



An-Najah National University

Faculty of Engineering & Information Technology  
Department of Computer Engineering

Cash Bblash



Done by  
Shafiq Abdal, Marah Shakhshir

Supervisor  
Dr. Raed Al-Qadi

June 27, 2024

# Acknowledgements

*“First of all, we would like to thank our supervisor, Dr.Raed Qadi, for his consistent efforts throughout the semester, and for being completely prepared to assist us with scientific support. We would also like to thank Cash Bblash institution for providing information about the company and their management protocol, we thank our friends and family.*

*Those who gave us their undivided attention and believed in our ability. ”*

# Disclaimer

Shafiqa Abdat and Marah Shakhshir have written this report as requirements for a Bachelor's degree in Computer Engineering Department. No one modifies or corrects it because it will be evaluated by professors at An-Najah National University. It is worth mentioning that An-Najah National University does not have any responsibility for any word in this report.

# Abstract

Two years ago, the coronavirus pandemic disrupted many aspects of daily life. In Palestine, this disruption was compounded by the persistent traffic at military checkpoints, severely affecting people's mobility. To address these challenges, there was a need for an online solution to facilitate transportation and meet user needs comfortably.

In collaboration with Cash Bblash, a furniture and electronics institution located in Nablus and Beit-Foreek, we developed a website and mobile application to reduce the effort required to visit the institution physically. Through this platform, users can easily search for, view, and purchase products online. The key feature of our project is the ability to visualise products in 3D, allowing users to place them in a virtual room to see how they would look in real life. This capability builds user confidence in making purchases without visiting the store.

Our platform provides users with a comprehensive view of all products in 3D, enabling them to rearrange chosen items in a default room or use their own room's camera for a realistic preview. Additionally, the admin (institution owner) can manage products by adding, updating, and deleting items, including converting images to 3D models. Users can interact with the admin through chat, receive notifications about their orders, and design custom components based on the institution's offerings.

The platform also allows users to pay a deposit to reserve products, track their orders, and make payments via Visa. Admins can monitor all orders, set delivery dates, and users can review and comment on services post-delivery.

Despite the existence of furniture websites, ours stands out due to its unique features and tailored solutions. In Palestine, there are few furniture and electronics websites, and none offer the extensive functionalities of our platform.

Contents

- 1.1 General background.....7
- 1.2 Objectives .....7
- 1.3 Scope of the work .....7
- 1.4 Significance.....8
  - 1. Constraints and Earlier Coursework .....10
    - 1.Economy .....10
    - 2.Environment .....10
    - 3.Society.....10
    - 4.Politics .....10
    - 5.Ethics.....11
    - 6.Health and Safety .....11
    - 7.Manufacturability.....11
    - 8.Sustainability .....11
  - 2. Used Technologies .....12
    - 1.ReactJS.....12
    - 2. React Native.....12
    - 3.Node Js .....12
    - 4.MongoDB.....13
- 3.1 Cash BBlash as a Website & Mobile application .....15
  - 3.1.1 Home page .....20
  - 3.1.2 Admin Pages .....21
  - 3.1.3 Cash Bblash departments .....28
  - 3.1.4 Cash Bblash departments-Large Bedrooms .....30
  - 3.38 Designing page .....37
  - 3.3.10 Cash Bblash departments-Kids Bedrooms.....42
  - 3.3.11 Cash Bblash departments-Sofa Sets.....42
  - 3.3.12 Cash Bblash departments-Dining rooms.....45
  - 3.3.13 Cash Bblash departments-Electronics.....45
  - 3.3.14 Favorites page .....46
  - 3.3.15 Offers Page .....47
  - 3.3.16 Searching on products page .....50
  - 3.3.17 Sorting the products page .....51
  - 3.3.18 Cart Page .....52
  - 3.3.19 Payment Page.....55
  - 3.3.20 Sold out products .....56
  - 3.3.21 New arrival products .....57
  - 3.3.21 Reviewing .....58
  - 3.3.22 Detailing Page.....59

|  |    |
|--|----|
| 3.3.24 Design Guidebook Page:.....       | 62 |
| 3.3.23 Reels Page.....                   | 64 |
| 3.3.25 Converting to 3D models page..... | 65 |
| 3.3.27 Messaging page.....               | 70 |
| 3.3.26 Contact page.....                 | 73 |
| Results & Discussion.....                | 74 |
| Results.....                             | 74 |
| Discussion.....                          | 74 |
| Conclusion & Future Work.....            | 75 |
| Conclusion.....                          | 75 |
| Future Work.....                         | 75 |

# Chapter 1

## Introduction

The military check points significantly disrupted daily life globally, and in Palestine, this disruption was exacerbated by ongoing traffic issues at military checkpoints. To address these challenges, partnership with Cash Bblash, a furniture and electronics institution in Nablus and Beit-Foreek, to develop a website and mobile application was a solution. The goal was to provide a convenient online solution that allows users to search for, view, and purchase products without needing to visit the store physically, and to make the institution advantageous. This report details the development and features of the platform, which offers unique functionalities such as 3D product visualization and interactive room design, tailored to meet the specific needs of users in Palestine.

### 1.1 General background

Some people want a Website and Mobile application especially in Palestine to see the furniture and electronics products for the companies but they can't find them because of the lack of platforms that specializes in this field on the internet in the region of Palestine. That is why we made it (Cash Bblash) to help the people see the products in a clear way and buy.

### 1.2 Objectives

In Cash Bblash the customer can see all the products that the institution introduces in a 3D way and to design his room from the chosen products and aslo the customer can buy any product.

### 1.3 Scope of the work

1. Create accounts: Each user can sign up and create his own account.
2. Search Feature: Users can search for any product they want, open it, and view it in a 3D way.
3. Search filters: Users can search for any product according to the description of the product also.
4. Showing products: Users can see the products in 3D and images too.
5. Showing offers: Users can see all the offers that the company introduces .
6. Designing: User can design his own room from the available products like bedrooms,sofa sets,etc.

7. Customizing products: User can customize any existing furniture product to his own dimensions.
8. Designing pieces: Users can design any furniture piece using Three.js library.
9. Converting to 3D: User can convert any product he wants to a 3D model.
10. Buying products: Users can buy any product he want by visa card.
11. Reviewing:Users can review the product he bought by commenting , uploading an image and rating it.
12. Messaging: User can message the admin about any information he wants.
13. Notification: User can see in his profile all what the admin publish whether a new offers,new advertisements or a new product.

## 1.4 Significance

People who want to view and buy furniture products and electronics online can use (Cash Bblash) to do all of that

# Chapter 2

## Theoretical Background and Previous Work

### 1. Theoretical Background of the project

It is an application and website that supports one profitable category, which is the Cash for Free Foundation, to serve customers and sell all of the organization's furniture products. Through them, the customer can see all the pieces offered for sale in 3D, and he can design the pieces he wants, and also arrange the pieces in his shopping cart in a room in 3D to provide him with more satisfaction, and he has a broader background on what his room looks like with these products. They also provide electronic payment for customer convenience and time saving.

### 2. Previous similar works

The idea of the project was not new, but many features were added that make it popular with different categories of people. It supports a profit-making organization that sells furniture, which makes this online store an appropriate environment to gain customers' trust and encourage them to buy. There are similar applications, including She-In and Ali-Baba, but they do not specialize in home furnishings in particular, and Cash Bbalash online store has no competitor at the local level. Since it is specific to one institution, even if there are similar ones, the impact on it will not be significant. In addition Cash Bblash store provides 3D models for the products.

# Chapter 3

## Methodology

### 1. Constraints and Earlier Coursework

#### 1.Economy

##### Budget Limitations

Developing and maintaining a comprehensive website and mobile application required a substantial budget. Costs include initial development, server hosting, 3D model creation, learning the languages and ongoing maintenance. Cost of Related Products

Competitive pricing for the 3D converting feature, considering similar services on the market.

##### Maintenance Costs

Regular updates, bug fixes, and customer support are essential, adding to the overall cost of the project.

#### 2.Environment

##### Power Consumption

The platform is optimized for energy efficiency to minimize power consumption during its operation, both on servers and user devices.

##### Electromagnetic Radiation Issues

The platform's usage does not significantly contribute to electromagnetic pollution.

##### Environmentally Friendly Power Sources:

Whenever possible, using servers powered by renewable energy sources to host the platform.

#### 3.Society

##### Information Security

Good security measures implemented to protect user data from unauthorized access and breaches.

##### Privacy

User data privacy is absolutely maintained, adhering to data protection laws and regulations.

#### 4.Politics

##### Promoting Equality

The platform is designed to be inclusive, promoting gender and race equality in both its user base and content.

##### National Security

The platform complies with national regulations and does not pose any security risks.

##### Solving Common Problems

Mobility and access to essential goods during times of disruption where the user can easily see the

products without going to the location of the company.

## 5.Ethics

Safety and Health Issues

Our website and Mobile application are safe to use and do not pose health risks, such as minimizing screen time to avoid eye strain.

Respecting Intellectual Rights

Adhering to all copyright and intellectual property laws to the Cash Bblah institution.

## 6.Health and Safety

The platform's use does not compromise public safety, such as during product deliveries

## 7.Manufacturability

Utilizing current manufacturing and technology standards to create 3D models and they can be integrated smoothly into the platform.

## 8.Sustainability

Our website and Mobile application are designed to be scalable and easily upgradable to incorporate new features and improvements.

## 2. Used Technologies

### 1. ReactJS

ReactJS is a free and open-source front-end JavaScript framework for creating UI components-based user interfaces. [react] Meta (previously Facebook) and a community of individual developers and corporations manage it. React may be used as a foundation for single-page, mobile, or server-rendered apps.

#### **Why ReactJS?**

**JSX Syntax:** React provides a clean and simple syntax called JSX, which is comparable to HTML but allows developers to insert JavaScript code into the front-end design, giving them more control over the components.

**Reusability:** One of React's most powerful features is the ability to create reusable components, meaning developers can reuse existing components rather than creating them from scratch.

**Library Support:** React supports a vast number of free libraries that offer readymade components, making the development process easier.

**Fast rendering:** React optimizes rendering performance, enhancing the user experience.

### 2. React Native

React Native is a framework created by Meta for building native mobile applications using JavaScript and React. It allows developers to create applications for both Android and iOS platforms using the same codebase.

#### Why React Native?

**Reusable Code:** React Native allows the use of reusable code across different platforms, which speeds up the development process and reduces effort.

**Comprehensive SDK:** It includes a complete development kit with libraries, APIs, and frameworks, enabling the development of various applications suitable for multiple platforms simultaneously.

**Single Codebase for Multiple Platforms:** With React Native, you can develop applications for both Android and iOS using the same code, saving time and effort and reducing the need to learn multiple programming languages.

### 3. Node Js

Node.js is a framework for programming many of its basic modules in the JavaScript language. It was developed by an American programmer living in Germany called Ryan Dahl and the super-phase joint, and the first launch of this pattern was in 2009. It is known that the language of JavaScript is the language of the client side, meaning that

it is a language that works alongside the user and not in the server, but after Ryan Dahl developed this pattern (Node.js) that works with the Google V8 engine and many other libraries, the matter became more complicated than before and This framework has been transformed by working on the server like PHP, in other words, the Node.js has become a completely dynamic and dynamic Functionality framework, through which you can deal with databases and so on with ease.

## Why Node Js?

1.Asynchronous and Event-Driven: All APIs of the Node.js library are asynchronous, that is, non-blocking. This means that a server based on Node.js never waits for the API to return data. All improvements and bug fixes are quicker and released on a regular interval so that you do not have to wait for ages to harness the latest developments. Flexibility of Open-Source framework is another reason why ASP.NET Core is a preferred choice for developers.

2.Being built on Google Chrome's V8 JavaScript engine, the Node.js library is very fast in executing code.

3.Highly scalable Node.js uses a single-threaded model with iterating events. The event mechanism helps the server to respond in a non-blocking manner and makes the server highly scalable, unlike traditional servers that create limited threads to handle requests. Node.js uses a single-threaded program and the same program can serve more requests than traditional servers such as Apache HTTP Server.

## 4.MongoDB

It is NoSQL under the name MongoDB, that is, a database in which there is no relationship between tables, and it relies on saving data as BOSN documents, and this type is the most famous among the NoSQL family

### Why MongoDB?

**Cloud-Based Developer Platform:** MongoDB provides a full cloud-based data platform for developers.

**Flexible document schemes:** It offers flexible schemas for storing data, allowing for easy modifications.

Widely supported and code-native data access.

**Change-friendly design:** Its design accommodates changes and updates efficiently.

**Simple installation:** MongoDB is easy to install and set up.

Full technical support and documentation

### Other technologies & tools

There are multiple other technologies used, including:

**React Router** is a tool for handling routes in a web app by utilizing dynamic routing that occurs when the app is rendering on the machine to create a single page application. [react router]

**Visual Studio Code** , also commonly referred to as VS Code, is a source-code editor made by Microsoft for Windows, Linux and macOS. Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git.[vscode]

**CSM 3D Viewer -AI tool-** : A tool for viewing 3D models with AI capabilities, and convert image to obj extension[CSM]

**Chat Engine** , A tool for building chat functionalities within applications.[ChatEngin]

**Native Notify** , A tool for integrating native notifications in applications.[NativeNotify]

**Postman** is an API platform for building and using APIs.

Postman simplifies each step of the API lifecycle and streamlines collaboration so you can create better APIs— faster.[Postman]

**GitHub**, is an Internet hosting service for software development and version control using Git. It provides the distributed version control of Git plus access control, bug tracking, software feature requests, task management, continuous integration, and wikis for every project [github]

**android Studio:** Android Studio is ideal for developing native Android apps with advanced coding, debugging, and testing tools, along with a feature-rich emulator and performance monitoring. [androidStudio]

**Expo App:** Expo simplifies the creation of cross-platform React Native applications, offering easy testing, native functionality, and seamless updates without the need for extensive native code knowledge. With Expo, developers can write their applications in JavaScript/TypeScript and have them run on multiple platforms without native code. Expo includes a client app, which allows for easy testing and sharing of projects by scanning a QR code. [ExpoApp]

**10.JWT (JSON Web Token)** is an open standard for exchanging security information between a client and a server, and is commonly used for user login authentication. [jwt]

**11.EmailJS:**used for returning the forgotten password to send a new password to the email.[E

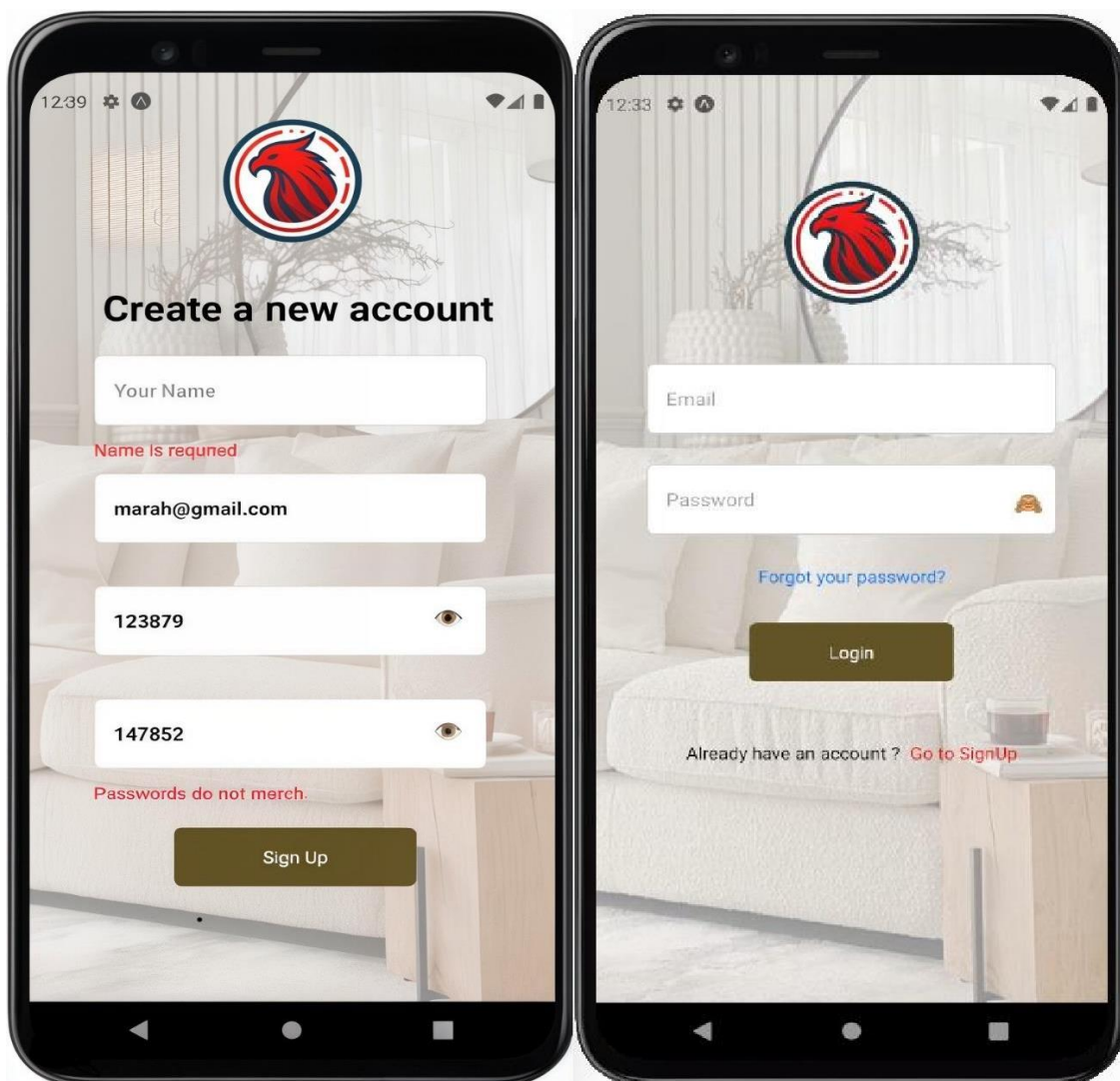
### 3.1 Cash BBlash as a Website & Mobile application

#### 1. Authentication and Validation

Because Cash BBlash is regarded as a middleman between the institution and the users, each user must register on the platform in order to identify himself and have access to all of its features. The user needs to register his name, email, password.

#### Signup

In order to login to the website, you have to enter your valid email address and a valid password. As seen in Figure 3.2 and 3.1a website and application respectively.



(a) Mobile Sign Up Form

(b) Login page

Figure 3.1

Create a new account for Exclusive Furniture Deals!

Your name  
shafiq

Your Email  
s12027801@stu.najah.edu

Password  
.....

Confirm Password  
11234

Sign Up




Figure 3.2: Website Sign Up Form

### Sign up Validation

If the user signs up with an unmatched password the system will give him the alert of the mismatch, and the password must be a strong password. As seen in Figure 3.3.

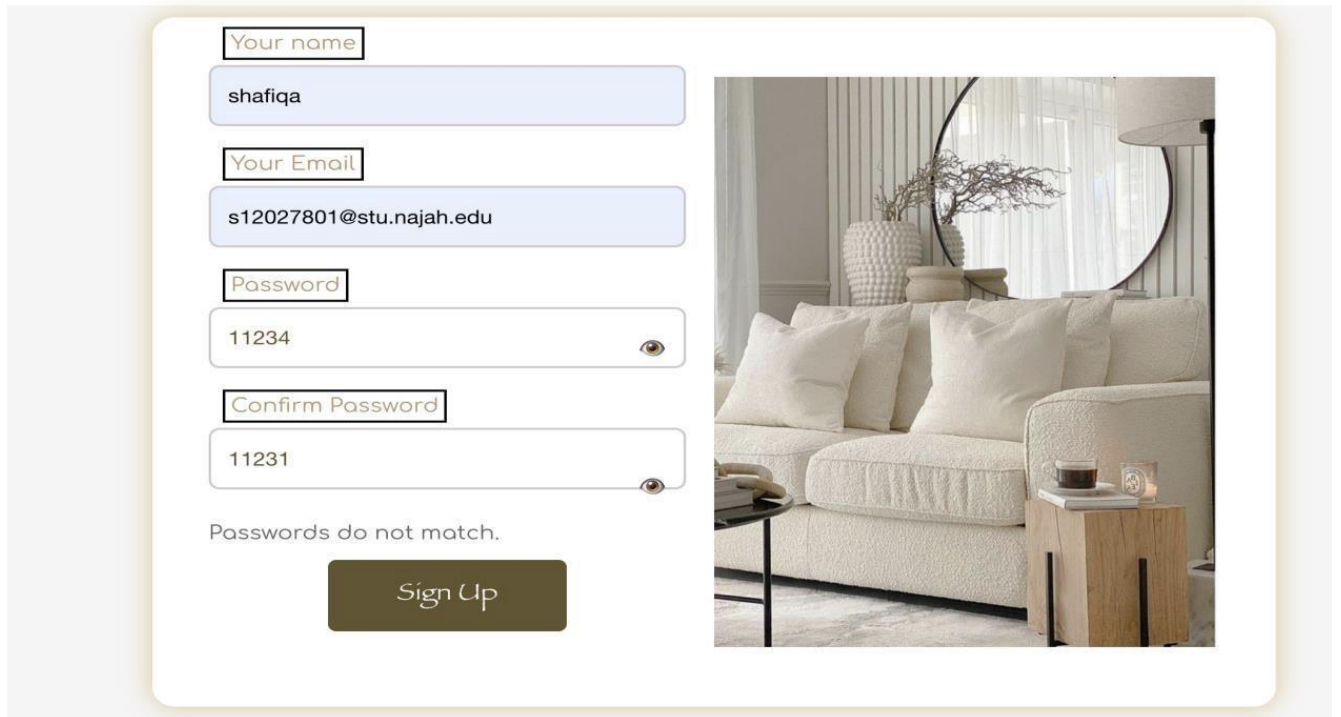


Figure 3.3: Mismatched passwords

Also after signing up if the user tries to sign up with the same email again the system will alert him also. As seen in Figure 3.4.

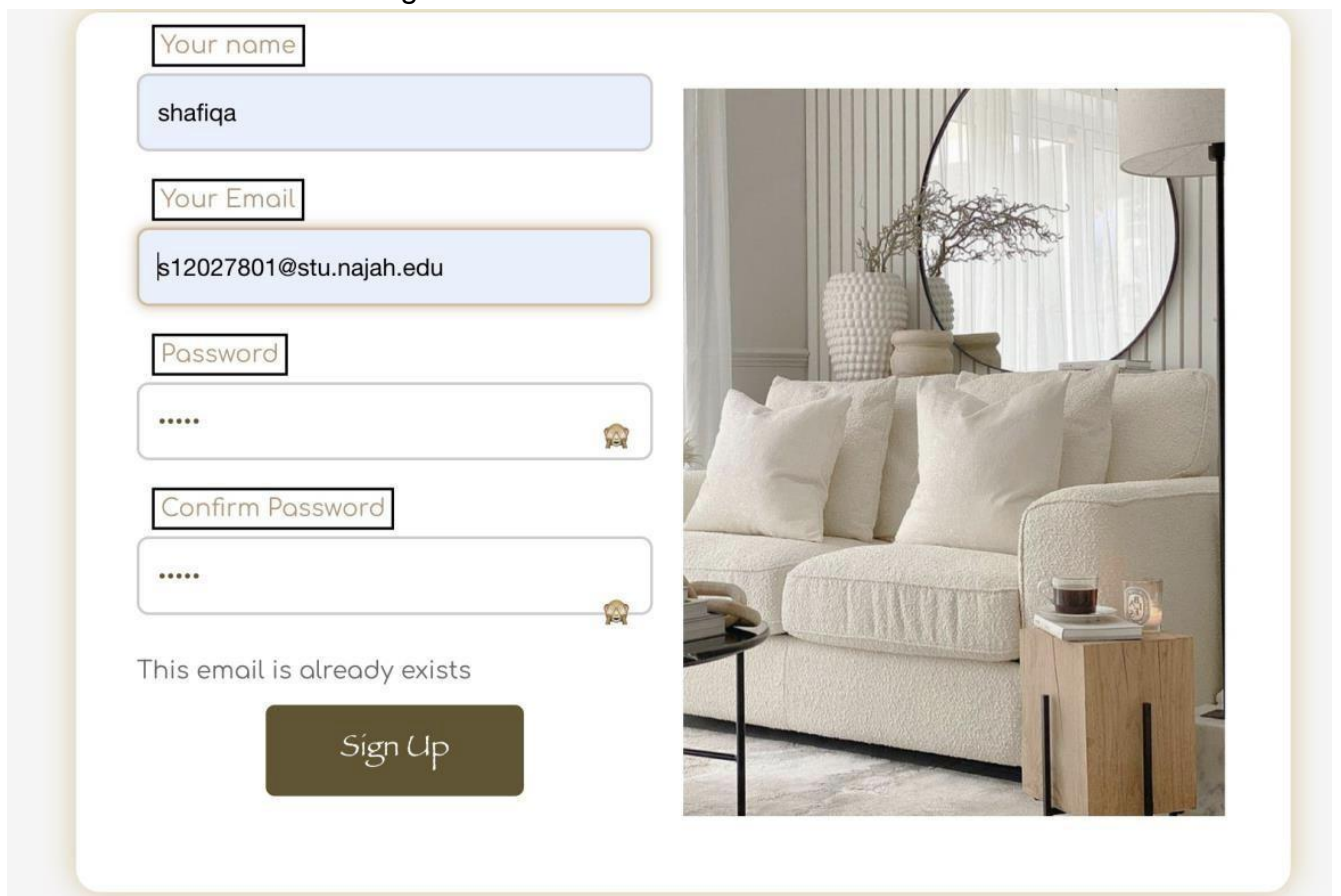


Figure 3.4: Email is already exist

## login

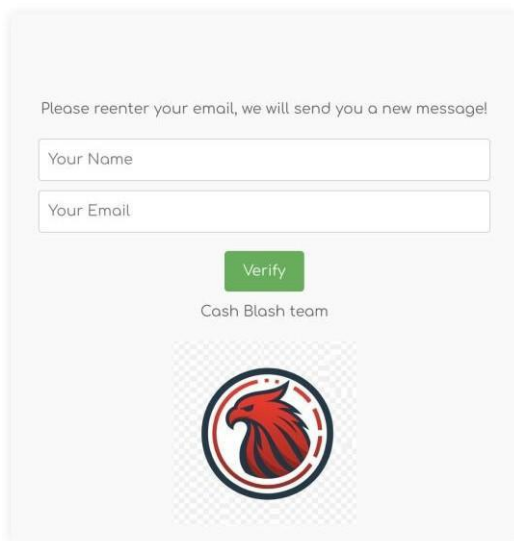
To log in to the website, you must provide certain information such as your email and password that you have already registered with them. As seen in Figure 3.1b.

## Login Validation

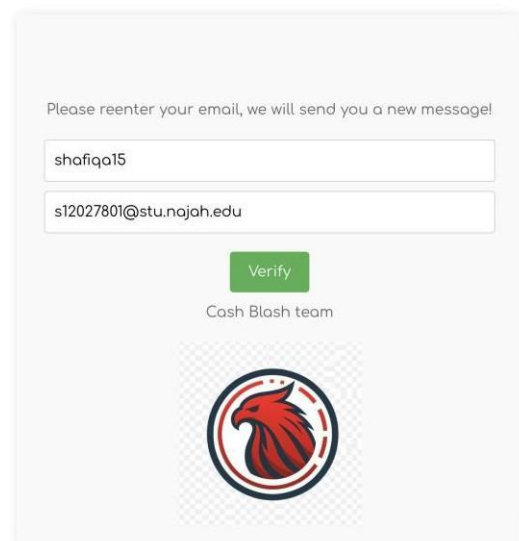
When a user attempts to login, the back-end validates the credentials; if they are invalid, the user is alerted, and if he attempts to log in using a non-existing email address, he is also notified.

## Forget password

When a user wants to login and click on a forgotten password, he will identify his email again to send the new password on the email, this is done by using EmailJS. As seen in Figure 3.5a and Figure 3.5b.



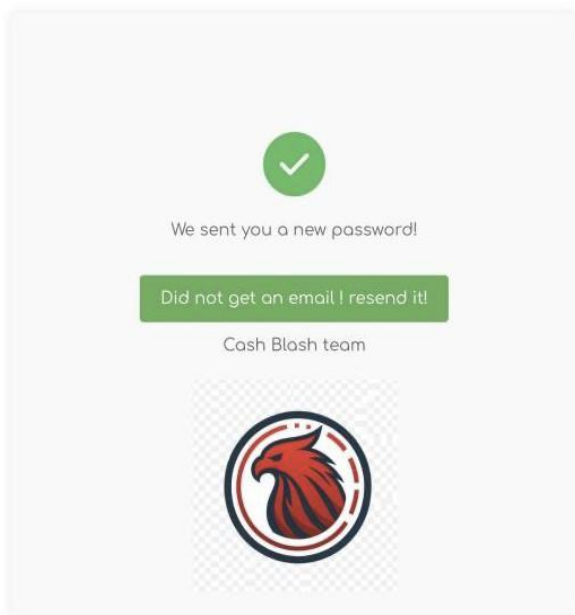
(a) Forget password form



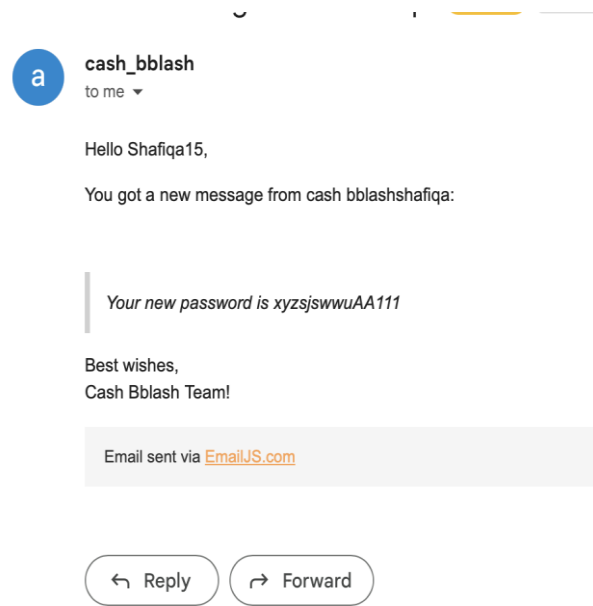
(b) Forget password form2

## 3.5

And after this the new password will be generated randomly to be sent to the email that the user put and already registered in and then the user can register with it. See figures 3.6a and 3.6b.



(a) Email verified and password is sent



(b) New password is sent

Figure 3.6: Send a new password

## 2. User Profile

Each registered user has his own profile which he can upload his image, add his number, country and update his own information. See figures 3.7a and 3.7b.

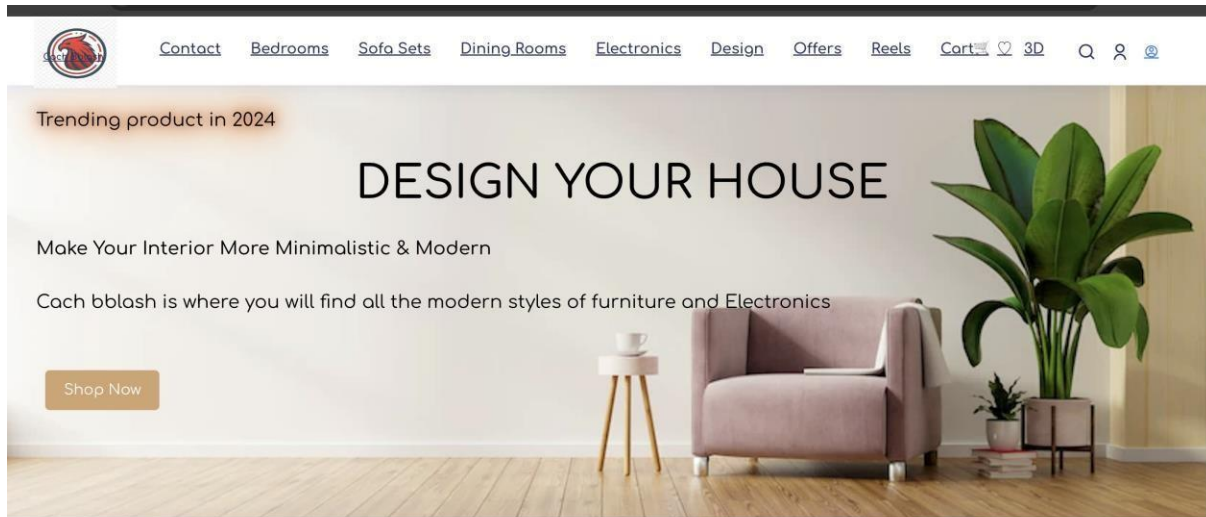
(a) User profile

(b) Updating user information

Figure 3.7: User profile page

### 3.1.1 Home page

This is the home page in the 2 platforms Website and Mobile application which shows the company's departments (bedrooms, electronics, sofa sets, dining rooms..) and show other features as shown in the Navigation bar. See figures 3.8 and 3.9 .



## Categories

Figure 3.8: Homepage – Website

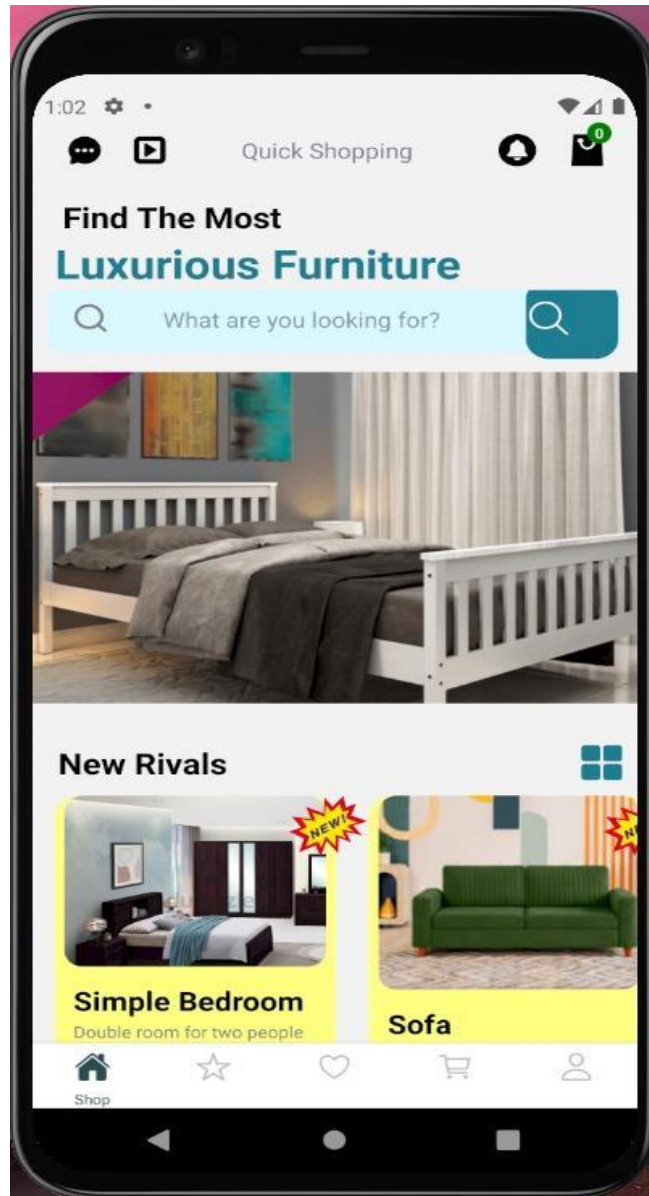


Figure 3.9: Home page - Mobile

### 3.1.2 Admin Pages

This interface appears to the administrator only when he enters the application as an admin, and a business page is created for him to manage the online store through: (3.10)

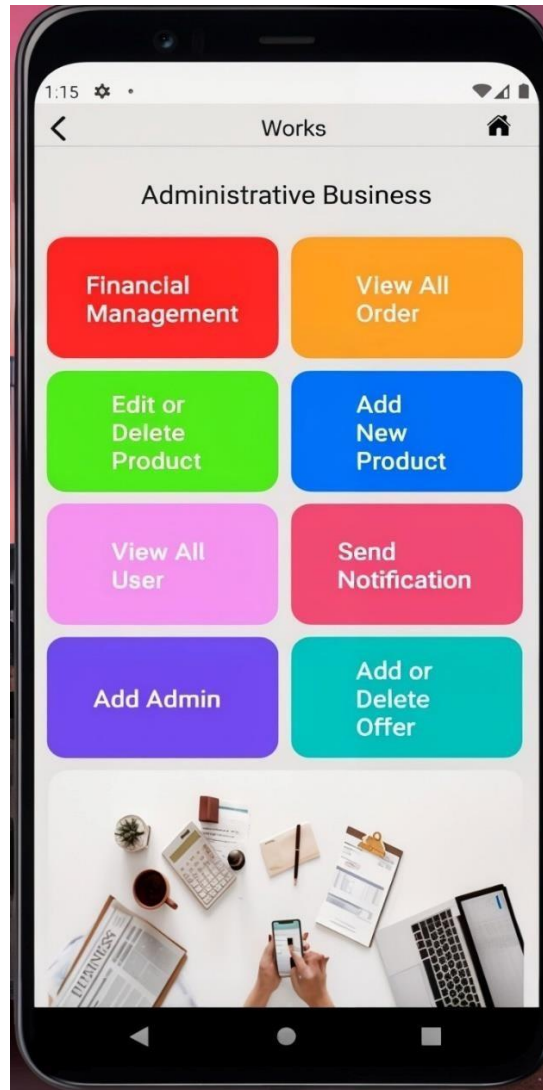
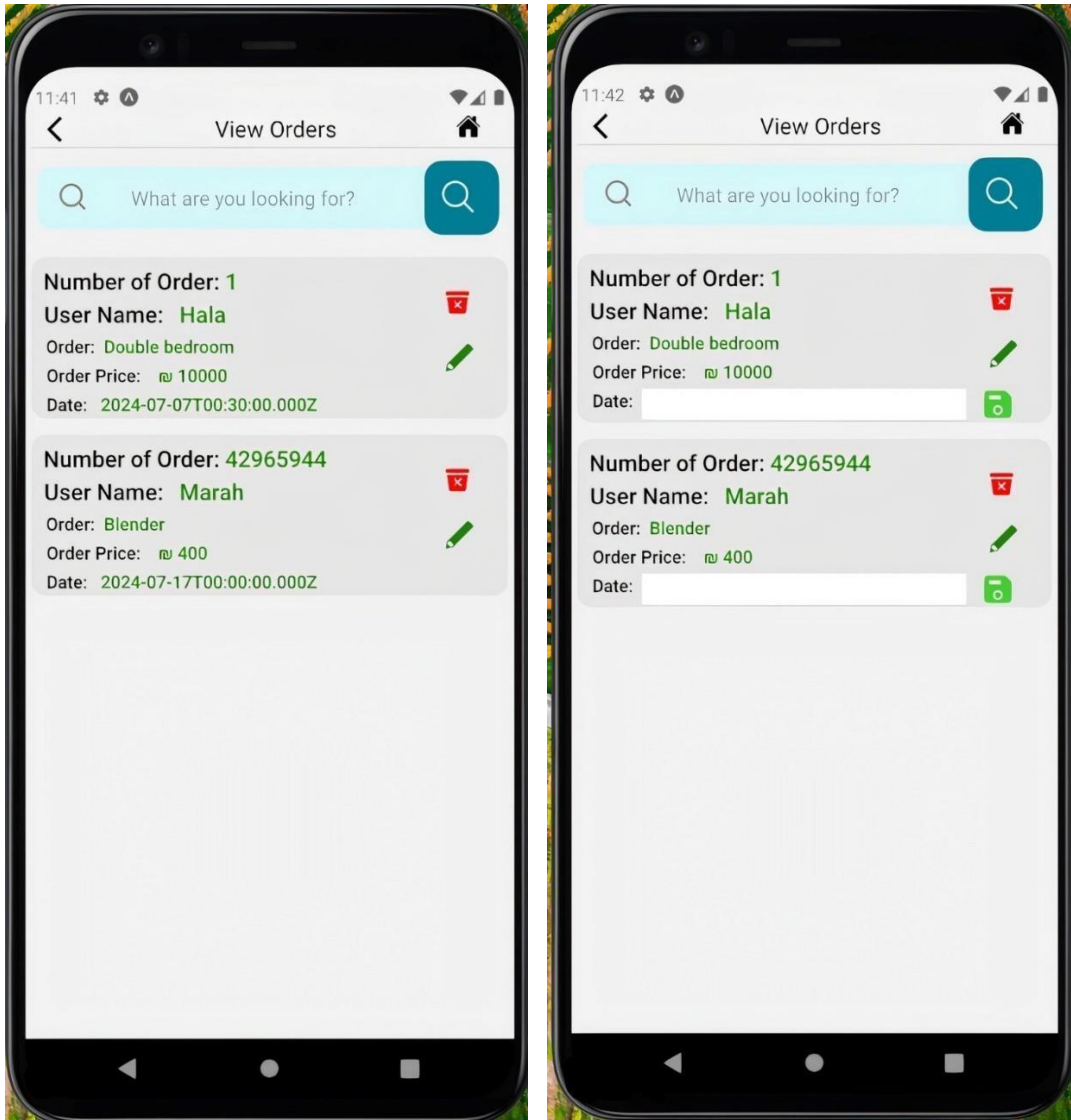


Figure 3.10: Admin Page

Put arriving date of each order and showing users orders

It is within the powers of the admin to modify the order delivery date, or to delete an order for which the amount has not been paid in full, by agreement between the customer and the admin via chatting. And the date of the arriving will be shown for the user. See Figure 3.11a and 3.11b.



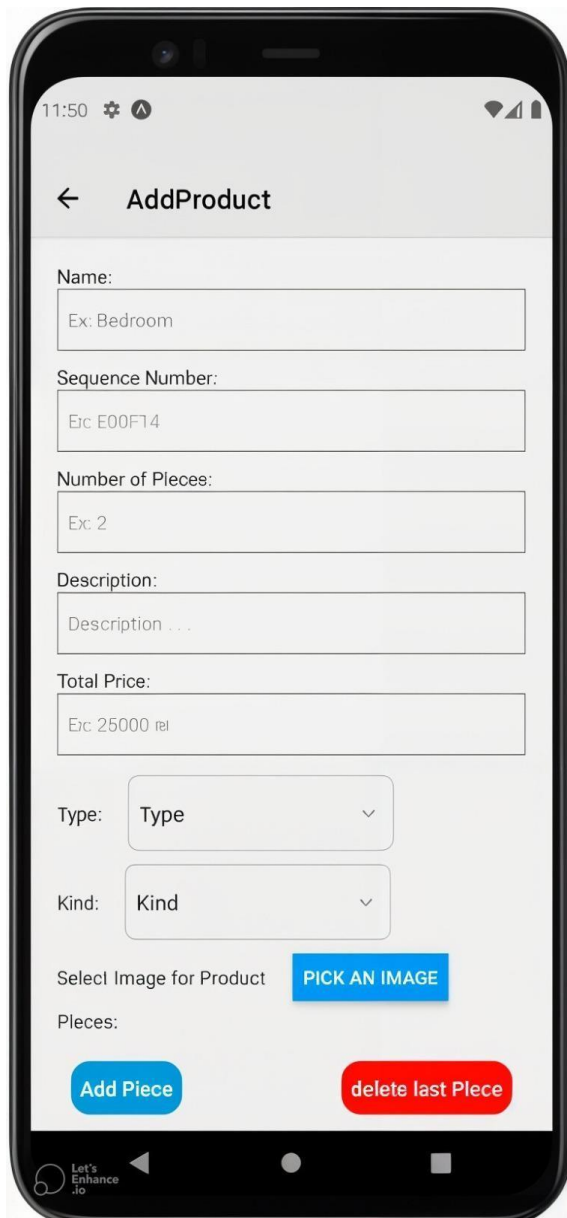
(a) Users orders

(b) Put arriving date of each order

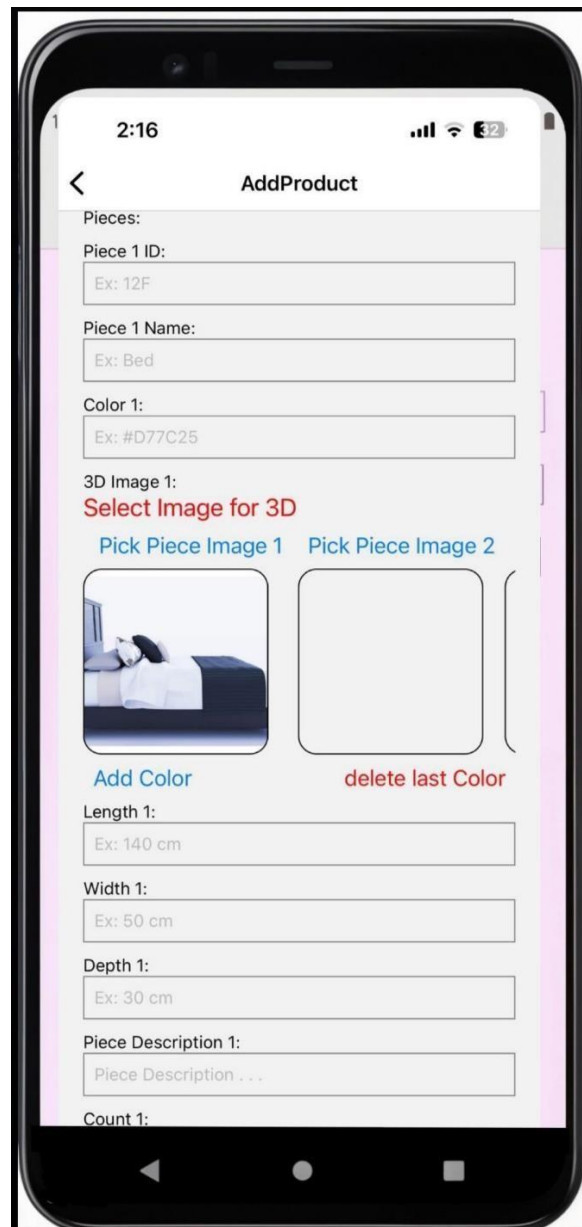
Figure 3.11: Showing users orders and edit their arriving dates

### Adding a new product

It is within the powers of the admin to add a new product within the store. He enters all the details for this product in terms of the number of pieces, details of one piece, and several images for each piece, in addition to adding an image to convert it to 3D. (See Figure 3.12a and 3.12b)



(a) Adding new product

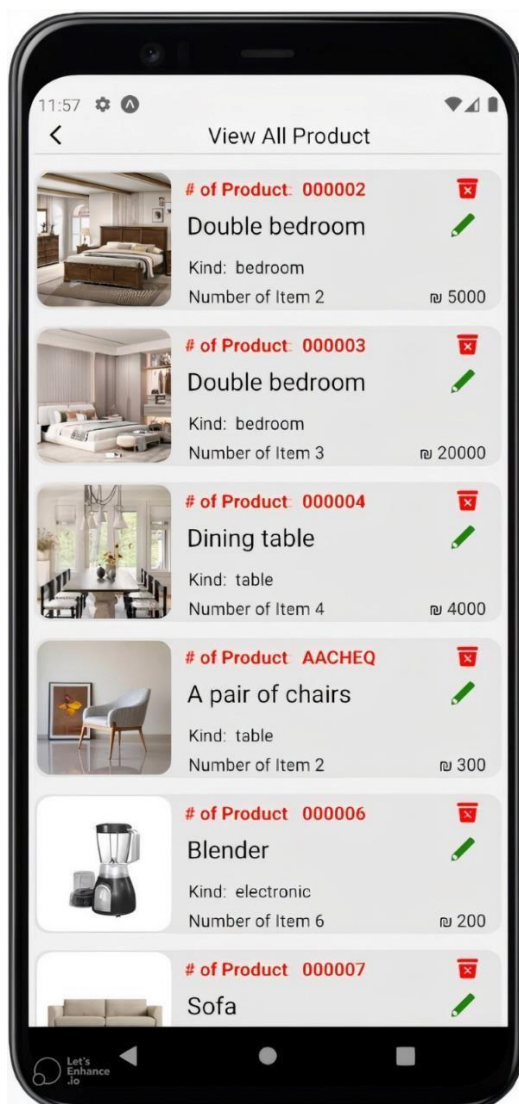


(b) Adding new product

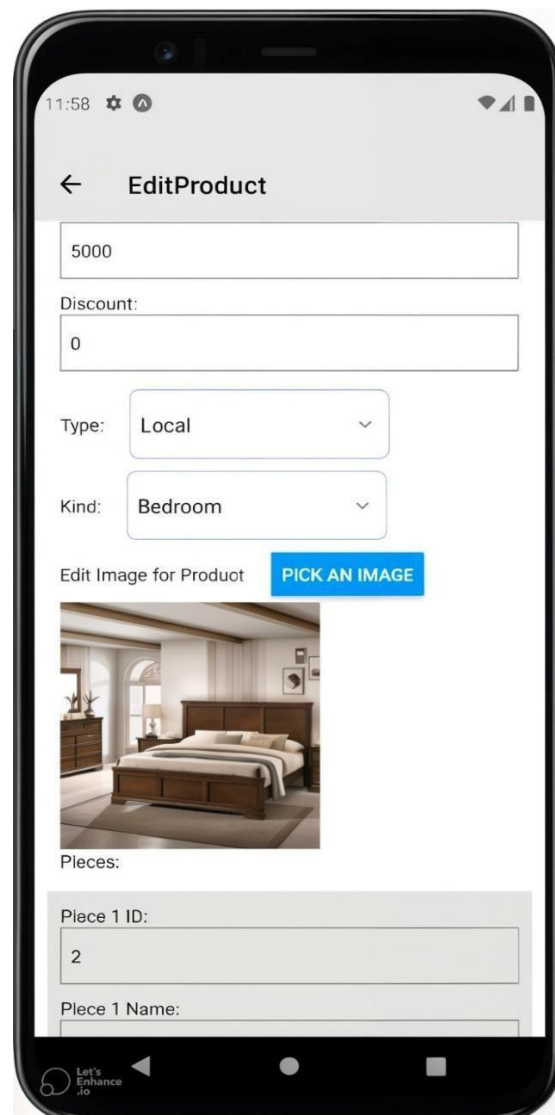
Figure 3.12: Admin with adding new product

### Viewing products and edit them

In this interface, the admin can modify or delete any product within the store, and once the modification process is completed, he presses the Save Changes button so that the information is stored in the database. The admin can also add a discount to the price of the product he wants, and this is reflected while displaying the product to the customer (as in the Figure 3.13a) and 3.13b)



(a) Viewing all the product



(b) Edit product info.

Figure 3.13: Admin can view all the products to edit them

### Viewing users

It is within the admin's powers to see all customers registered in the online store, in order to easily reach them and communicate with them, as well as knowing their addresses to deliver orders to them. (see Figure 3.14)

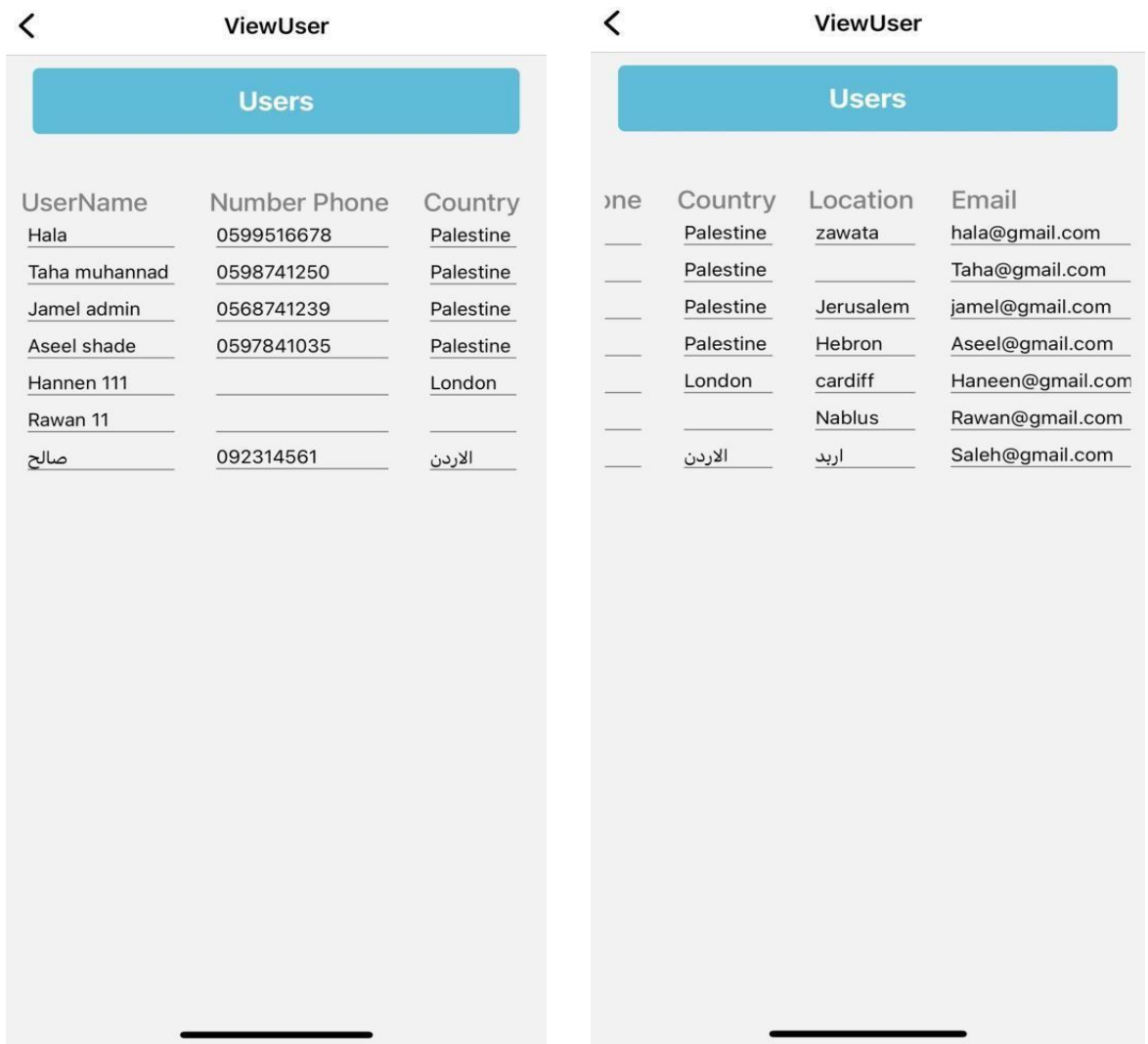
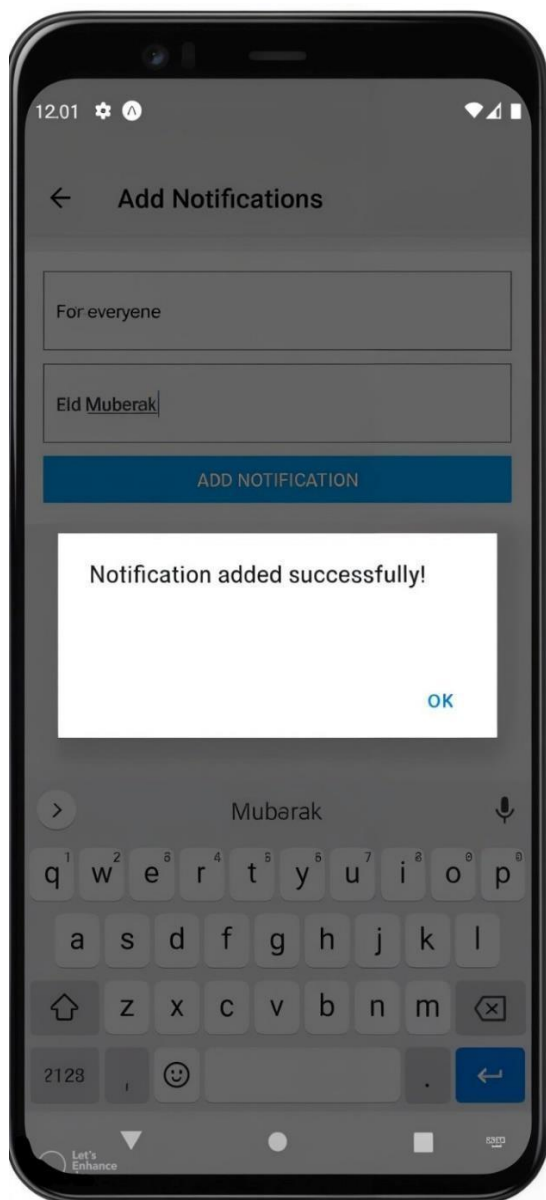


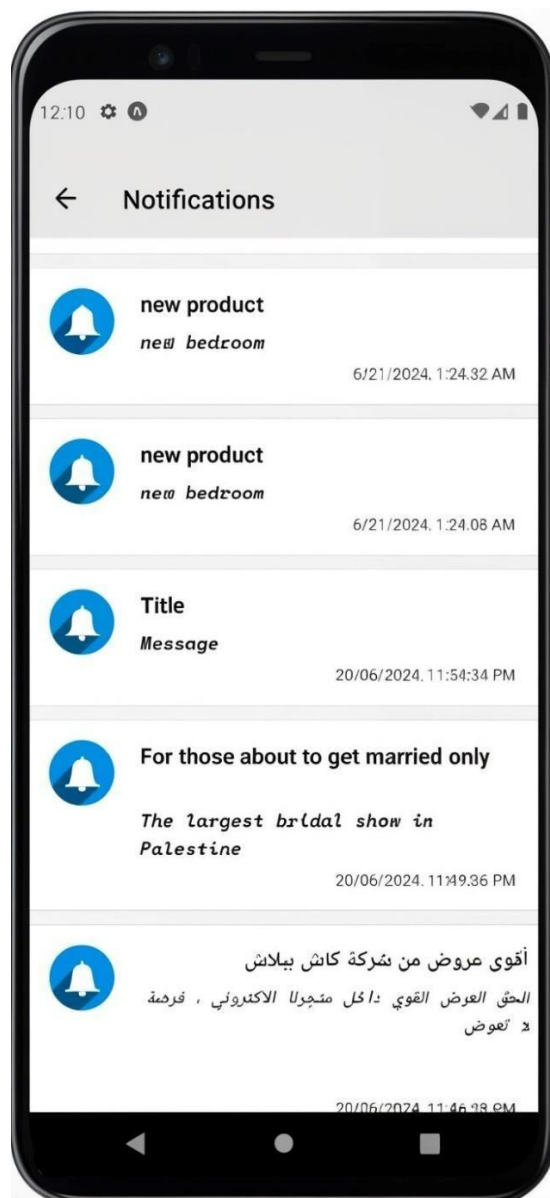
Figure 3.14: View All Users

### Adding a notification

The admin on this page sends notifications to all customers to inform them whether there is a new product, discounts, offers, or congratulations on an occasion. (see Figure 3.15a and 3.15b).



(a) Adding a new advisement or offer

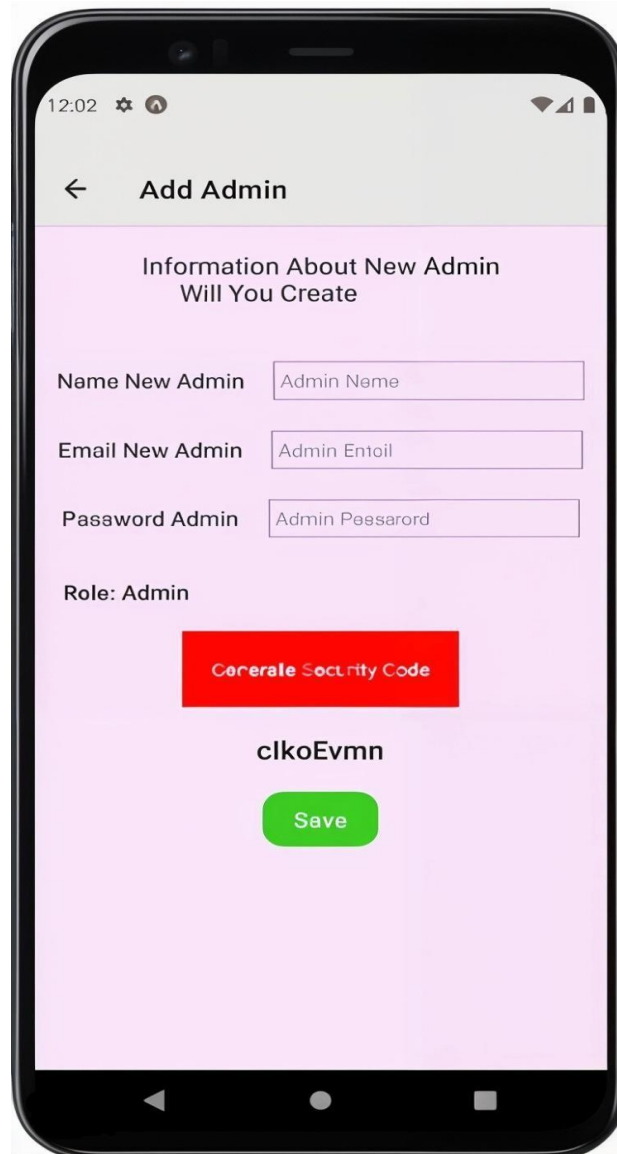


(b) User notifications side

Figure 3.15: Notification

## Adding a new admin

One of the admin's powers is to create an account for a new admin to help him manage the online store, where he enters the name, email, and new password, as well as a special code for the admin to give more security. The password and code are encrypted to provide security. (see Figure 3.16)



The screenshot shows a mobile application interface for adding a new admin. The title bar at the top reads "Add Admin" with a back arrow on the left. Below the title, the text "Information About New Admin Will You Create" is displayed. The form contains the following fields and elements:

- Name New Admin:** A text input field containing "Admin Name".
- Email New Admin:** A text input field containing "Admin Entoil".
- Pasaword Admin:** A text input field containing "Admin Pøssarord".
- Role:** A dropdown menu set to "Admin".
- Generate Security Code:** A red button.
- Security Code:** The code "clkoEvmn" is displayed below the button.
- Save:** A green button.

Figure 3.16: Add a New Admin

## Adding offers

Admin also can add a new offer

### 3.1.3 Cash Bblash departments

Cash Bblash has many departments from furniture to electronics and each one has a page.

## Bedrooms

This includes the Normal bedrooms and kids bedrooms section. In this page users can see all the available bedrooms. (As in figure 3.17 and 3.18).

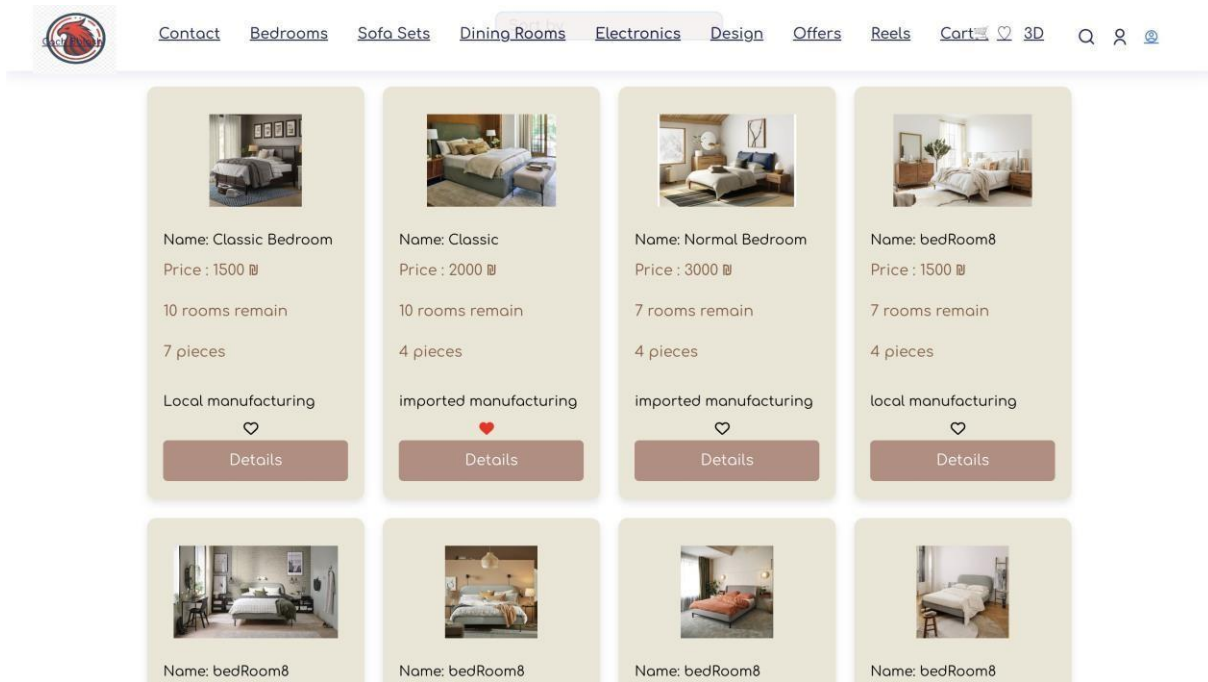


Figure 3.17: Big bedrooms

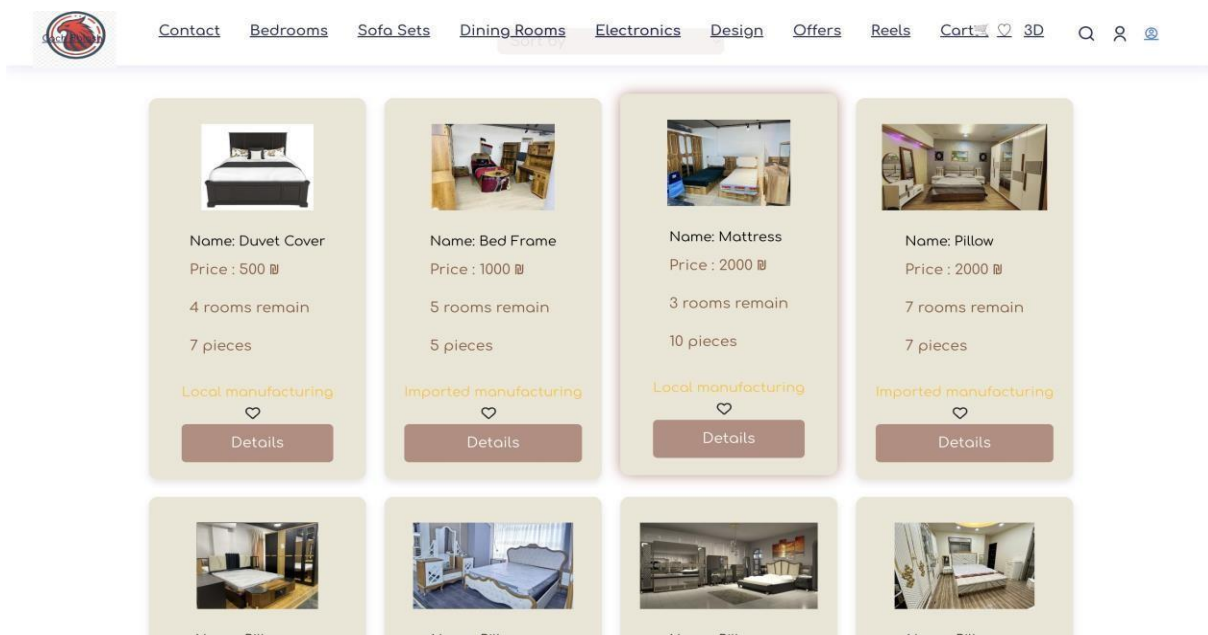
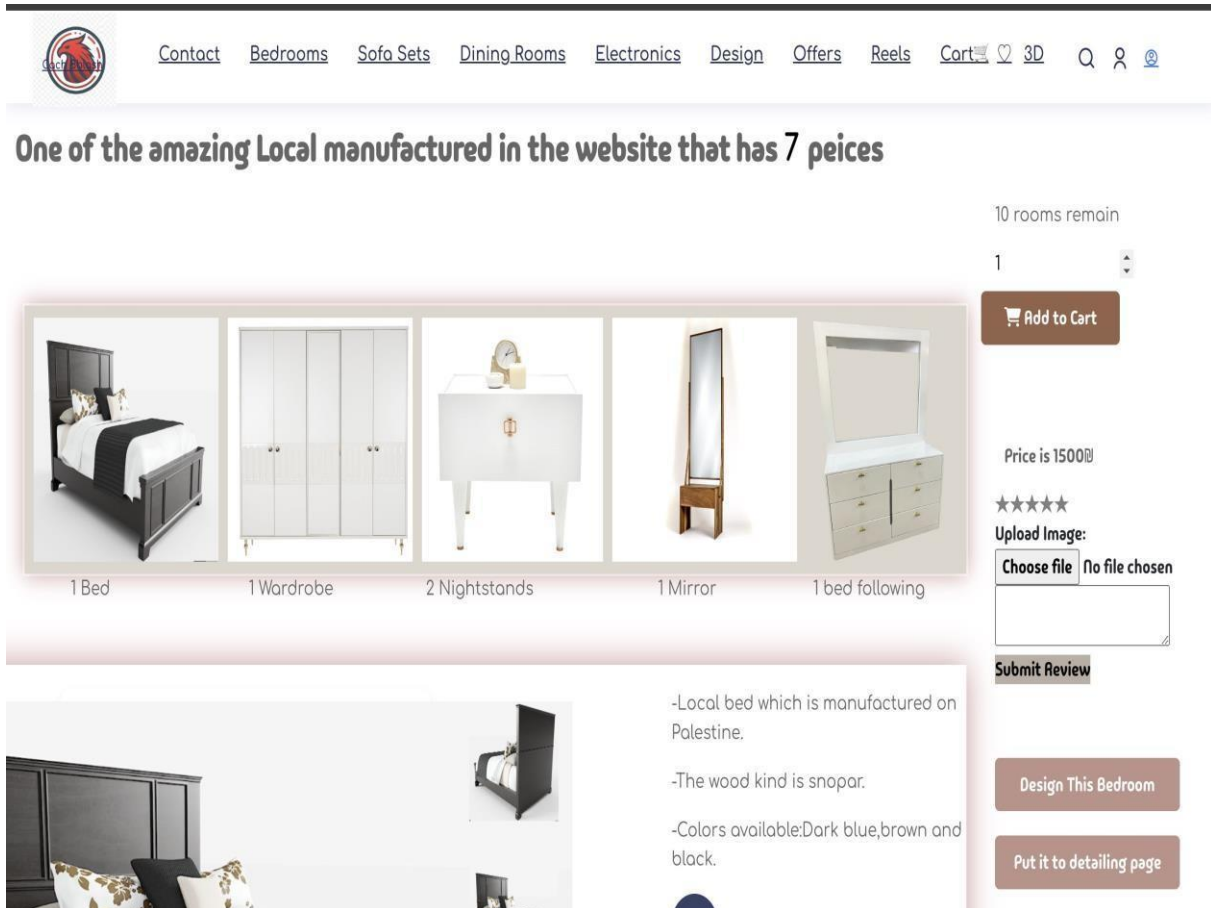


Figure 3.18: Kids bedrooms

### 3.1.4 Cash Bblash departments-Large Bedrooms

If the user clicks on details in any product of these bedrooms he will see all the info about the bedroom like number of pieces of each bedroom, wood kind, dimensions of each product, 3D model for each product, images for each piece and color available. First when the user clicks on the product the number of pieces and price, button to add to cart and review part (as seen in figure 3.19), then info. about each piece (as seen in



fig

Figure 3.19: Basic info. about the bedroom

Each piece has 5 images, when the user click on any it will be the main image and so on to see all the shape form more than one side (as shown in figure 3.21), he can also see the colors of the available piece, dimensions and description. Also he can see the each piece in 3D way! according to the color he choose. (As shown in figures 3.22 and 3.23). ures 3.20, 3.25, 3.26, 3.28, 3.30)



Click on the images on the right to see more Details.

-Local bed which is manufactured on Palestine.  
 -The wood kind is snopar.  
 -Colors available:Dark blue,brown and black.

Dark Blue  
 Dark Brown  
 Black

width : 2000cm, high: 2000cm,length:2000cm

Pick the color you want to see the changes!  
 U can see the 3d model of you chosen product to see all it's details.


Submit Review

Design This Bedroom

Put it to detailing page

3D

Figure 3.20: Piece no.1



Click on the images on the right to see more Details.

-Local bed which is manufactured on Palestine.  
 -The wood kind is snopar.  
 -Colors available:Dark blue,brown and black.

Dark Blue  
 Dark Brown  
 Black

width : 2000cm, high: 2000cm,length:2000cm

Pick the color you want to see the changes!  
 U can see the 3d model of you chosen product to see all it's details.

Submit Review

Design This Bedroom

Put it to detailing page

3D

Figure 3.21: Piece no.1 in another way



Figure 3.22: 3D model of piece 1- Brown color

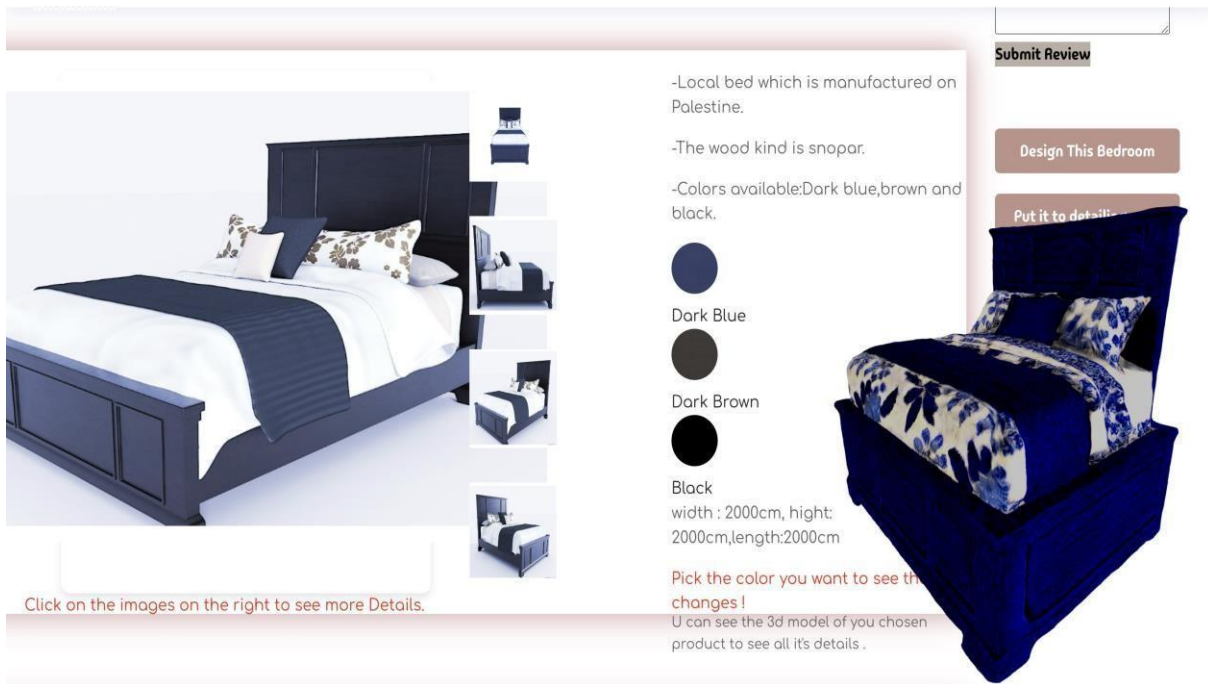
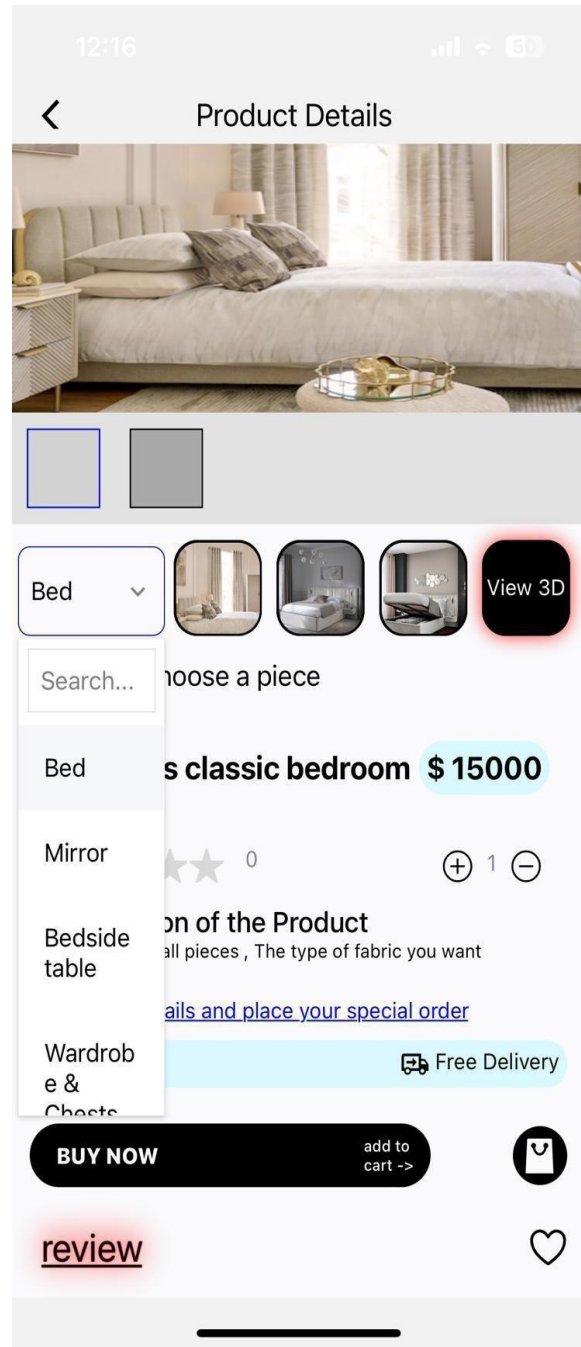


Figure 3.23: 3D model of piece 1- Blue color Also in the mobile are the same feature !See figure 3.24a and 3.24b .



(a) 3D model -mobile side



(b) Product viewing -mobile side

Figure 3.24: Mobile-side

The same features are applied to other pieces including 3D models



Figure 3.25: Piece no.2



Figure 3.26: Piece no.3

When we click on 3D button it will show the 3D model of the piece as shown in figure 3.27



Figure 3.27: 3D model of piece 3

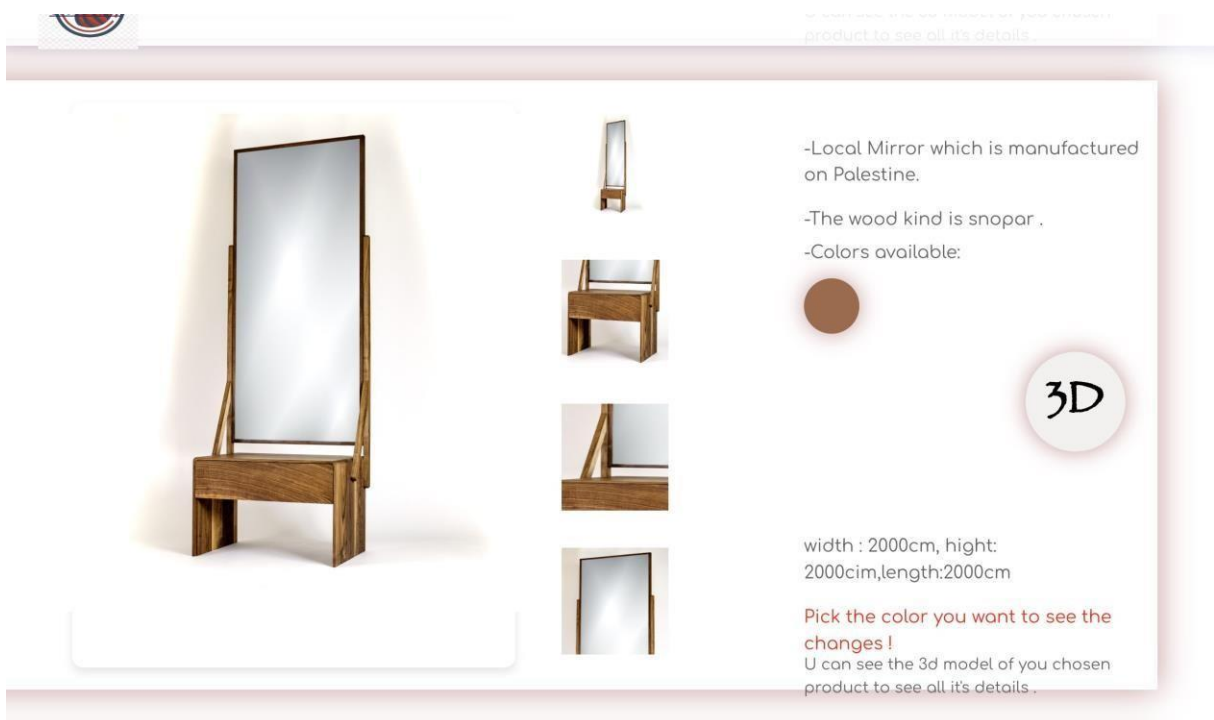


Figure 3.28: Piece no.4

When we click on the 3D button it will show the 3D model of the piece as shown in figure 3.29.

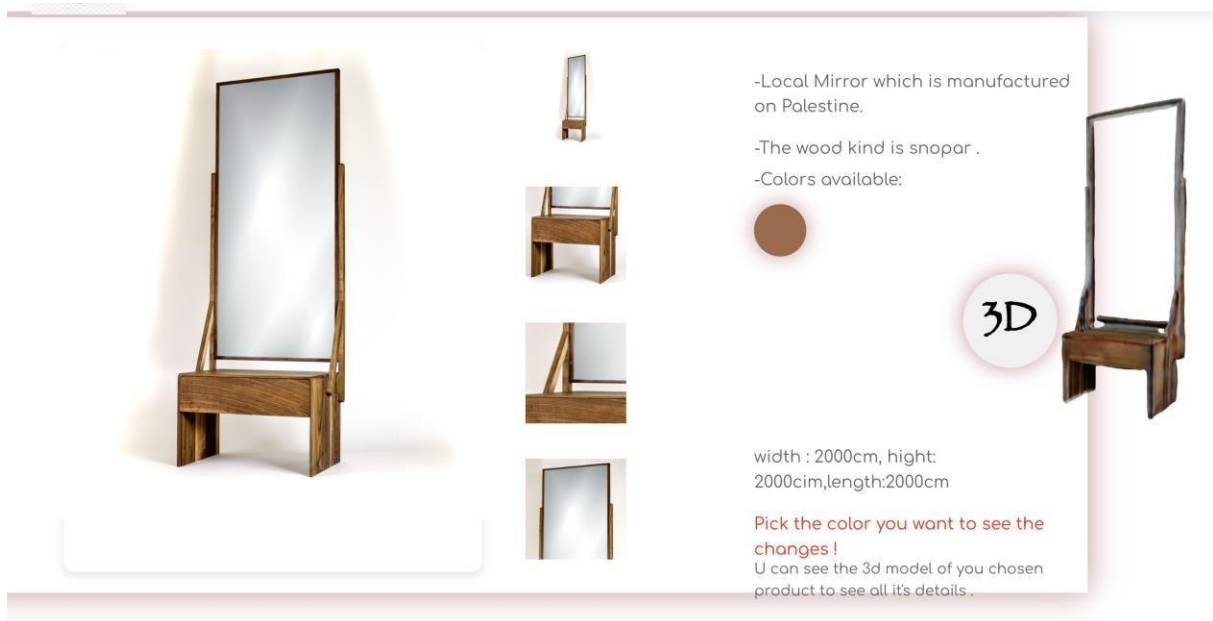


Figure 3.29: 3D model of piece 4



Figure 3.30: Piece no.5

When we click on the 3D button it will show the 3D model of the piece as shown in figure 3.31.

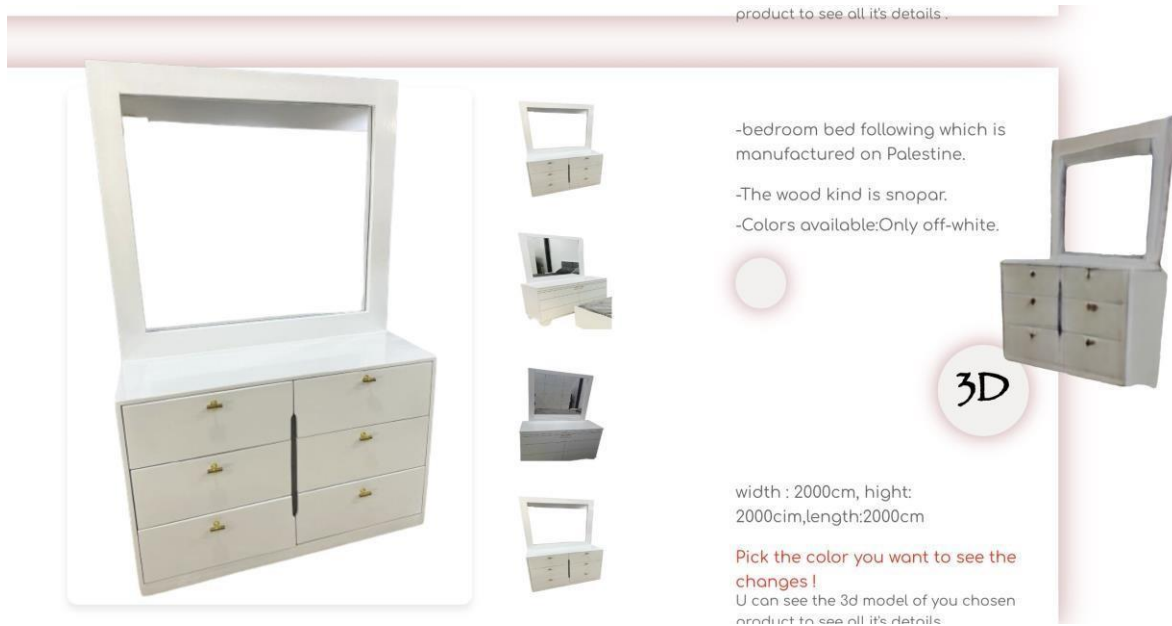


Figure 3.31: 3D model of piece 5

### 3.3.7 Cash Bblash departments-kids Bedrooms

The same features as the large bedrooms.

### 3.38 Designing page

User can design this chosen furniture(product)after clicking the design this bedroom button ;in a default room and reorder the pieces in the order he wants(as shown in figure 3.33 and 3.34) ! And upload his floor and wall photos to test the product as it's in his room(as shown in figure 3.35 )which he can move the room as he wants by mouse and zoom in or out, he also can open the camera to see how the pieces are in his real room!(as shown in figure??).As shown in the figure 3.32 is the default page for designing and all the controlling buttons on it also like after choosing the piece we want to move we can move it up,down,left,right,rotate by 3 axis's x,y,z!

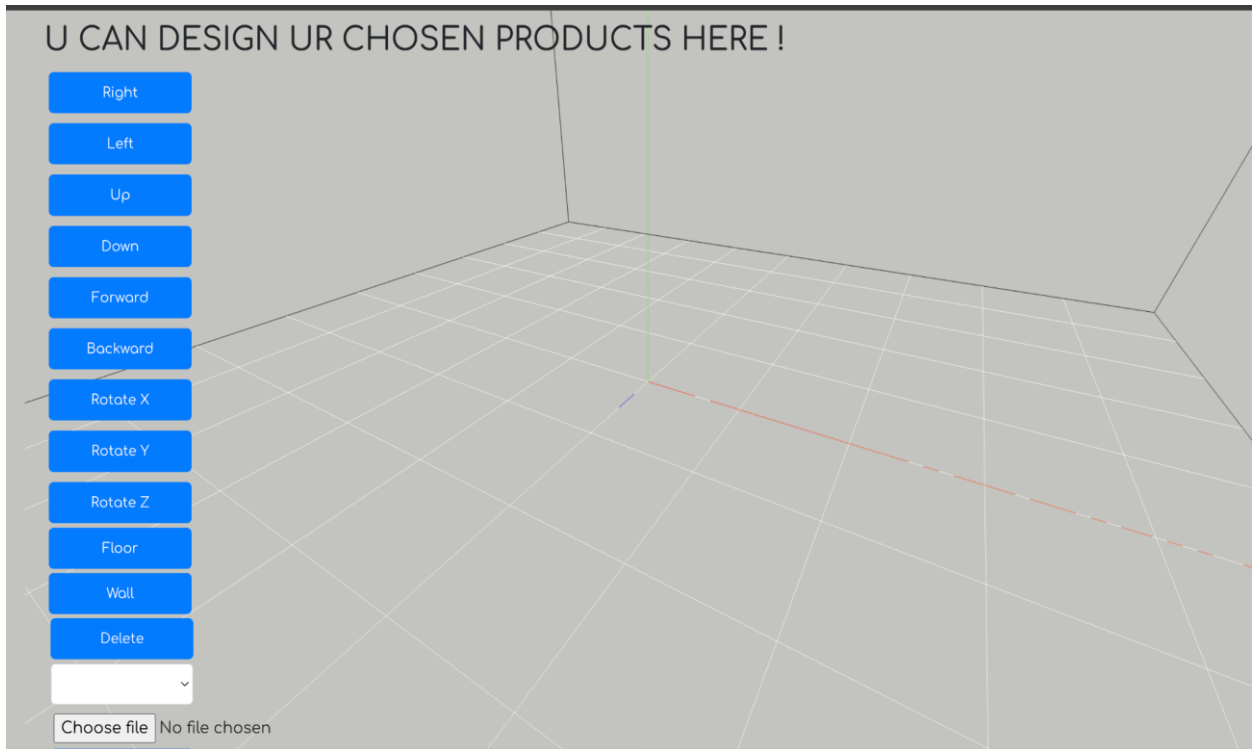


Figure 3.32:Default page for designing.

As shown in Figure 3.32 there are many buttons for controlling the movements of each piece like Forward ,backward ,right, left,up and down and to move it around the 3 axis's x,y,z. The user can upload any 3d model he wants to try it in this room!(See figure 3.36 and 3.37) He can also convert any image to 3D using AI as will be shown in later slides.

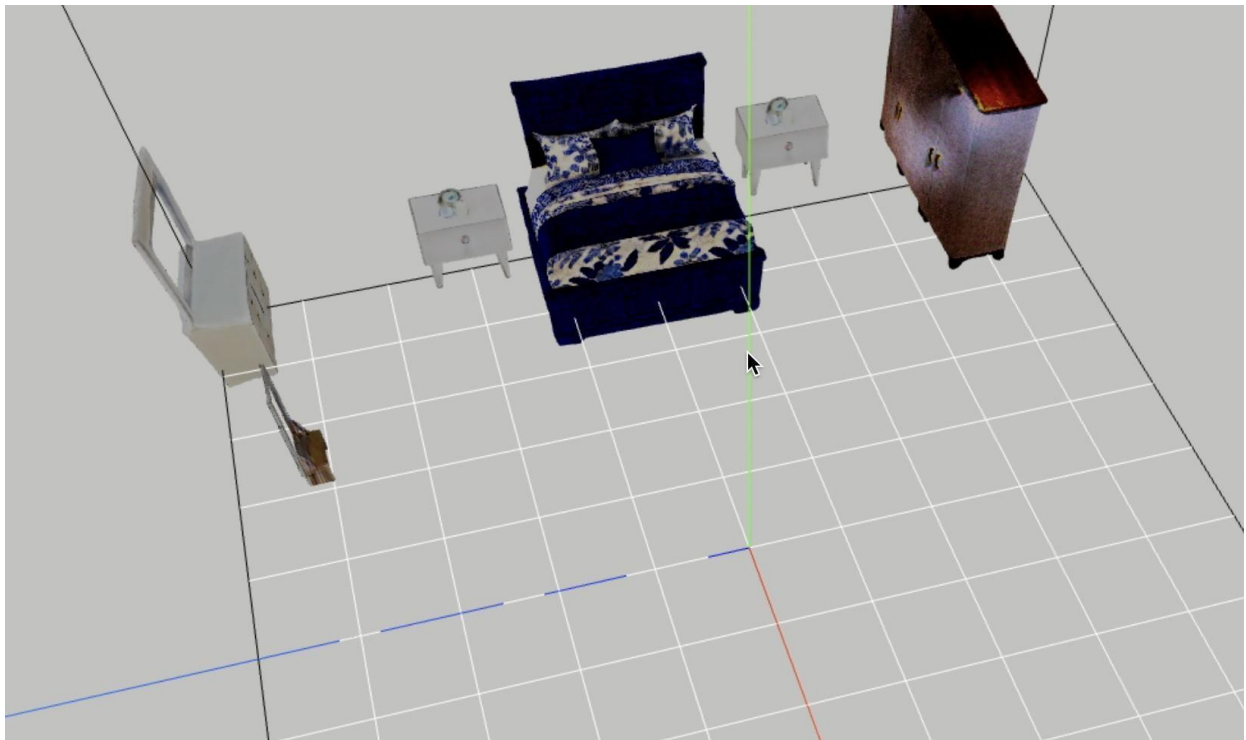


Figure 3.33

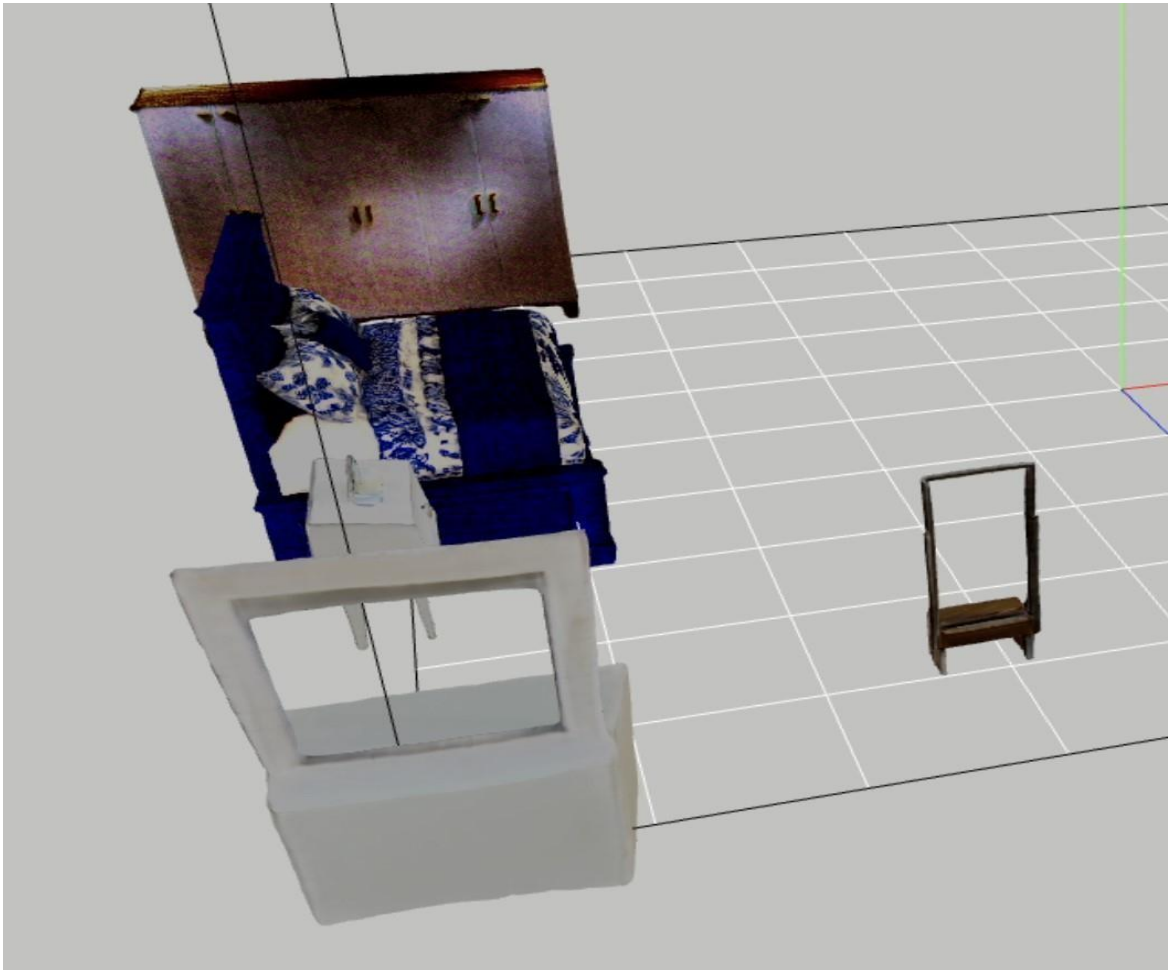


Figure 3.34

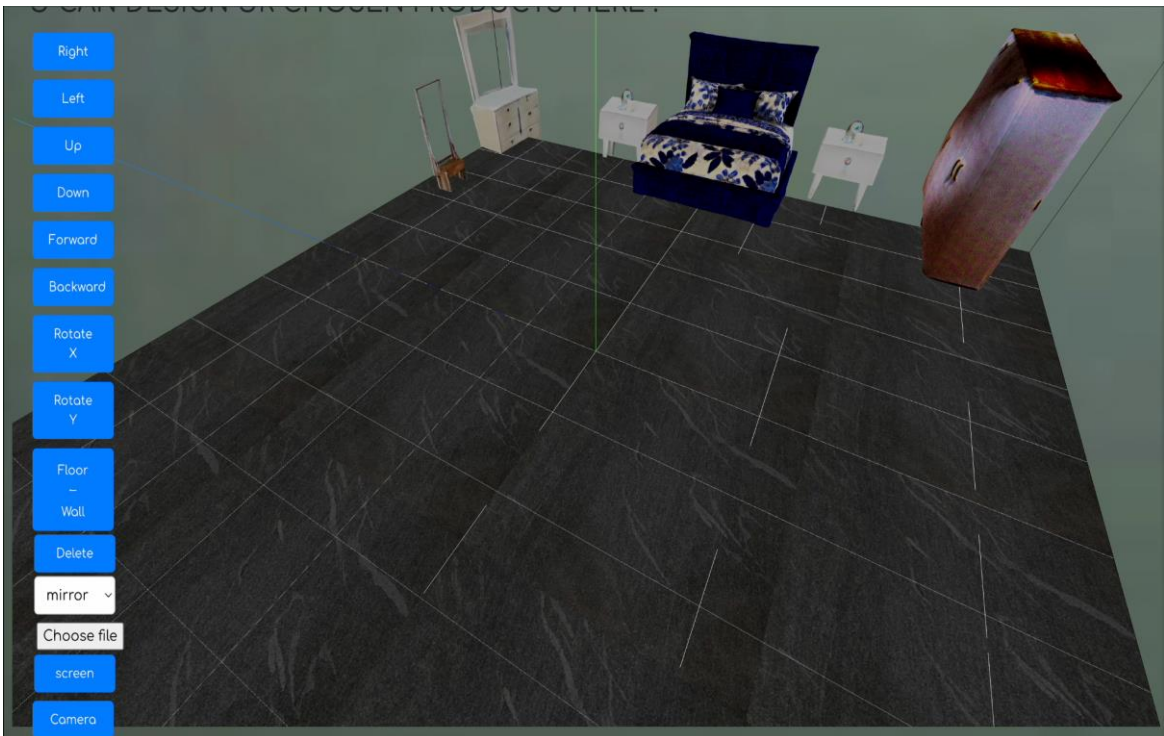


Figure 3.35:uploading from the upload input the floor and walls images related to the user room.

The user can upload any 3d model he wants to design it in the designing page where the 3D model has the .gltf or .glb extensions!(see figures 3.36,3.37)

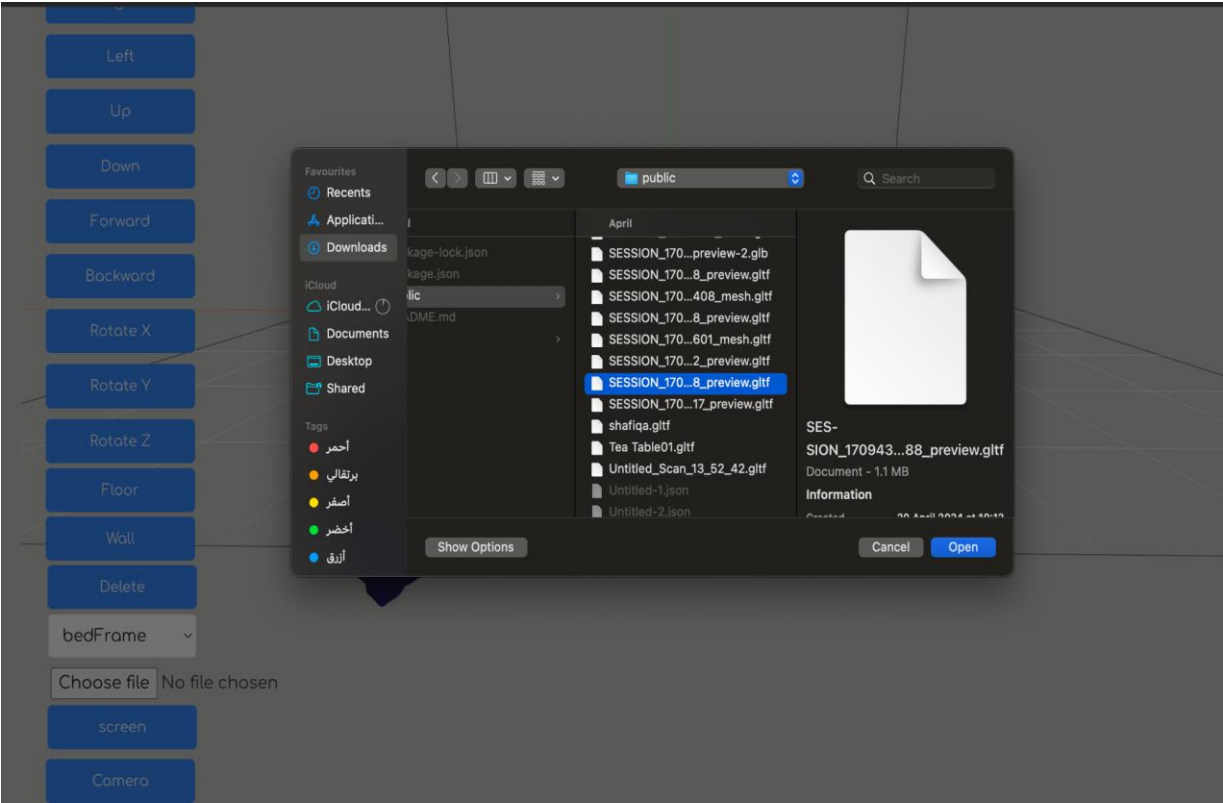


Figure 3.36:Uploading the model



Figure 3.37:Model uploaded ready to design

### 3.3.9 Customizing page


When the user in the bedrooms page click on the Customizing button (detailing button) the user can customize the dimensions he want regardless of the fixed one in the institution (For every additional fifty cm (50 cm), 100 ₪ will be added to the price). See figures 3.38, 3.39.

## Classic Bedroom - bedroom

Price: 1500 ₪


Number of Pieces: 7

For every additional fifty cm (50 cm), 100 ₪ will be added to the price




Original Dimensions: W: 80 cm, L: 150 cm, D: 50 cm

cm (W)  cm (L)  cm (D)



Original Dimensions: W: 50 cm, L: 110 cm, D: 30 cm


cm (W)  cm (L)  cm (D)




Original Dimensions: W: 50 cm, L: 110 cm, D: 30 cm

cm (W)  cm (L)  cm (D)

Figure 3.38




cm (W)  cm (L)  cm (D)



Original Dimensions: W: 50 cm, L: 110 cm, D: 30 cm

cm (W)  cm (L)  cm (D)



Original Dimensions: W: 50 cm, L: 110 cm, D: 30 cm

cm (W)  cm (L)  cm (D)

[Save Changes and Add to Cart](#)

Figure 3.39

User can put the dimensions he wants and when he puts it in the cart, the admin will see the new dimensions in the order and in the cart.

### 3.3.10 Cash Bblash departments-Kids Bedrooms

The same feature as the before section (Large Bedrooms).

### 3.3.11 Cash Bblash departments-Sofa Sets

User can see all the available products of sofa sets as figure 3.40:

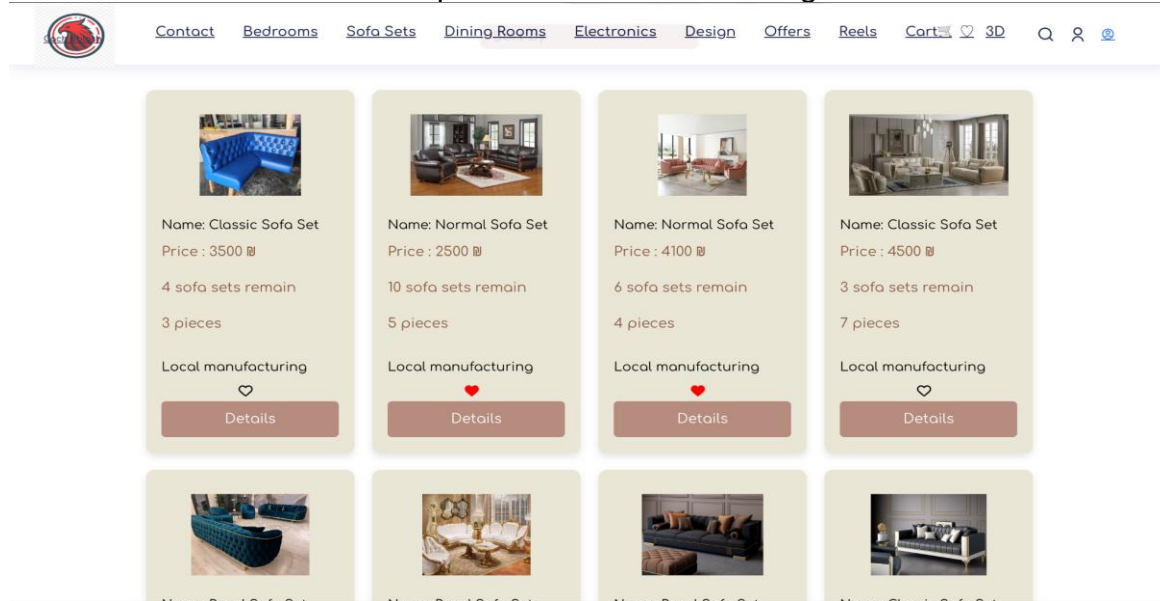


Figure 3.40 : available sofa sets products

When the user clicks on details he will see all the details about sofa sets ,including 3D models and put to design page and customization page as shown in figures (3.40,3.41,3.42,3.44,3.45).

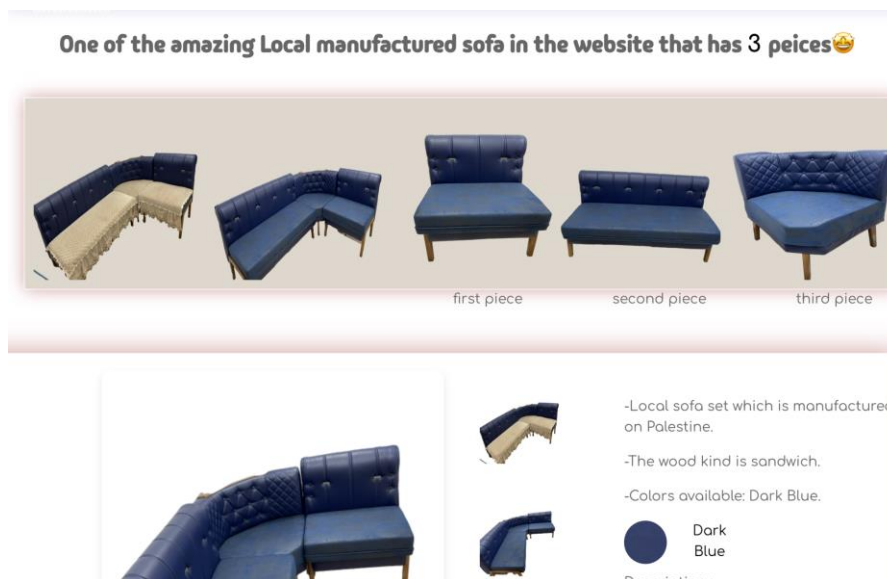



Figure 3.41 : available sofa sets products

-Local sofa set which is manufactured on Palestine.

-The wood kind is sandwich.

-Colors available: Dark Blue.

 Dark Blue

Description :



width : 2000cm

high: 2000cm

length:2000cm

**Pick the color you want to see the changes !**  
 U can see the 3d model of you chosen product to see all it's details .

Figure 3.42 : Product information (sofa set).

Description :

width : 2000cm

high: 2000cm

length:2000cm

**Pick the color you want to see the changes !**  
 U can see the 3d model of you chosen product to see all it's details .




Figure 3.43 :Piece 1 and 3D model button to show it.

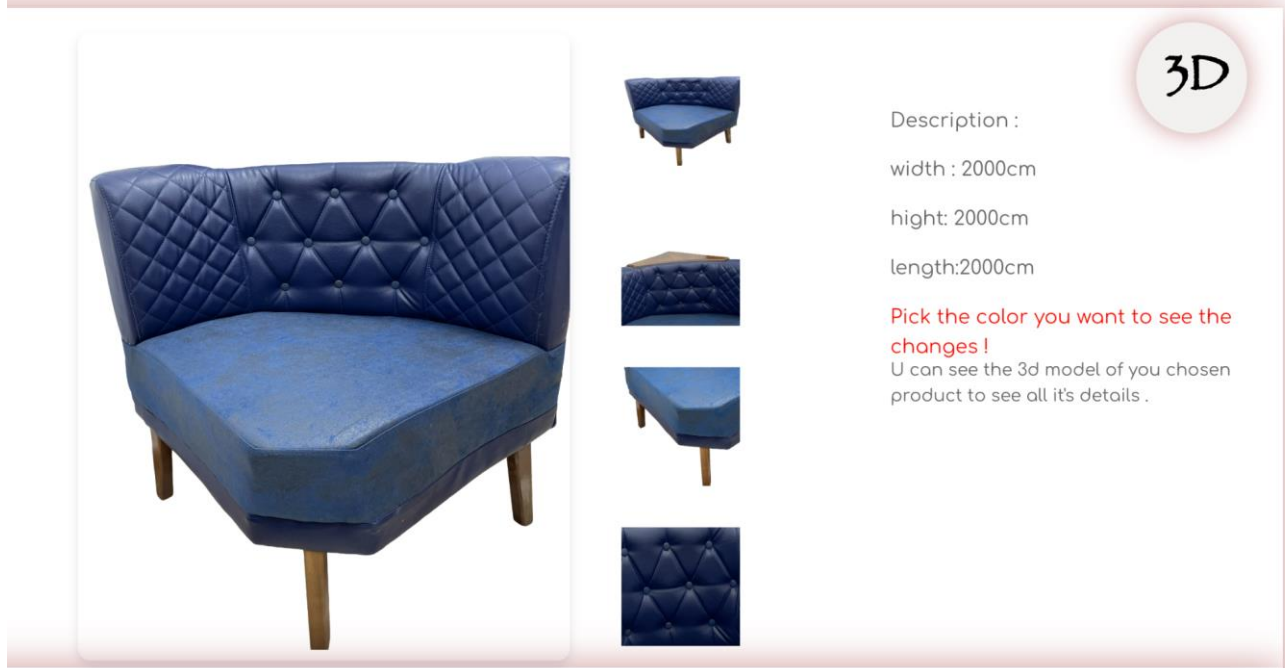


Figure 3.44 :Piece 2 and 3D model button to show it.

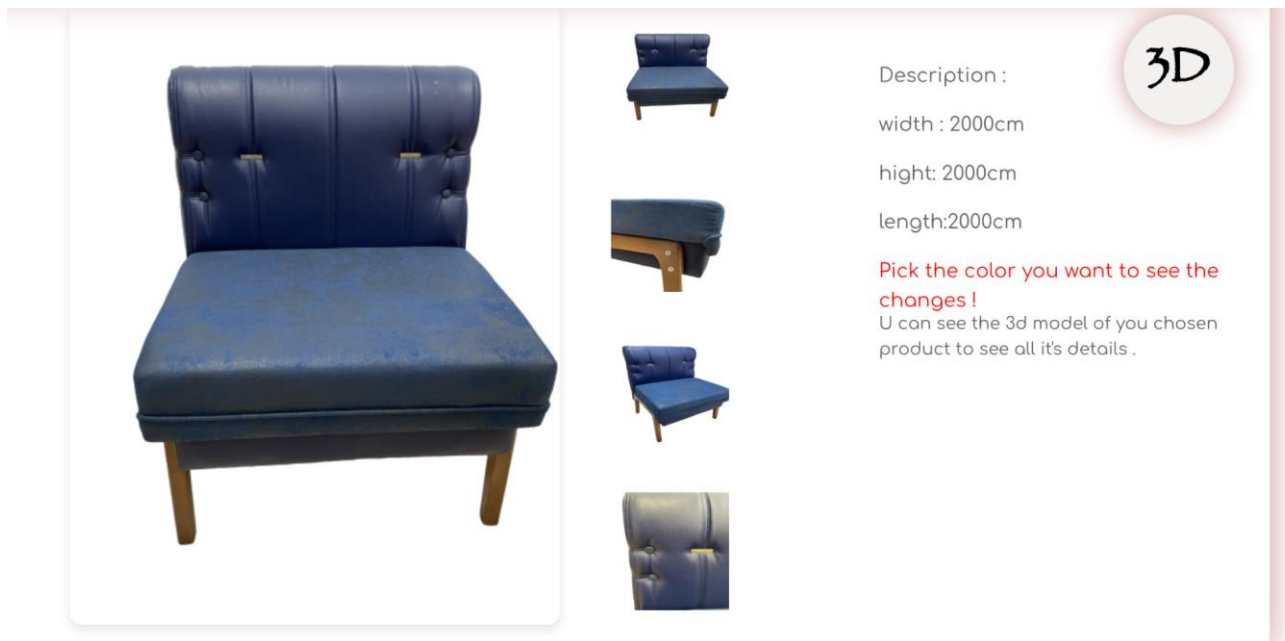


Figure 3.45 :Piece 3 and 3D model button to show it.

### 3.3.12 Cash Bblash departments-Dining rooms

The same feature as the previous sections ( Bedrooms and sofa sets).

### 3.3.13 Cash Bblash departments-Electronics

There are many sections in this department like :fridges,washing machines,blenders,air fans and other electronics,as shown in figure 3.46.

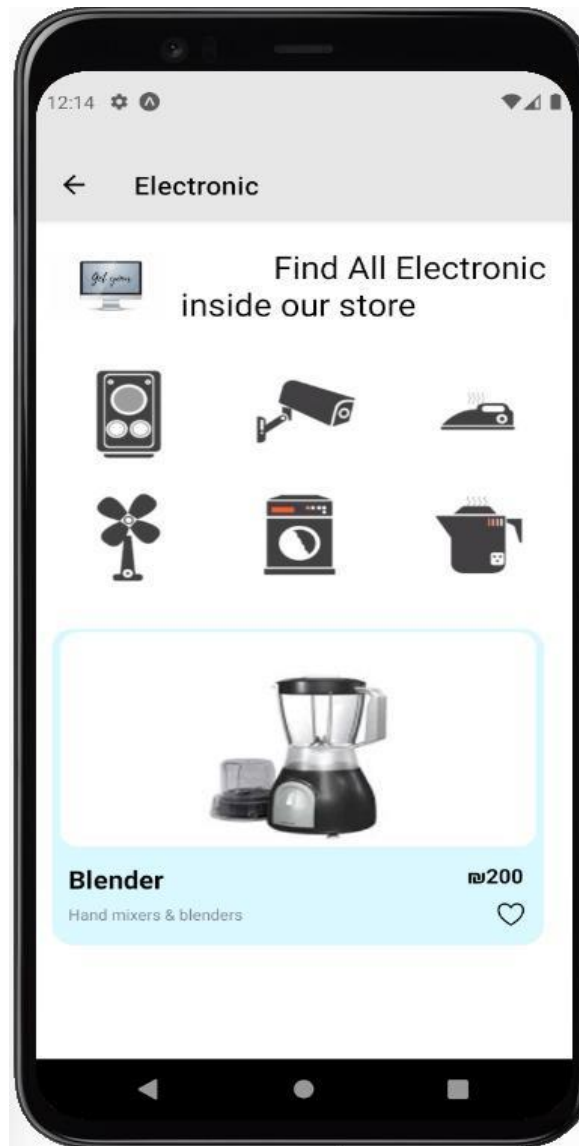


Figure 3.46 :Electronics page

Also this page has the same features for the last pages but without the 3D,users can buy it ,put it to their favorite,and show it.

### 3.3.14 Favorites page

User can put any product he wants to favorite page which allows him to decide which products to choose as shown in figures 3.47 ,3.48,3.49.



Figure 3.47

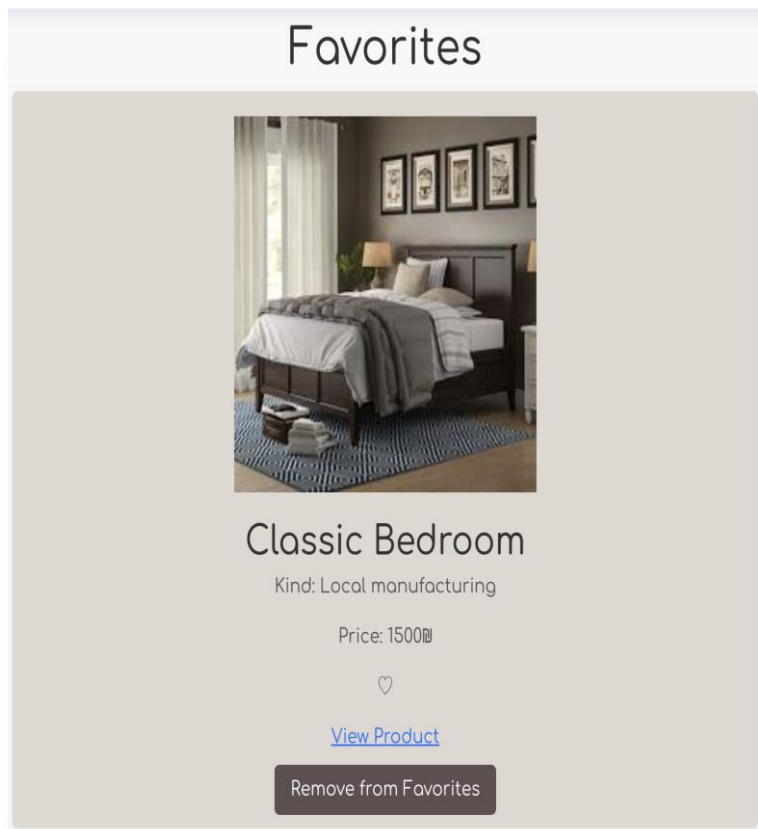


Figure 3.48: Product after added to favorites

Users also in the favorites page can remove the product from the favorites page.



Figure 3.49

From the mobile side also the user can put the product to their favorites page.

### 3.3.15 Offers Page

Admin can add any offer as explained above then these offers will be displayed for users as shown in figure 3.50.

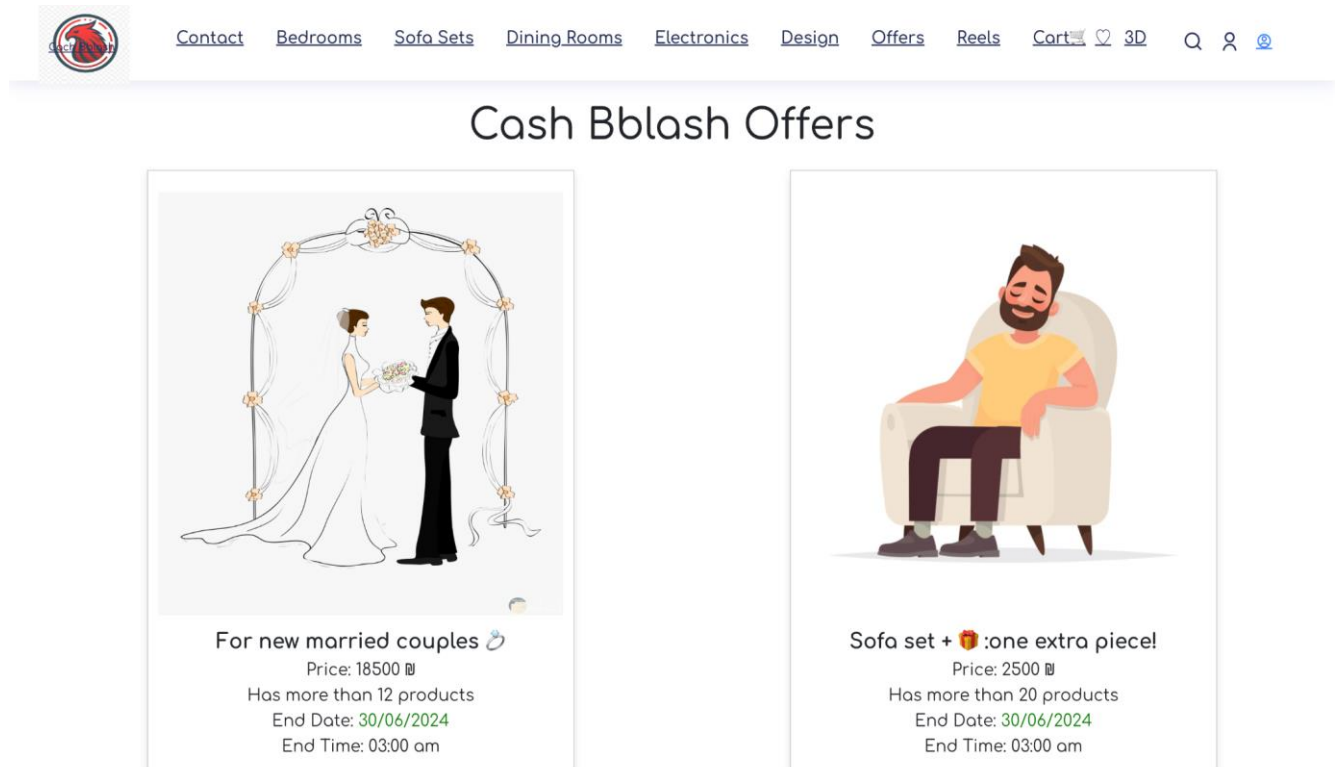


Figure 3.50 :Offers page

User can select any offer he wants as shown in figure 3.51 and click on view details to see the offers information more specifically.

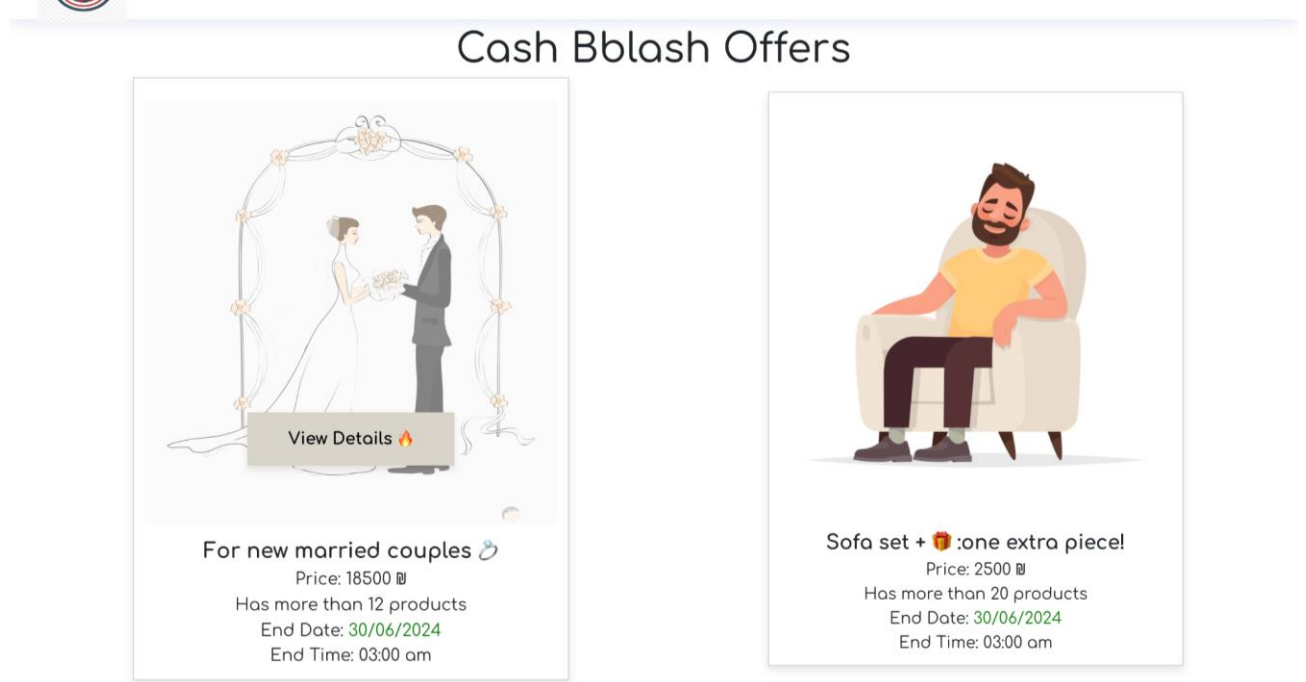


Figure 3.51 :Offers page-2

When the user clicks on view details for any offer all the information about the offer will be shown like price,offer products,end date ,start date of the offer,images for each product and more information about each product in the offer.(As shown in figures 3.52,3.53,3.54).

## Are you getting Married ? this offer is for you ! This offer Has more than 12 products

Price: 18500 ₪

End Date: 30/06/2024

End Time: 03:00 am

[Click on this link to can see the reel related to this offer!](#)

[Click on each product to know more details about it!](#)

Add to Cart 



Dining room



Bed room



Oven

Figure 3.52 : showing the products of the offer and images of them.



Sofa set 1



Sofa set 2



TV



Microwave



iron



Washing machine

Figure 3.53 : showing the products of the offer and images of them.

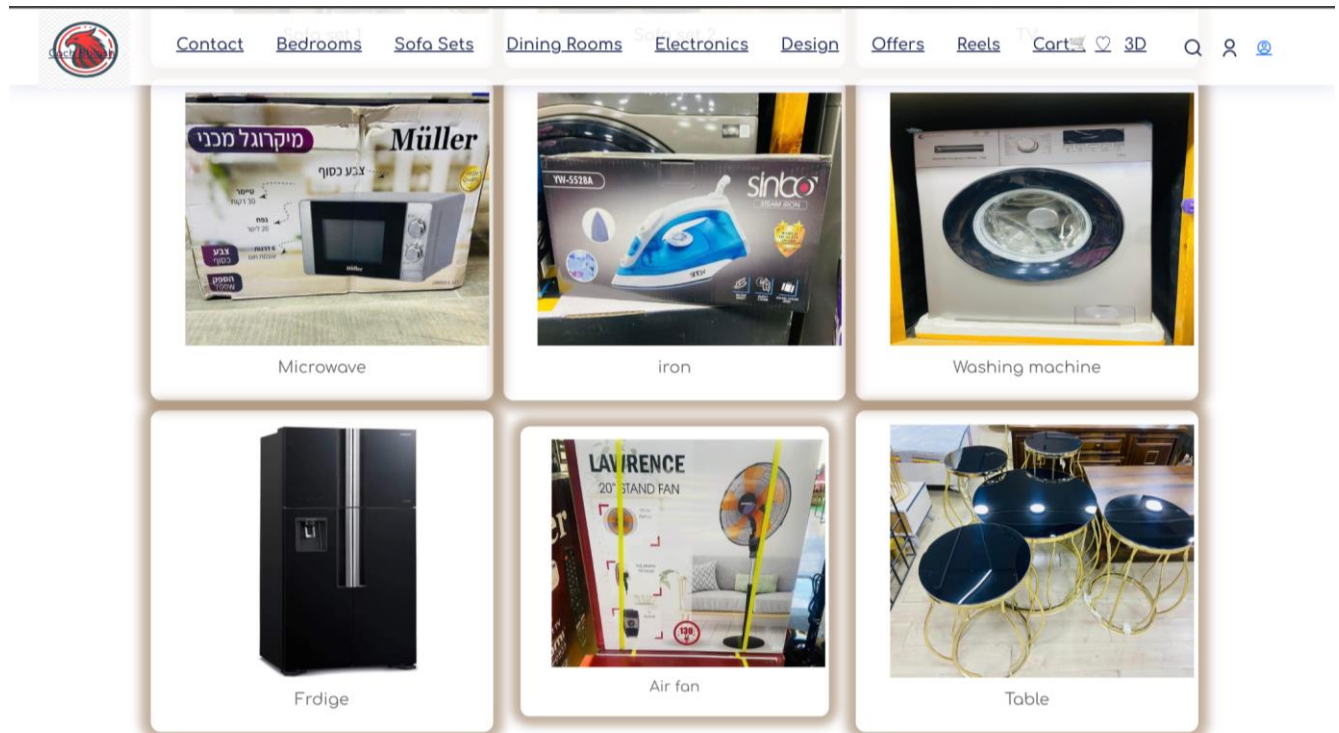


Figure 3.54 : showing the products of the offer and images of them.

When we click on any product it will appear in all the images of this product to give more details as shown in figure 3.55.

Select a color:



Figure 3.55 : showing the products of the offer and images of them.

When the user clicks on any image of the chosen product in the offer it will zoom out to show it more clearly.as shown in figure 3.56.

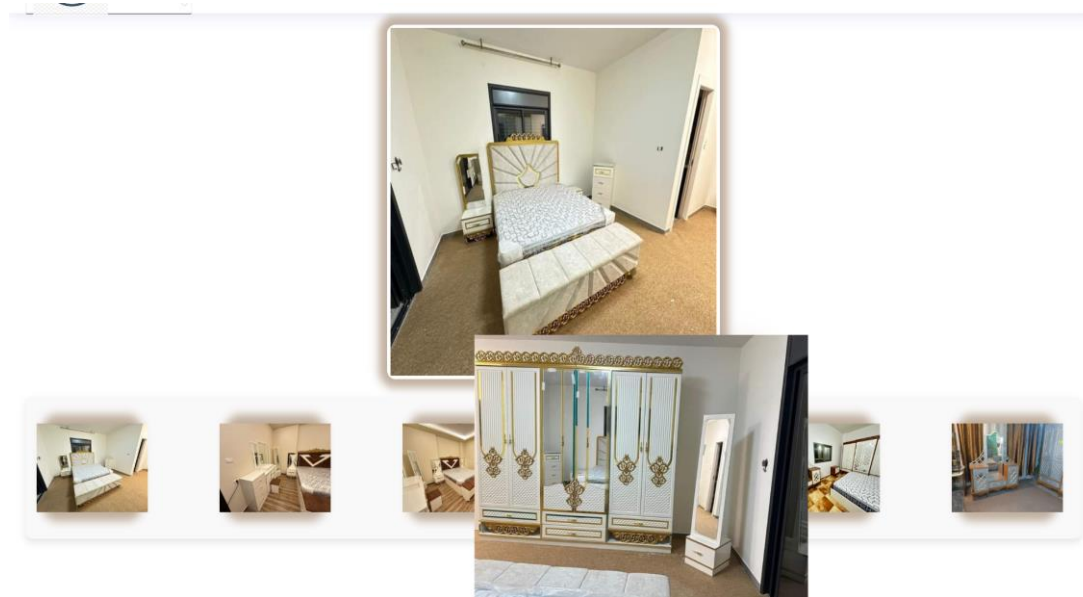
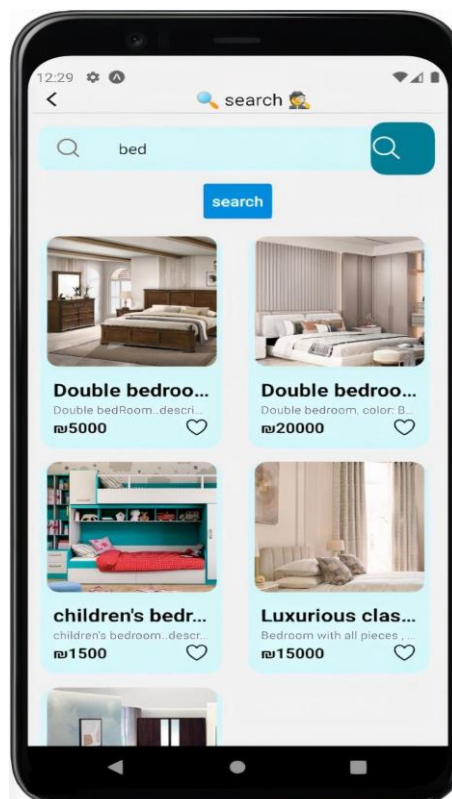


Figure 3.56 : showing the products of the offer and images of them.

And also the user can see if the reel of the offer in the company.As will be shown in the coming slides.

### 3.3.16 Searching on products page

User can search on any product in the store by product name or description of the product.



### 3.3.17 Sorting the products page

Users can sort the products according to the price and the kind of the manufacturing, as shown in figures 3.56, 3.57.

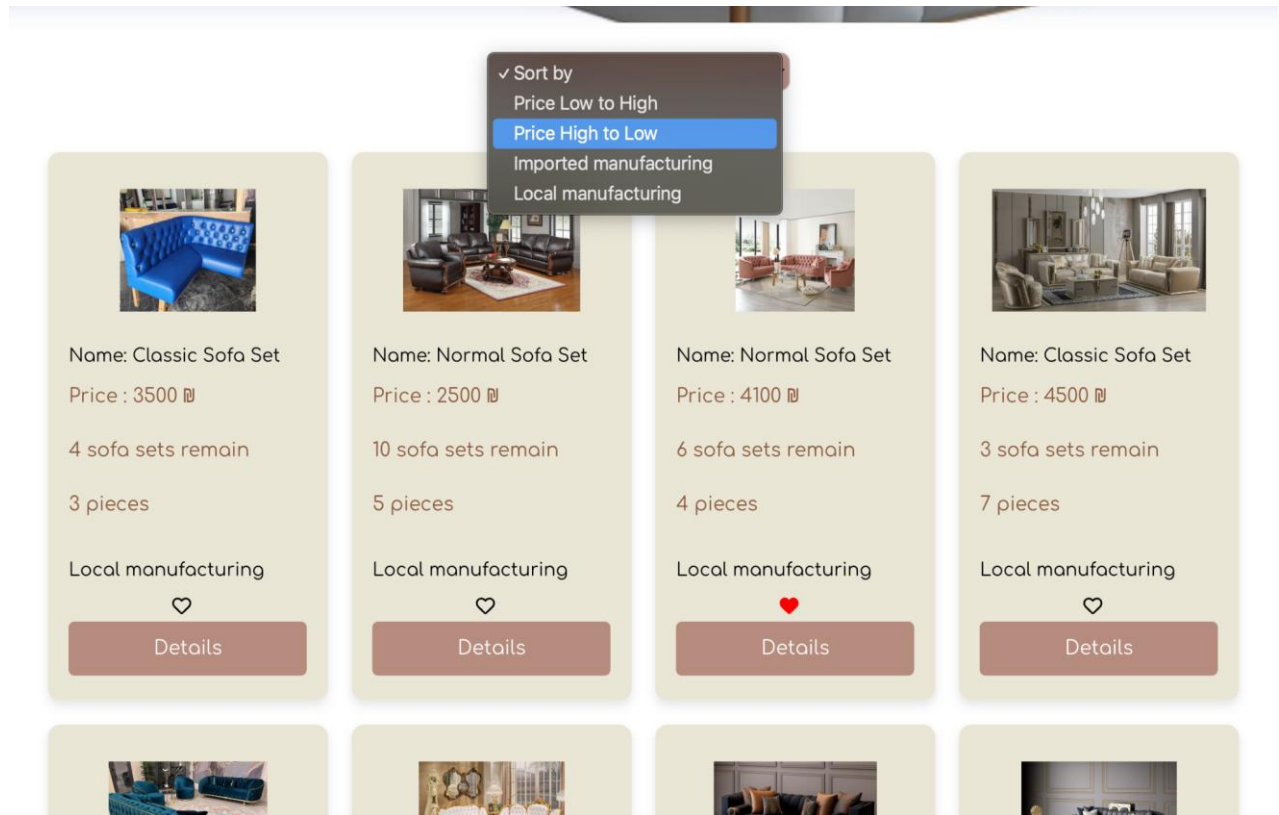


Figure 3.56 : showing the sorting choices for the product.

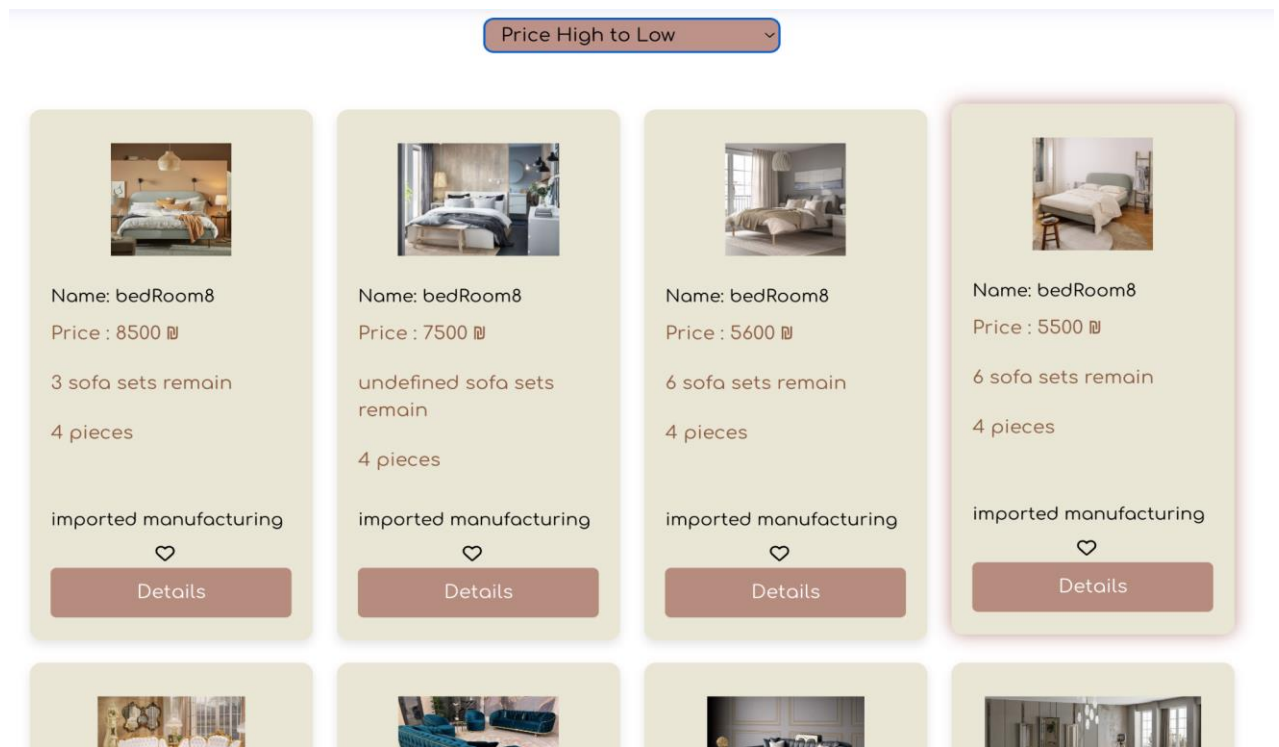


Figure 3.56 : Products after sorting according to the price.

### 3.3.18 Cart Page

Users can buy any product in the store and put it in the cart to buy the whole order.

Users can also put the customized products to cart!(as shown in figures 3.57,3.58,3.59).

Also in the cart users can choose any of the buttons for assistant whether messaging the admin or contacting the institution.

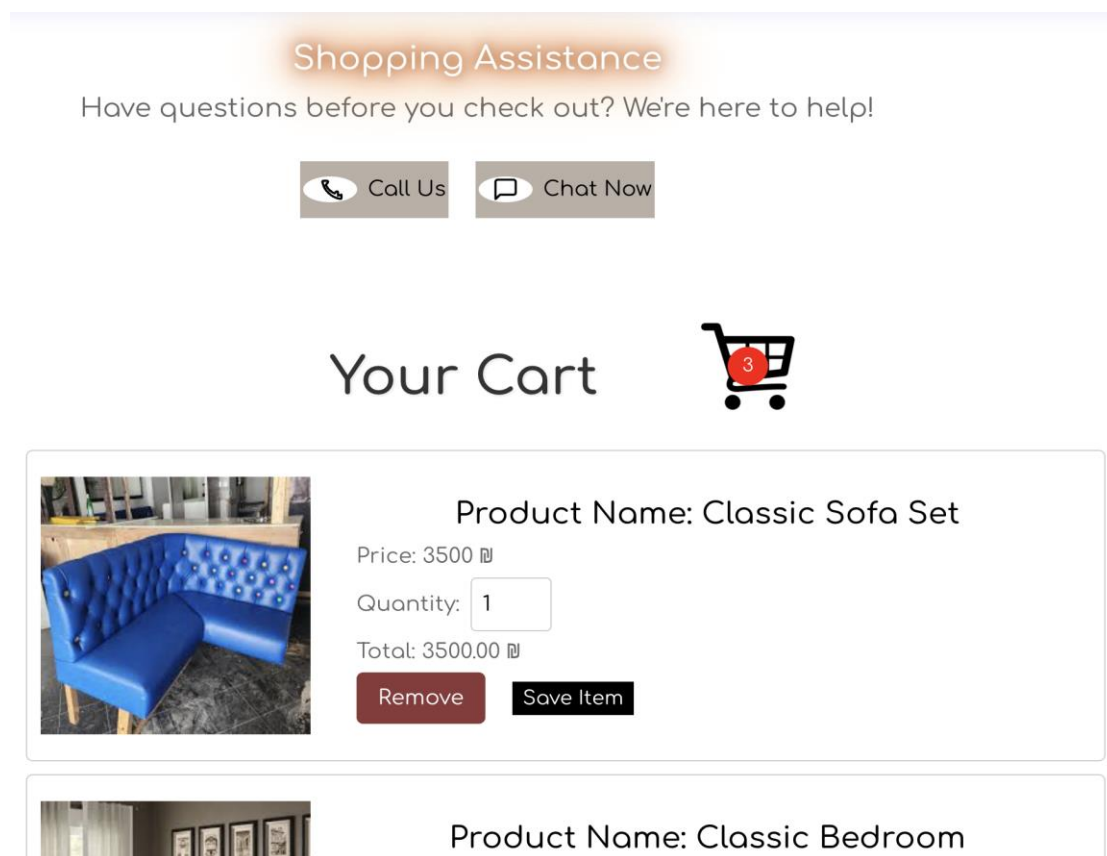



Figure 3.57 : Products after added to cart.

**Product Name: Classic Bedroom  
(Customized)**

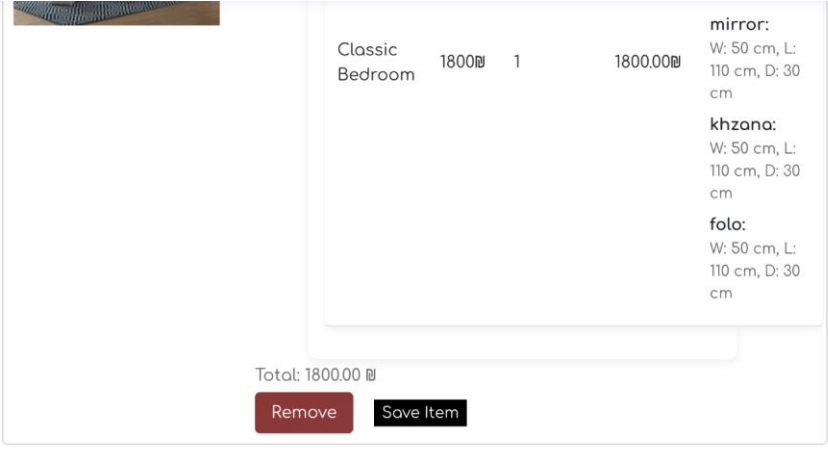
Price: 1800 ₪

Quantity:



| Item             | Price  | Quantity | Total     | Dimensions  |
|------------------|--------|----------|-----------|---|
| Classic Sofa Set | 3500 ₪ | 1        | 3500.00 ₪ | Real price  |
| Classic Bedroom  | 1500 ₪ | 1        | 1500.00 ₪ | Real price  |
| Classic Bedroom  | 1800 ₪ | 1        | 1800.00 ₪ | <b>img1:</b><br>W: 200 cm, L: 150 cm, D: 50 cm<br><b>comedena1:</b><br>W: 50 cm, L: 110 cm, D: 30 cm<br><b>mirror:</b><br>W: 50 cm, L: 110 cm, D: 30 cm |

Figure 3.58 : Products after added to cart including customized products.




|                 |        |   |           |   |
|-----------------|--------|---|-----------|---|
| Classic Bedroom | 1800 ₪ | 1 | 1800.00 ₪ | <b>mirror:</b><br>W: 50 cm, L: 110 cm, D: 30 cm<br><b>khzana:</b><br>W: 50 cm, L: 110 cm, D: 30 cm<br><b>folo:</b><br>W: 50 cm, L: 110 cm, D: 30 cm |
|-----------------|--------|---|-----------|---|

Total: 1800.00 ₪

[Remove](#) [Save Item](#)

Total Cart Value: 6800.00 ₪

Payment Methods 

User can buy his order by clicking on the visa as shown in the payment page section.

mobile side:

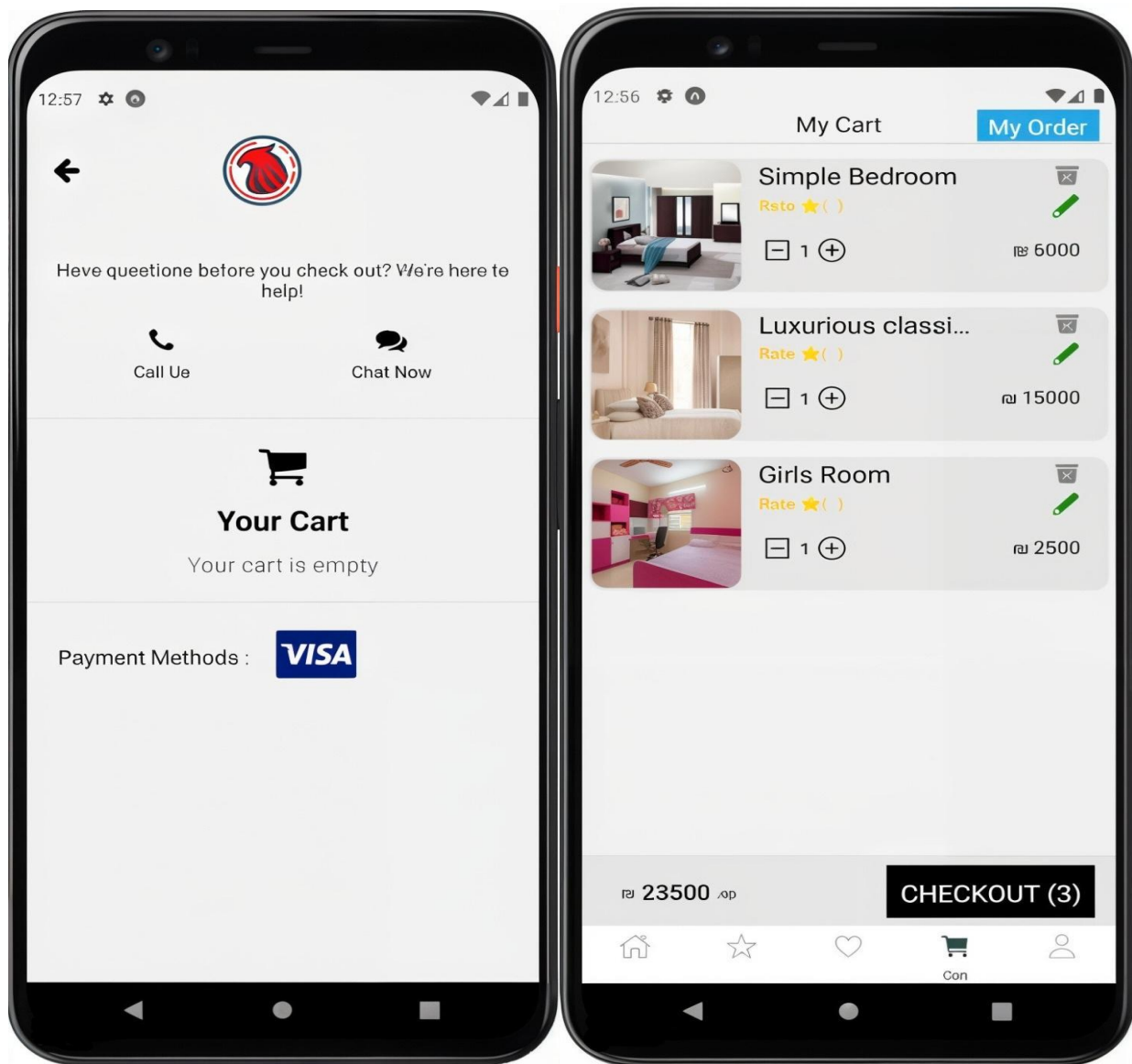


Figure 3.59 :mobile side for order and cart.



Thanks for choosing us ! Your cart just has been bought,check the messages from admin of arrival day + check ur profile to know the date! Have a nice day.



Here you can keep checking the date of your order arriving

Go

INVOICE HISTORY:

Figure 3.62 : Order successfully paid and admin will put the date of arrival as clarified in the admin section.

### 3.3.20 Sold out products

When any product is sold out it will appear to the user as shown in figure 3.63 .

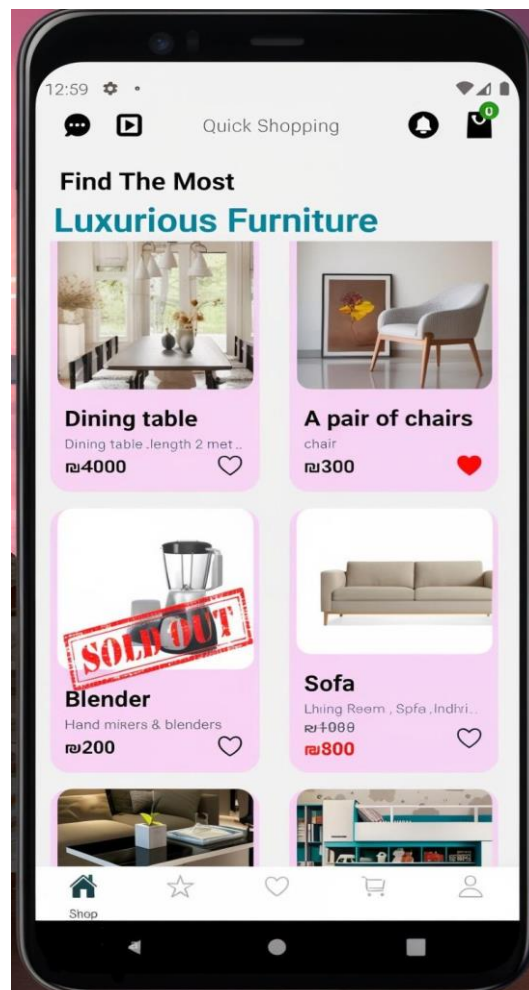


Figure 3.63:Blender is sold out

3.3.21 New arrival products

Users in the homepage can see the newly added products to the store as shown in figure 3.64.

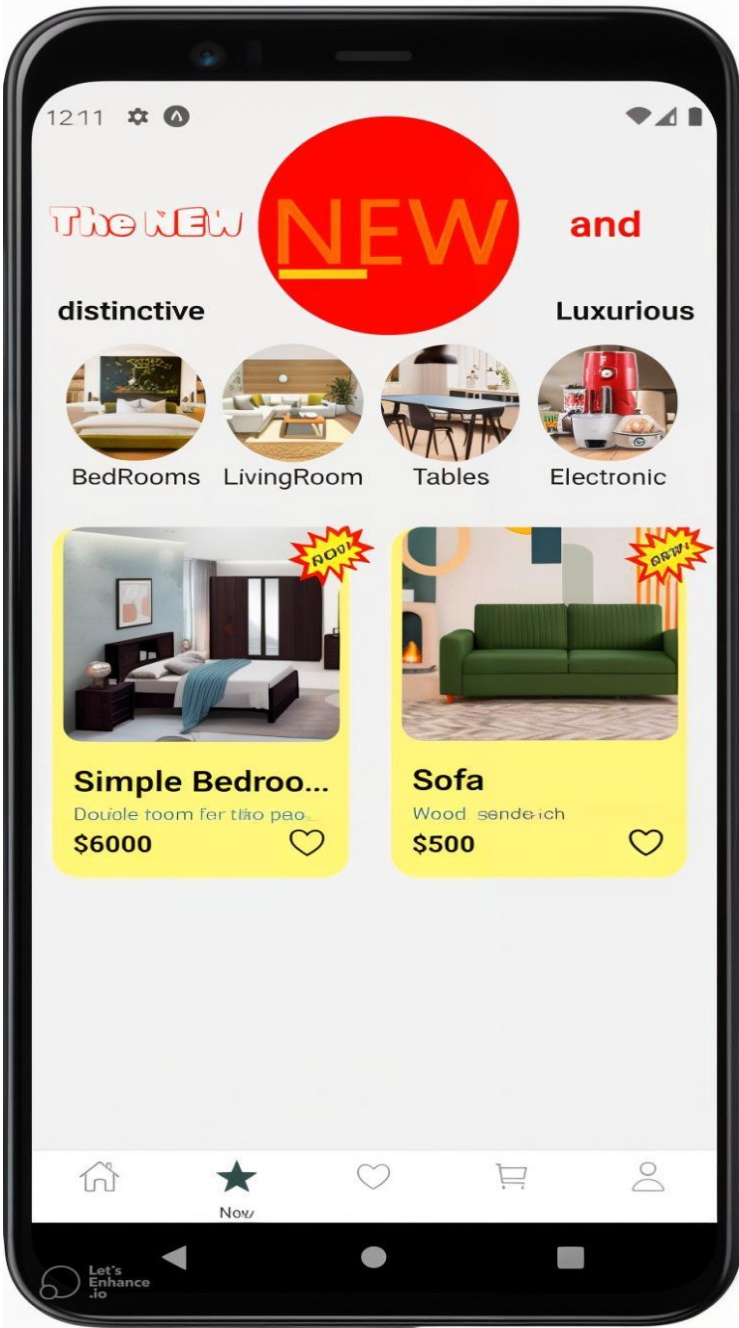


Figure 3.64:New arrival products.

### 3.3.21 Reviewing

Users can review any product he wants after buying it by putting a comment ,reviewing stars and uploading image.As shown in figure 3.65.

★★★★★

**Upload Image:**

**Choose file** templmageGomwyV.png

**it's a great sofa set , i  
really recommended it!**

**Submit Review**

★★★★★

Shafiq15:it's a great  
sofa set , i really  
recommended it!



Figure 3.65:Reviewing by users.

### 3.3.22 Detailing Page

User can detail his own model as he wants using available boxes like in figure 3.67.

He can choose the box he wants and start making a new model as he wants by many movements reight ,left , up and down including insert spaces.As in figure 3.68.

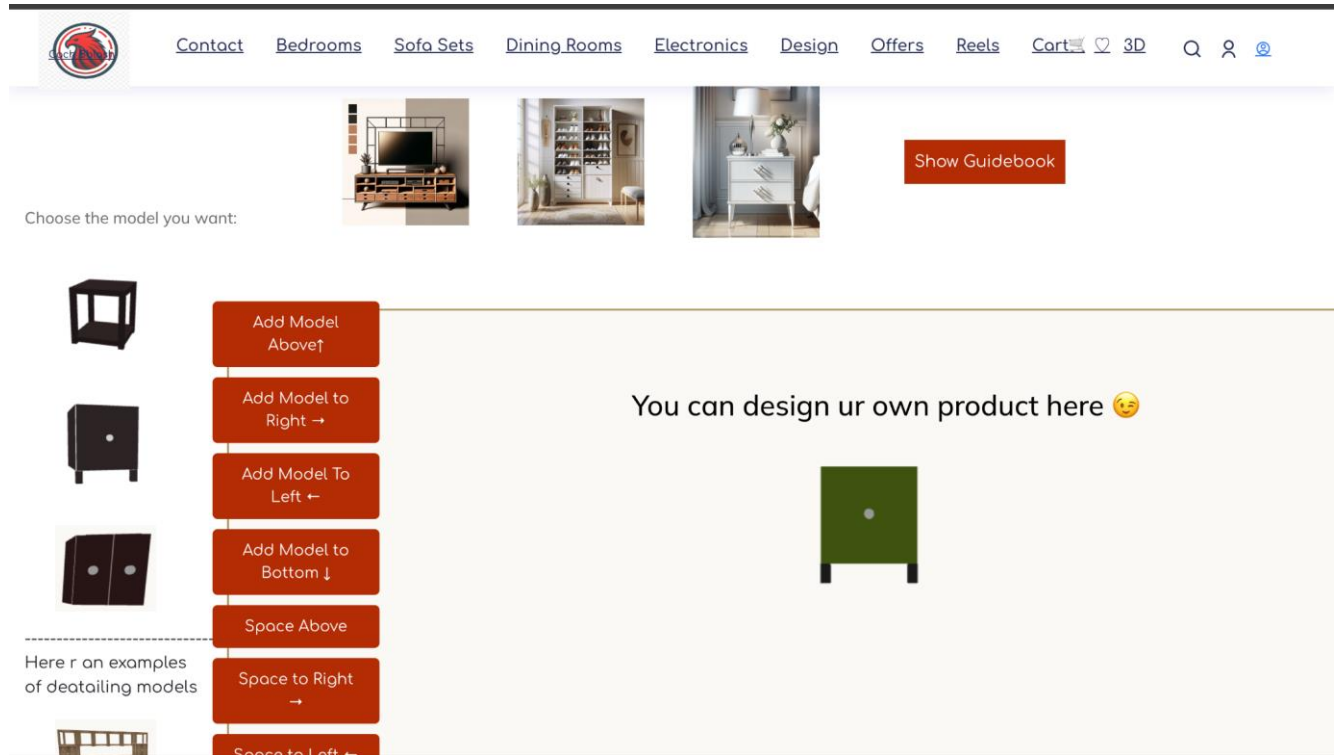


Figure 3.67: Detailing page showing the boxes available and the place for designing.

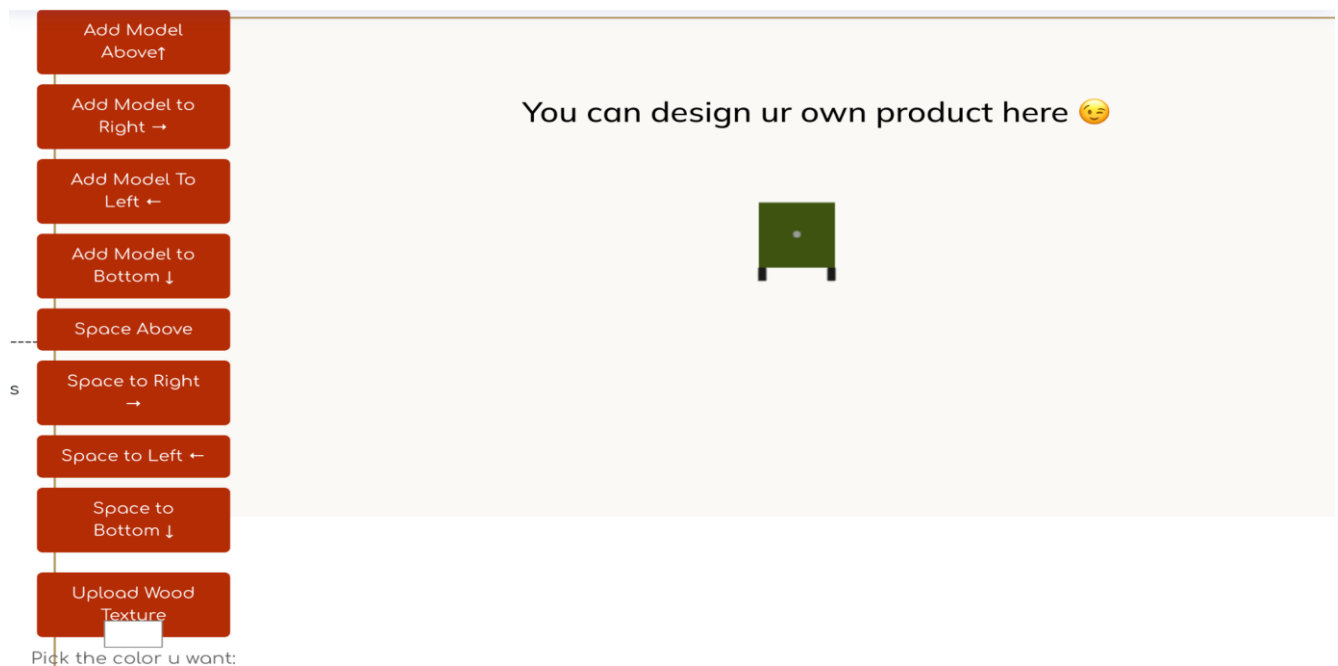


Figure 3.68: Showing the movements for starting designing.



After creating the model the user will put more info about the model he created to make the admin later decide the price via messaging. As shown in figure 3.71.

First 2 inputs for width and height and third one for any description then the user uploads the image of his created design.

oe:

2 meters

1.5 meters

i want each closed box to be 200 cm.

\*please upload ur design screenshot to be saved

Choose file Screenshot 2...-25 at 19.34.54

Save Design Message Admin

Figure 3.71: User adding more info. for the created design.

After that the created design will be saved in his own space in this page to show the admin the created design and determine the price. As shown in figure 3.72.

shafiq'a's Saved Designs

Design #1  
Width: 2 meters m x Height: 1.5 meters m  
Description: i want each closed box to be 200 cm.  
Color: #3b2b2b

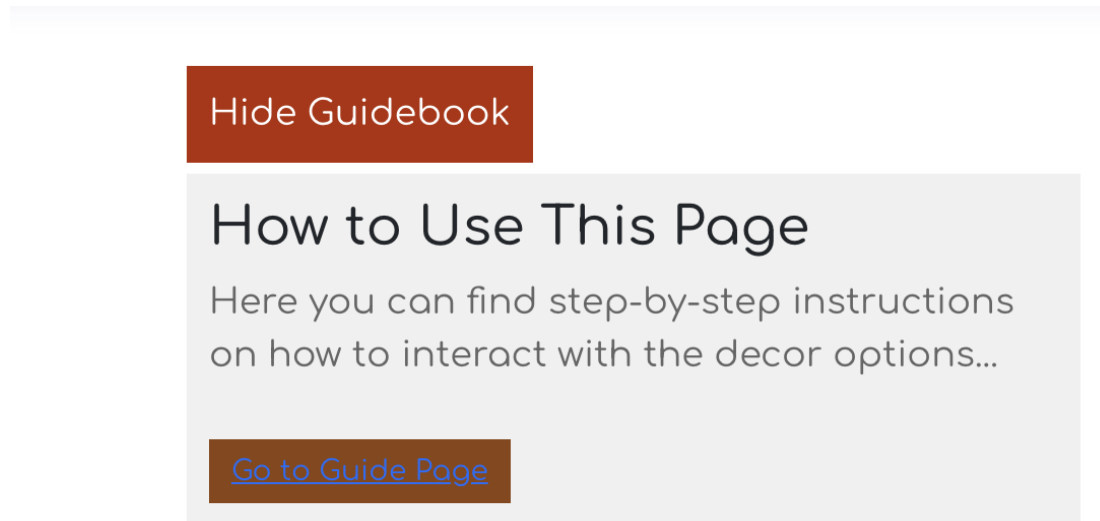
Wood texture

Design image

Delete

Figure 3.72: Saved designs

There is also a guidebook for using this page as shown in figure 3.73.



### 3.3.24 Design Guidebook Page:

This page shows how the user can use the design page as shown in figures 3.74,3.75,3.76,3.77.

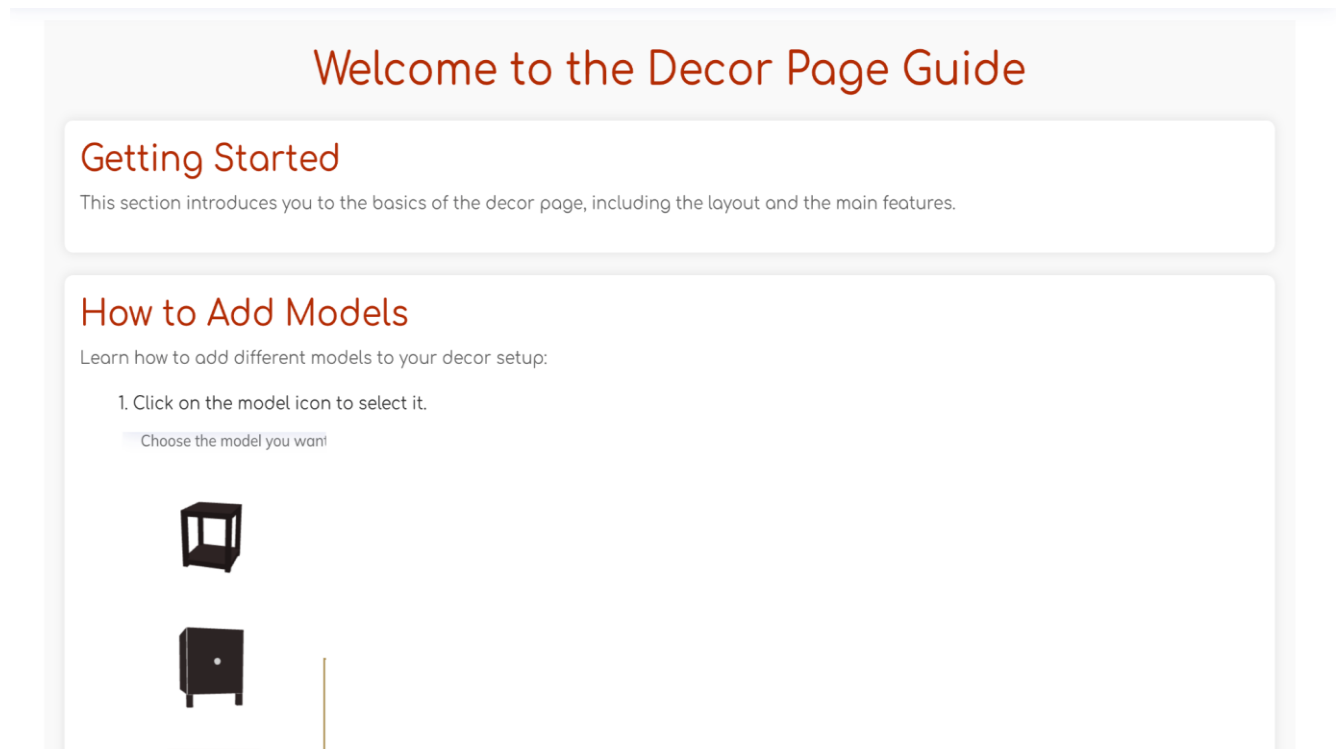


Figure 3.74: Guidebook page 1

2. Use the add buttons to place the model in the desired position.



3. Adjust the model's properties using the control panel.

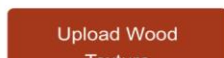
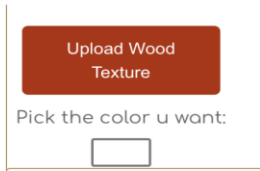


Figure 3.75: Guidebook page 2

3. Adjust the model's properties using the control panel.



## Customizing Models

Customize models by changing colors, textures, and dimensions:

To change the color, select the color picker and choose a new color.

To change the texture, upload a new texture file using the upload field.

To adjust dimensions, use the dimension inputs to specify width and height.

## Saving and Sharing Your Design

Once you are satisfied with your design, you can save or share it:

Click the 'Save' button to save your design to your profile.

Click the 'Share' button to generate a link that you can share with others.

Figure 3.76: Guidebook page 3

## Video Tutorial

Watch the video below for a full walkthrough of the decor page features:

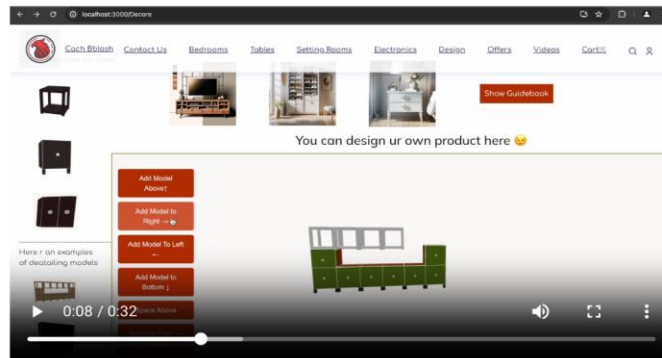


Figure 3.77: Guidebook page 4

### 3.3.23 Reels Page

In This page the user can see all the videos related to Cash Bblash institution and he also can put a like and comment and see the offers. As shown in figure 3.78.



Figure 3.78: Reels page

### 3.3.25 Converting to 3D models page

This page admin and user can use it.

In this page we connected with an api for csm.ai website for converting images to 3d which makes the admin add them with the products and users can add them to the design page!

The first step to upload the photo we want to convert it to 3d after that we press on the converting button and waiting for 1 minute to generate the segmentation image to isolate the object from the background after that we wait for 4 minutes for generating the spin for the 3D model(the shape of it) after that u can whether accept the generated spin or regenerate a new one ,if you accept it it will go to the last step and waiting for 2 minutes to generate the 3d model.As shown in figures 3.80,3.81,3.82,3.83,3.84.

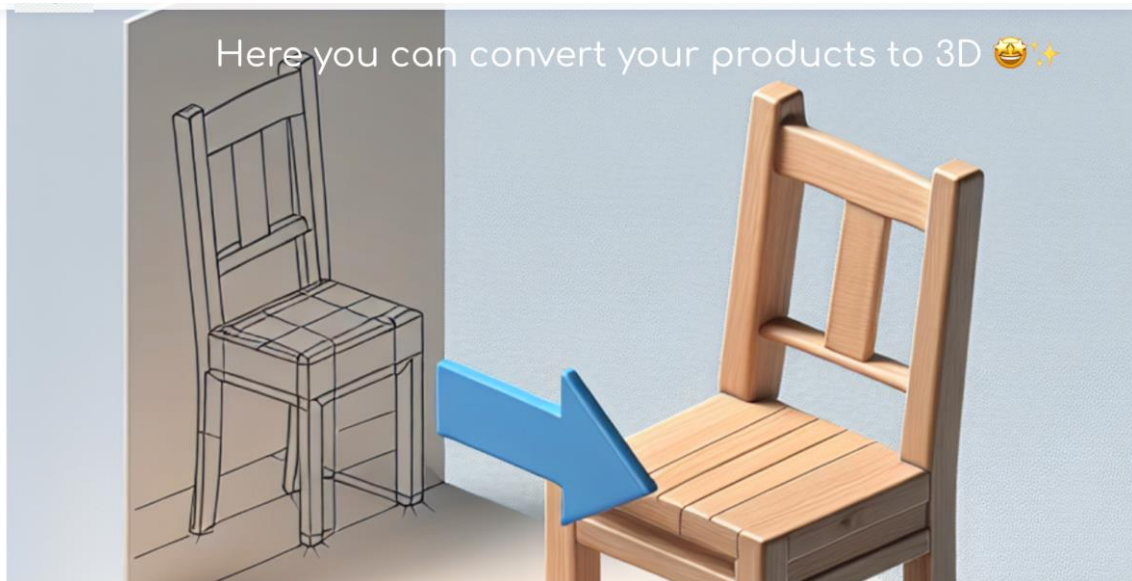


Figure 3.80: 3D converting page

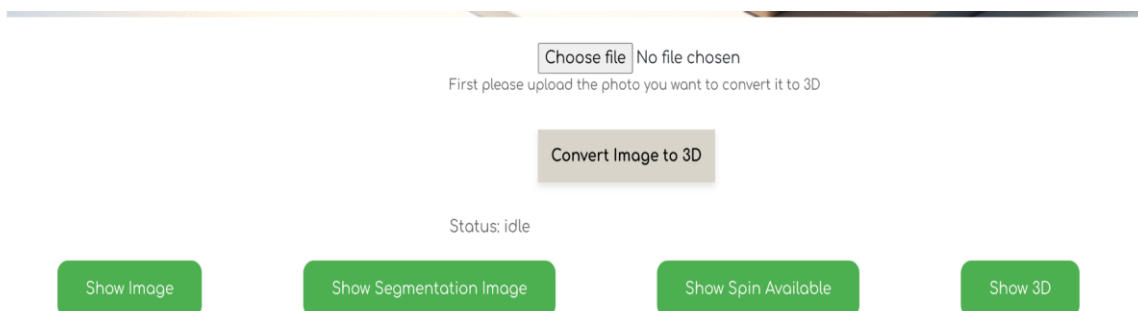


Figure 3.81: steps for 3D converting page

After inserting the image the user or the admin have to click on convert image to 3D and wait

for one minute to show the segmentation image. As shown in figure 3.82

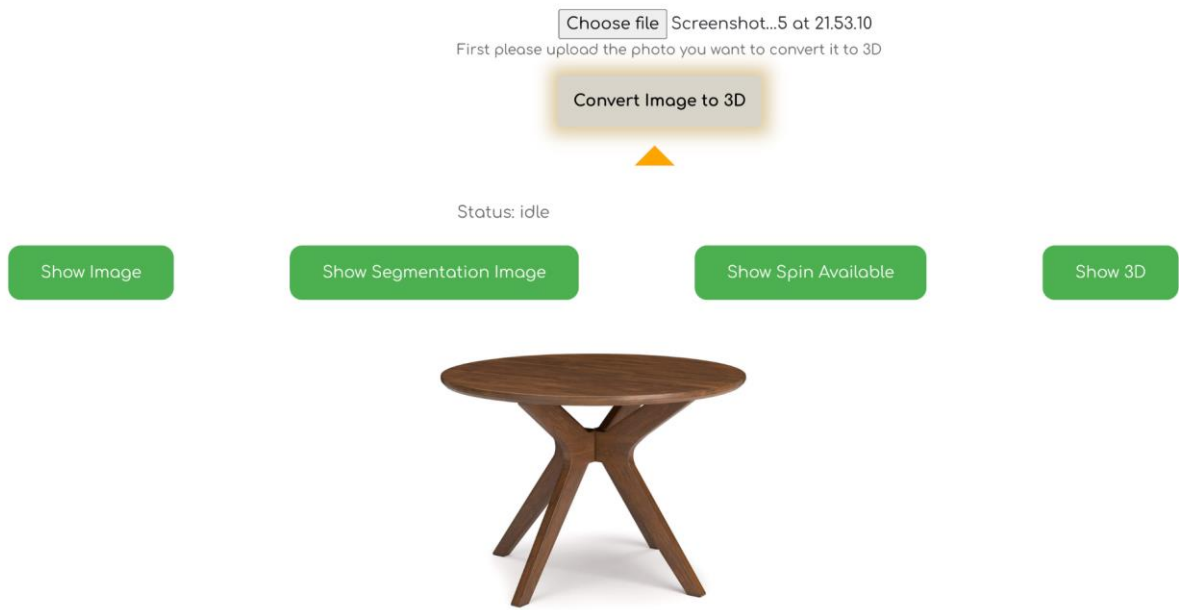


Figure 3.82: step 1 for converting

After this the segmentation image will be ready as shown in figures 3.83 ,3.84.

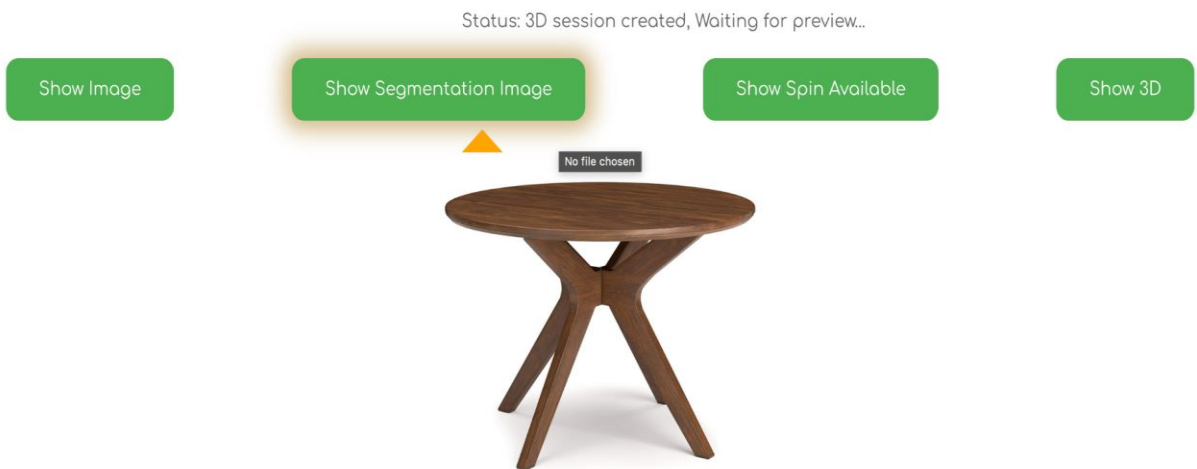


Figure 3.82: step 2 for converting -Segmentation image is ready



Figure 3.83 :Image after Segmentation

After the segmentation image is ready we have to wait another 4 minutes for showing the spin.As shown in figure 3.84.

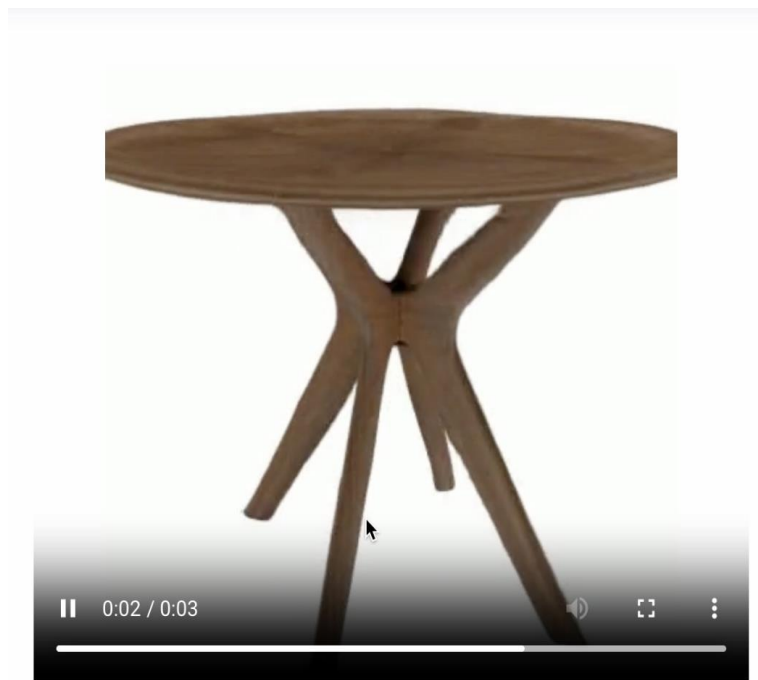


Figure 3.84 :Spin is ready-step3

After the spin is ready we will wait another 2 minutes for the final step which is showing the 3d model as shown in figure 3.85.

[Download USDZ](#)

[Download GLB](#)

Choose file No file chosen

Show

Figure 3.85 :Step 4 is ready.

We can now download the models in extensions .usdz or .glb as shown in figure 3.85 ,after downloading one of them we can upload it as shown in figure 3.86 and then show it as shown in figure 3.87.

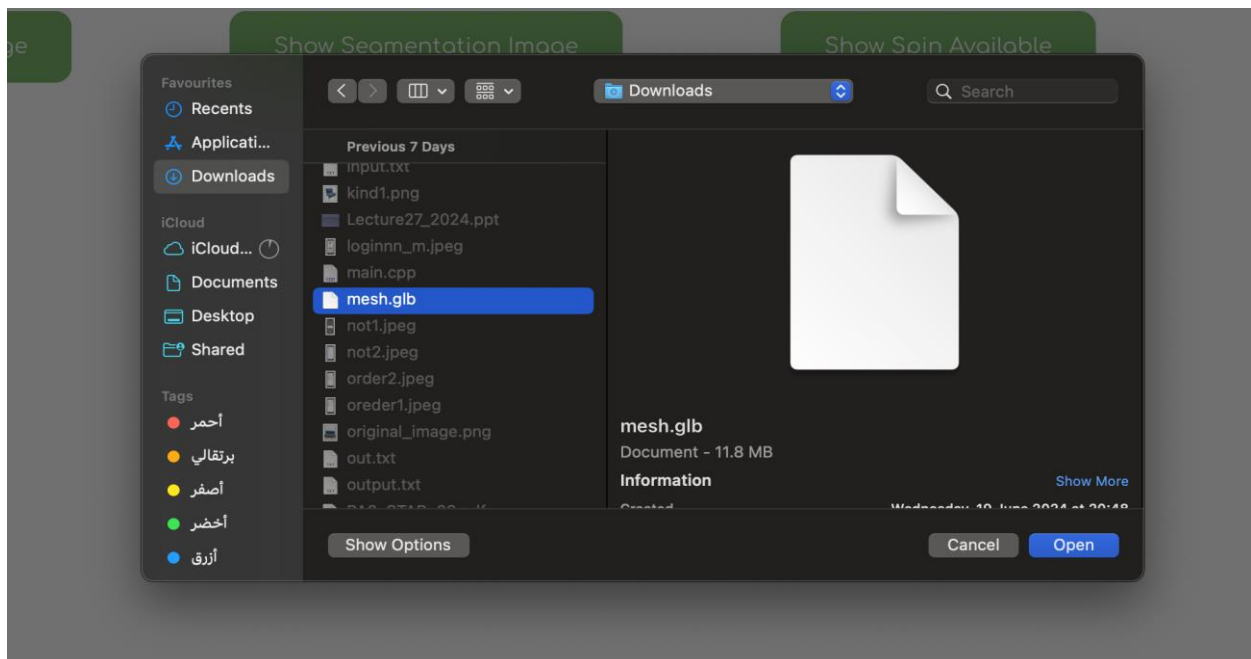


Figure 3.86 :Uploading the 3D file.



Figure 3.87 :Showing the 3d model.

### 3.3.27 Messaging page

In this page users can talk to the admin and ask about what they want(see figure 3.89 ).First the user has to enter a username to authenticate (see figure 3.88 ),then create a conv. with the admin(see figure 3.90).

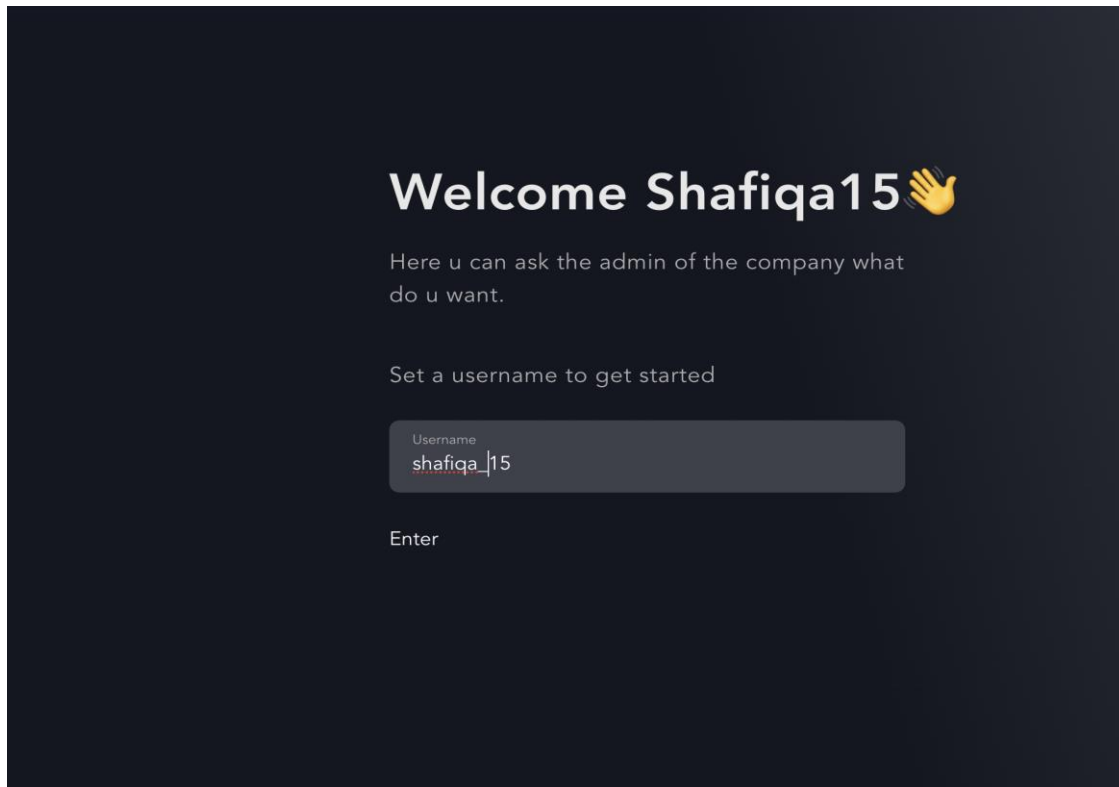


Figure 3.88 :Username is setted

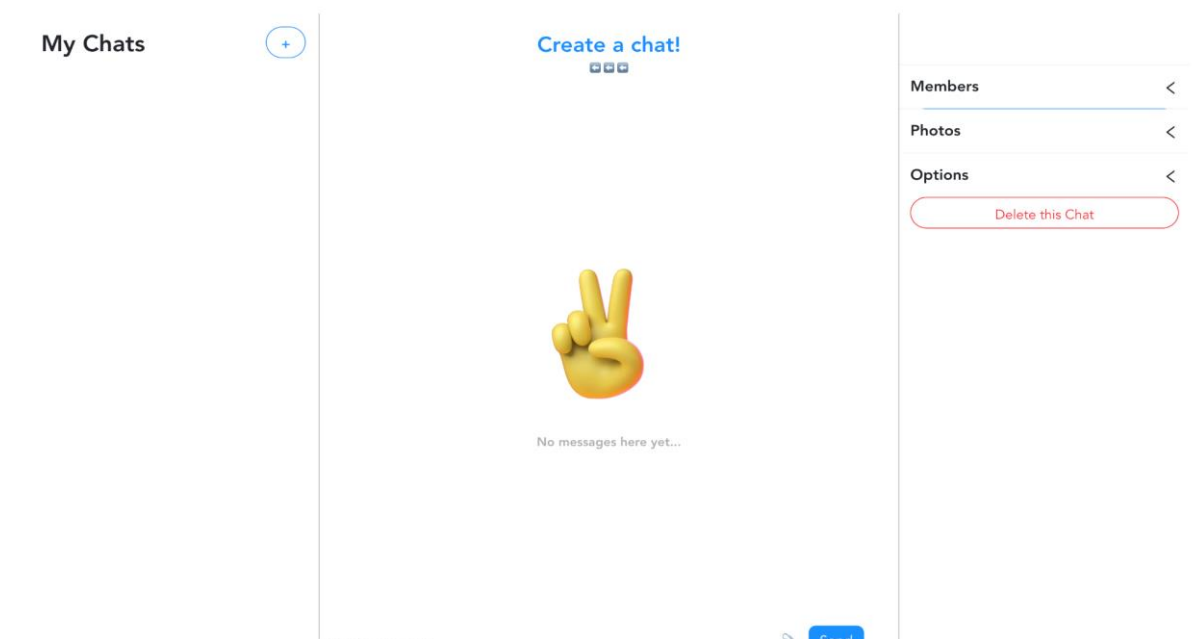


Figure 3.89 :Chat page

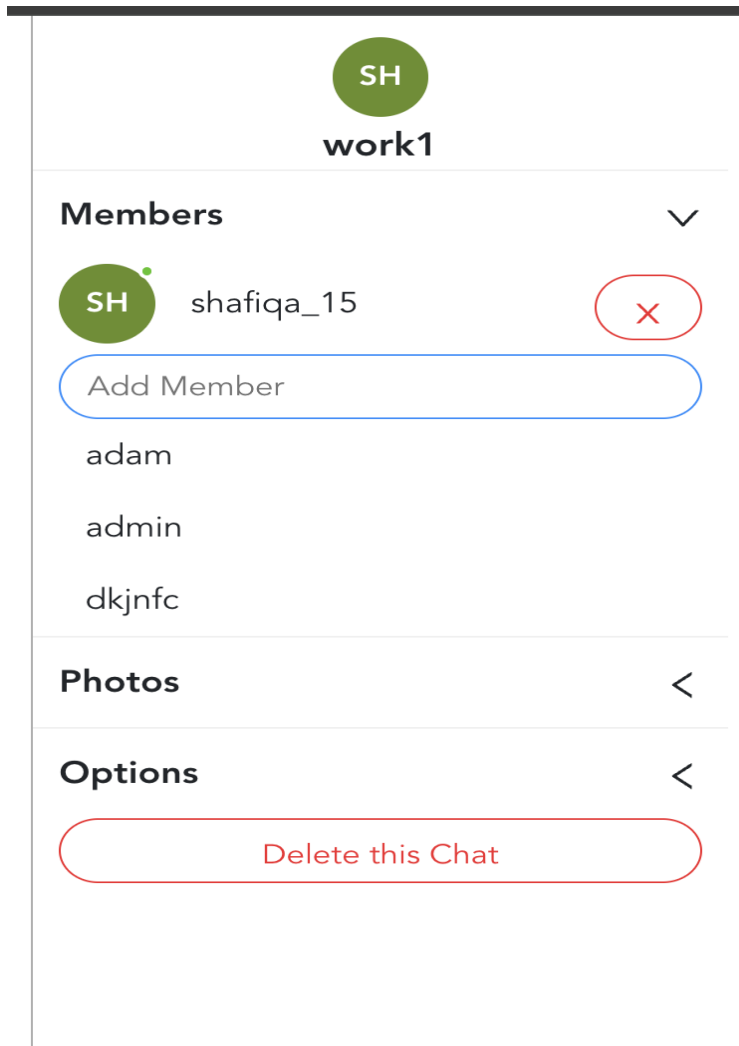


Figure 3.90 :Adding admin to the chat

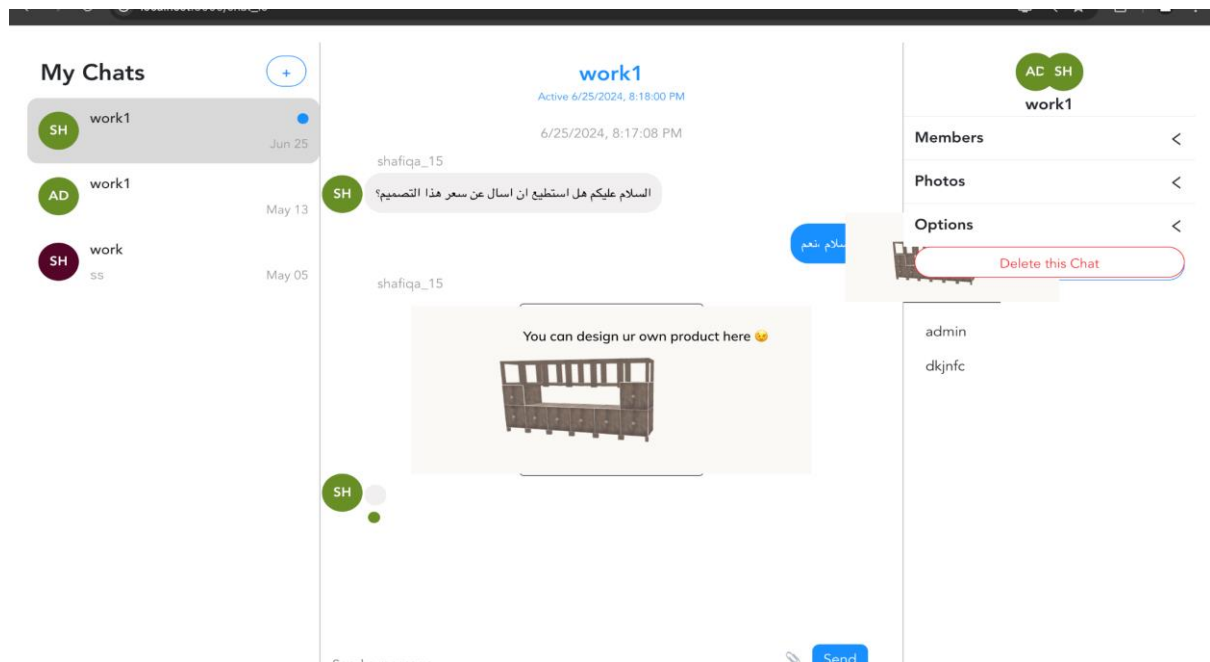


Figure 3.91 :Admin side

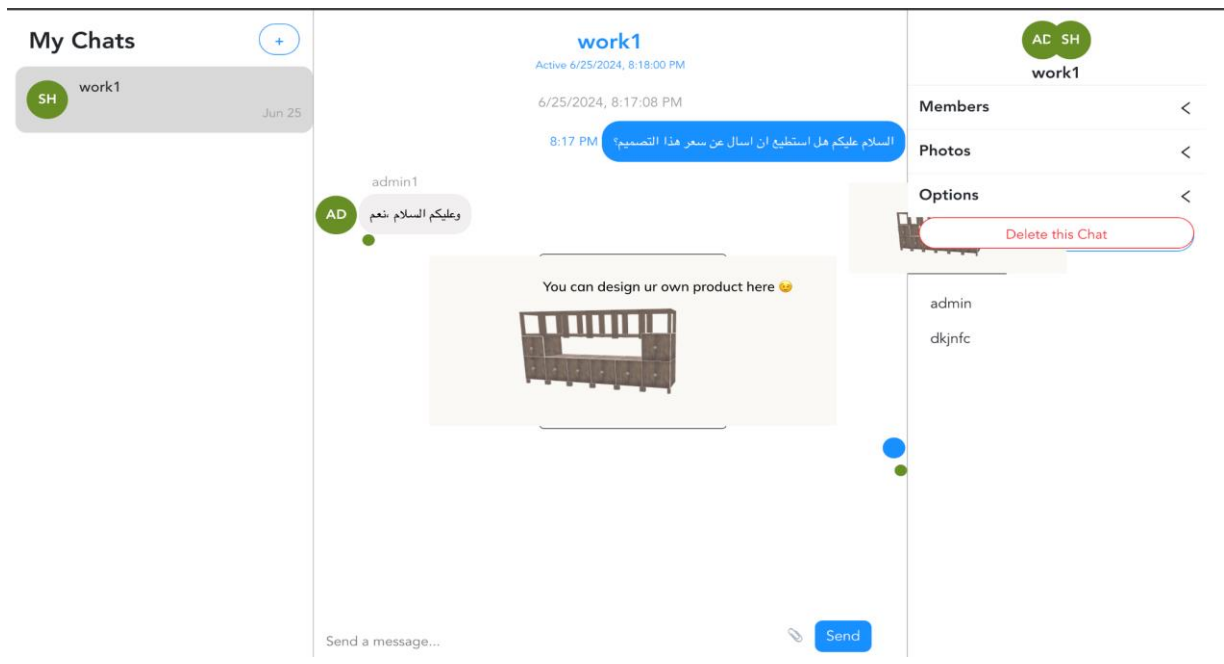


Figure 3.91 :User side



Figure 3.92 :Chatting on the mobile side.

### 3.3.26 Contact page

User can contact the institution by knowing the address, email and phone number instead of messaging. As shown in figures ().

[Cash Bblash](#)   [Contact](#)   [Bedrooms](#)   [Sofa Sets](#)   [Dining Rooms](#)   [Electronics](#)   [Design](#)   [Offers](#)   [Reels](#)   [Cart](#)   [3D](#)   [Search](#)

## Contact Us

Address: Main Street, Zawata, Palestine  
Phone: +972 56-605-6600  
Email: cashbblash2022@gmail.com

View larger map

Shavei Shomron   An-Naqura  
Dayr Sharaf  
Bar-industry zone  
Qusin   Beit Iba   Zawata

Park Htznirim   Google restaurant and cafe   Shopping mall   Juneid   Rafedya   Rafidia

0:00 / 0:27

[Cash Bblash](#)   [About Us](#)   [Services](#)   [Contact Us](#)   [Facebook](#)   [Twitter](#)   [Instagram](#)   [TikTok](#)

© 2024 Cash Bblash. All rights reserved.

# Chapter 4

## Results & Discussion

### Results

Cash Bblash is a platform with a website and a mobile app that allows users to perform the following:

1. Users can have his own profile page and edit his information.
2. Users can watch the products in 3D and see all the information about any product.
3. Users can see all the offers and new products.
4. User can rearrange his own room or sofa sets from the products he chooses.
5. Users can review, buy and customize any product within Cash Bblash initiation criteria.
6. Users can message the admin and ask about any product ,he can also upload pictures and make group chats with anyone.
7. The owner of the company can add, delete and update any product in the company, he can see the profit of the company, the paid orders and the registered users. He also can add offers and push notification to the users with the new offers and products. He can converting the images to 3D and add them with the products and he can put the arriving date of the order for each user after payment.

### Discussion

Cash Bblash most likely supplied the following:

Providing an easy-to-use platform regardless of their technical knowledge so they can register on the website easily

# Chapter 5

## Conclusion & Future Work

### Conclusion

The Cash Bbalash online store provides various services to customers. It provides the feature of displaying furniture in 3D to allow the user a clear view, and makes it easy for him to obtain his order with the least possible effort and make the design he wants and with the specifications he requests. It also provides electronic payment, and the ability to communicate with company officials and various inquiries. The store is easy to use.

### Future Work

There are various areas that Cash Bbalash store might improve, including:

1. Adding a payment service using Easy life.
2. Adding other benefits, such as booking Chalet for the Cash Bbalash Foundation.

