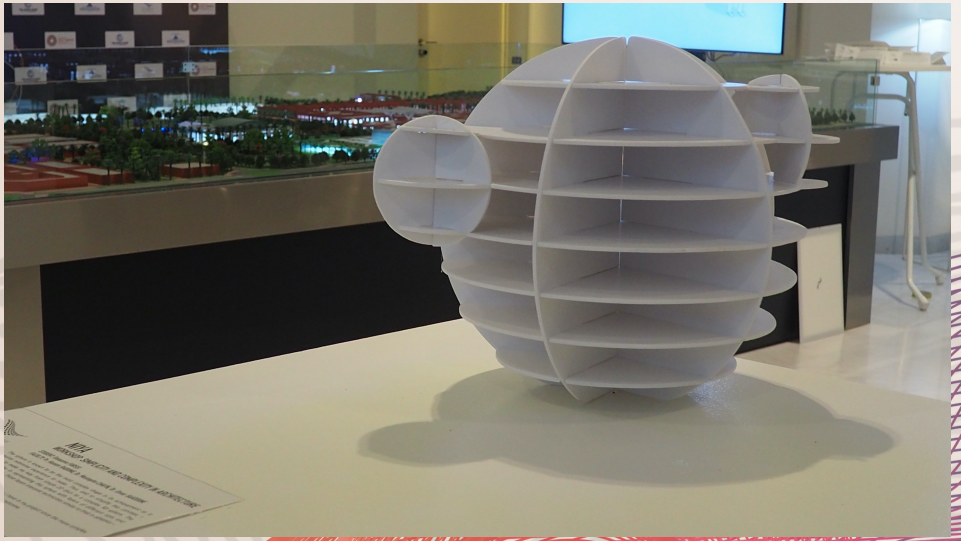
NIYA





OUSSAMA FARSSI

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« NIYA »

The sphere is known as the most complex shape in its achievement as it requires extensive experience to make it, so to simplify this concept, I choose to make my way from simple 2D discs to à complex 3D sphere. The complexity liés in representing this sphere with layers of different sizes and follow a rhythm. Those layers interpret technicities like athletism - team building...
This process symbolizes the " NIYA" and as the director Hassan Radoine comment : «The more I'm getting into the complexity by simplifying it with my "NIYA" the outcomes are good».

OUSSAMA FARSSI

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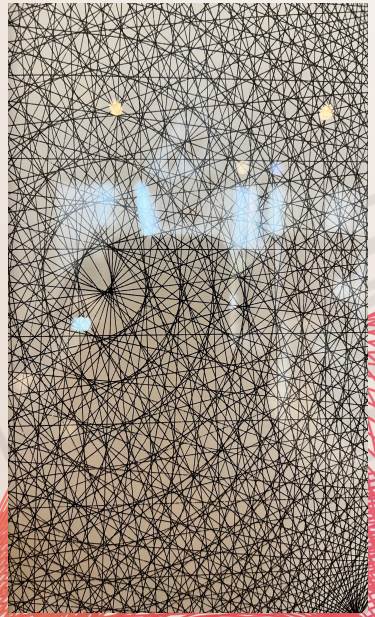
Fractality



Mouad BASSIM

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Fractality

The project aims to create a complex geometric shape by using different basic shapes such as square, circle, rectangle, and triangle, and combining them to obtain repetitive geometric patterns at the center. The design is drawn with lines that can vary in thickness to give depth and an interesting visual effect, and colors can be added to create contrasts with the white background of the paper. The project is based on fractal geometry, which involves merging complex geometric shapes to create a simple and easily recognizable form, which can then be enlarged and complexified, and then simplified again cyclically to create an elegant combination of simplicity and complexity.

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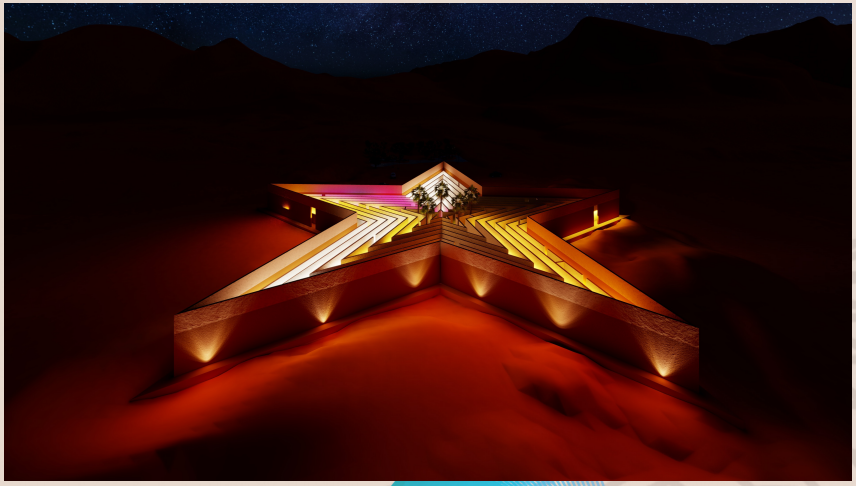
Experience



Kenza SOUINI

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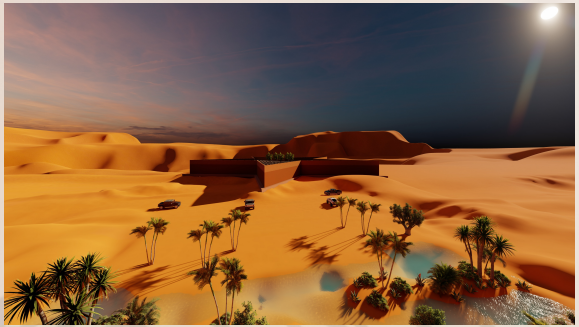
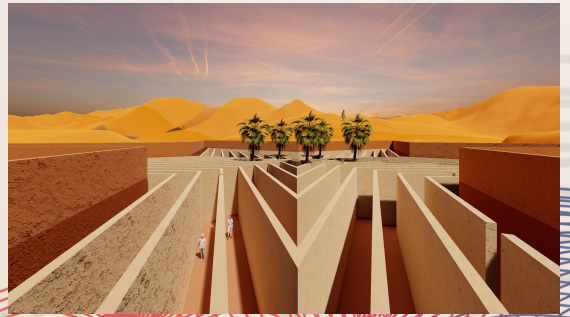
Experience





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Experience

Architecture is a balance between complexity and simplicity seen and felt through Design. But can we live an experience that encompasses this balance?The labyrinth is a design of a complicated network of paths with a single and simple exit, which allows us to experience both of these factors. Philosophically, this principle can be paralleled to the life we lead, in which we cross complex paths to reach a simple end.To better experience this, please put on your helmets and fasten your belts to travel all the way to the Moroccan Sahara, solve the riddle and find the exit of our complex labyrinth, which itself represents our heritage thanks to its form that we let you discover.

Kenza SOUINI