

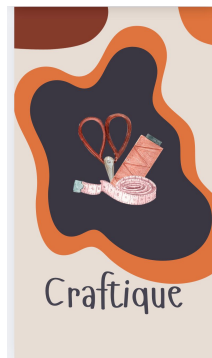


Al-Najah National University

Department of Computer Engineering

GRADUATION PROJECT II

CRAFTIQUE



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Abstract

Handmade products are becoming increasingly popular as unique and personalized alternatives to mass-produced goods, particularly among women. To address the challenges of finding affordable and accessible online sources, we developed Craftique, a user-friendly platform available as both a mobile application and a website. Craftique simplifies the process of buying and selling handmade items, offering a vibrant marketplace for women artisans to showcase their talents.

1. Includes diverse products such as t-shirt printing, chocolate distributions, wood engraving, and memory books.
2. Features a dedicated discounts page to enhance the shopping experience.
3. Offers advanced search filters for easy browsing by price and product name.
4. Provides seamless chat functionality for public and private interactions.
5. Empowers sellers with tools to efficiently manage inventory and track orders.
6. Contributes to women's charities with proceeds from select products under the motto: "Buy something beautiful, do something even more beautiful."
7. Ensures secure payments, personalized recommendations, and notifications for a smooth shopping journey.
8. Supports small businesses and local artists, fostering a community-driven ecosystem for handmade artistry.
9. Serves as more than a marketplace—a hub for creativity, empowerment, and community engagement.

We noticed that there are many platforms available for buying and selling handmade products globally. However, we could not find any comparable applications in Palestine that bring together all the features artisans and buyers need in one place. This project consists of a website for administrators and a mobile application for users. The website can be connected to businesses that support and collaborate

with artisans. Numerous frameworks and tools were utilized in the construction of this project to ensure efficiency and usability.

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Chapter 1

Introduction

1.1 Problem

In Palestine, handmade products are gaining popularity as people seek unique, high-quality alternatives to mass-produced goods. However, artisans face significant challenges in reaching their target audience due to a lack of accessible and affordable platforms. Many women artisans struggle to showcase their work effectively, limiting their ability to generate sustainable income. Additionally, customers seeking handmade products often find it difficult to discover diverse, reasonably priced options in one place.

This gap in the market has created a need for a platform that supports artisans by connecting them directly with customers, simplifying the buying and selling process, and fostering a community that celebrates handmade artistry. Craftique aims to address these challenges by creating a comprehensive and user-friendly solution.

1.2 Objective

The main objective of Craftique is to empower women artisans by providing a platform to showcase and sell their handmade products, connecting them with a wider audience. The platform simplifies buying and selling, supports artisans with tools to manage their work, and

offers customers unique, affordable items. Additionally, Craftique promotes social responsibility by donating proceeds from select products to women's charities, fostering creativity and community engagement.

1.3 Scope of the Work

The Craftique project aims to develop a mobile application and website that connect women artisans with customers, offering a platform to showcase and sell handmade products. It includes features for managing inventory, facilitating secure payments, and offering personalized recommendations. The platform also promotes community engagement through chat functionalities and supports social responsibility by donating proceeds to women's charities. The project focuses on creating a user-friendly marketplace for diverse handmade items while empowering artisans and enhancing the shopping experience.

1.4 Importance

The Craftique application is important as it provides a platform for all artisans, regardless of gender, to showcase and sell their unique handmade products. It empowers small businesses by offering tools for inventory management, order tracking, and reaching a wider audience. For customers, Craftique creates a convenient and accessible marketplace for affordable, high-quality handmade items. The platform also emphasizes social responsibility, with proceeds from select products donated to women's charities. Overall, Craftique fosters creativity, supports artisans, and connects customers with diverse, handmade products, contributing to a thriving, community-driven marketplace.

1.5 Report Organization

The structure of this report is as follows: Chapter 1 provides an overview of the Craftique project, explaining its main objective to connect artisans with customers through a user-friendly platform for selling handmade products. Chapter 2 offers an introduction to the significance of the project and its scope, highlighting its role in empowering artisans and promoting social responsibility. Chapters 3 and 4 discuss the challenges faced during the development of the platform, including technical difficulties and market limitations. Chapter 5 outlines the approach taken to overcome these challenges and successfully develop Craftique. In Chapter 6, we detail the technologies, tools, and frameworks used, along with the implementation process of the platform's features. Chapter 7 presents the findings, including user feedback and performance analysis, followed by a discussion. Finally, Chapter 8 concludes with suggestions for future improvements and the potential impact of Craftique on the handmade marketplace.

Chapter 2

Constraints and Earlier work

2.1 Constraints and limitations

Since the beginning of this project, we have faced numerous challenges and difficulties.

1. **Time constraint:** Some of the programming languages we worked with were unfamiliar to us beforehand. Since this was our first time developing a full mobile application, we had to pick up new programming skills. programming languages like Dart and mobile frameworks like Flutter. We were able to solve this issue because the syntax is comparable to C, but the main issue was the new background. Along with the Firebase database, which is a cloud-hosted database utilized in some sub-properties like chat and networking, and the MongoDB database, which serves as a database, we also had to learn and work with the Node.js language, which is based on JavaScript. To make the most of the features and programming, we tried to familiarize ourselves with everything we learned. We had other classes that forced us to work hard because each one had requirements, like projects, so we had to set aside time and work harder to study and create the app close to what we wanted, which made this more challenging than usual.

2. **Stable internet connection:**To run the API, our application needs a steady internet connection and a Node JS server connection.

2.2 Standards

2.2.1 MVC (Model View Controller)

In our system, the form was displayed using the architectural pattern. To make it easier to follow the project's progress, we can split it up into three parts. These components are as follows:

Model: symbolizes the MongoDB database we were using. It will react to both the view request and the controller request in order to keep updating itself.

View: Users and administrators will see and edit data using this graphical user interface (GUI).

Controller: This is the application and website's back-end server, which is built using Node.js. The controller facilitates coordination and collaboration between the view and the model.

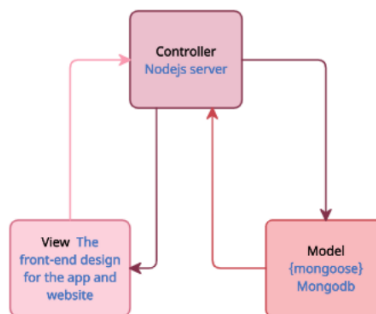


Figure 2.1: mvc

2.3 Earlier coursework

We completed numerous classes during our computer engineering studies where we acquired a variety of topics, including programming languages, programming techniques, and website creation and manage-

ment. These classes, which provided the groundwork for learning front-end and back-end programming and working with actual databases, were Web Programming, Object Oriented Programming, and Databases. In a similar vein, the software engineering course was really helpful to us while we were building our code to satisfy the requirements of advanced courses, critical thinking, etc. All of these courses helped us with the project and accelerated the development process; the Nodejs framework is a JavaScript file with sophisticated concepts and features, and the syntax of the Dart language is almost the same as the syntax and principles of the Java language. We have also completed online courses in Flutter, Dart, Firebase, and Node.js for work-related purposes.

Chapter 3

Literature review

There is significant research on the relationship between handmade crafts and mental well-being, and this area offers numerous potential study topics. Some studies delve into previously unexplored subjects, while others revisit those that have been explored before (Ryan & Ziebland, 2015). Handmade crafts have been an integral part of human cultures across generations, social classes, and nationalities. It's a natural, unforced human activity that brings joy and a sense of accomplishment.

It's crucial for policymakers to recognize the value of handmade crafts, particularly when addressing mental health concerns. Instead of focusing on expensive or complex initiatives, it's important to remove obstacles for individuals who seek to support themselves or others through craft-making (Pawson et al., 2005).

Starting with the therapeutic benefits of creating or owning handmade products, we will explore the use of digital platforms and mobile applications that connect artisans with customers. Previous research has demonstrated the effectiveness of technology in improving access to handmade crafts, providing artisans with a virtual space to showcase their products (Arnaldo et al., 2021). One notable study involved creating platforms that help users explore creative works, such as custom embroidery or t-shirt printing, by linking them to local artists and

creators.

Additionally, platforms like Craftique allow users to track their purchases, communicate with artisans, and personalize their shopping experience. For example, mobile applications can facilitate the customization of products or even enable users to share their experiences and reviews about the products they've bought (Chen & Elshakankiri, 2020). The introduction of such digital solutions to the handmade craft industry helps reduce barriers for artisans, providing them with tools to expand their reach and grow their businesses.

Moreover, some studies have explored smart systems for crafting tools, such as sewing machines and embroidery devices connected to apps, which can track crafting progress or provide useful tutorials to users (Sangvanloy & Sookhanaphibarn, 2020). These innovative approaches allow both novice and experienced crafters to improve their skills and gain more satisfaction from their creative pursuits.

Craftique offers a digital platform for individuals interested in handmade crafts, providing them with an easy way to connect with artisans, learn about their products, and make purchases while supporting the small businesses and artisans who create them. This platform also serves as a hub for community engagement, allowing users to share their stories and experiences with their creations, further building a sense of connection and belonging (Dsouza et al., 2022). Through Craftique, users can access a wide variety of handmade products, ensuring that they contribute to and support local artisans, while also enhancing their own well-being.

Chapter 4

Methodology

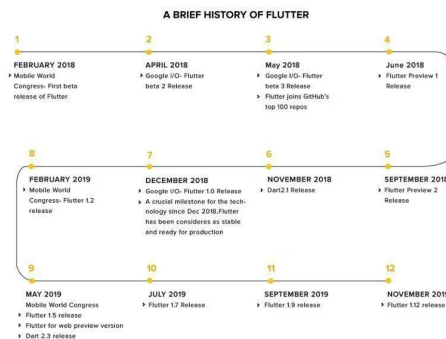
4.1 Tools, Programming Languages, APIs Technologies

In addition to the fundamental and indispensable components of creating websites and mobile applications, such as frameworks, programming languages, and tools, we have a plethora of possibilities for application creation after much reading and research. All of these specifics will be mentioned and discussed in more detail. We choose to construct them using the subsequent framework.

4.2 client Side:

1. **Design:**In order for the user to comprehend the program and easily navigate between the interfaces, we had to create a straightforward, user-friendly, and easy application. We also selected a color for the basic application that is visually pleasing. Before we had a clear idea of our application, we looked at a lot of other apps and designs, including ones on Pinterest, Google Play, and the App Store. We then customized the design to fit our needs and began developing the user interfaces.
2. **Frameworks:** :We choose the flutter framework to build our application which Flutter is a Google open-source user interface

toolkit that allows you to create mobile (iOS and Android), web, and desktop apps (Linux, Mac, and Windows) from a single code base. By creating an application in this language, consumers can be given a refined, rich, and immersive user experience. The single code rule states that you write the code once and run it everywhere! This way, you can plan and target an app release across all platforms at the same time. Thus, by quickly releasing the application to the market, time and money can be saved.



Top 10 Motivators for Flutter App Development Teams to Consider:

- (a) Simple to learn.
- (b) Excellent Performance.
- (c) Reusable Devices .
- (d) Quick time to market.
- (e) Quick reload.
- (f) Perfect for creating an MVP.
- (g) Capability to produce excellent design.
- (h) Reduced development expenses.
- (i) Excellent community for documentation.
- (j) Excellent work.

3. **Programming languages:** Flutter makes use of Google created the programming language Dart with online and mobile application developers in mind. It is intended for the development of iOS, Android, and web applications. Being compatible with all cutting-edge online browsers, mobile devices, and even web servers is one of the language's objectives. It goes without saying that we will utilize Dart as we will be utilizing the Flutter framework. There are numerous parallels between Dart and other programming languages including Java, C, Swift, and Kotlin. Since Java is the most familiar language we know, we found that Dart is very comparable to it. This makes learning a new language easier and more straightforward.

4.3 Website Side for admin:

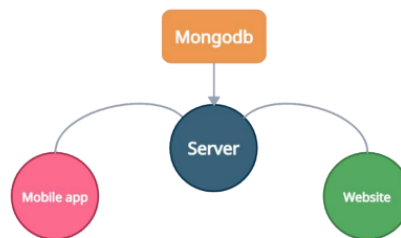
1. **Design:** First, we made a website that was only accessible by the administrator. On this website, they could add, remove, and see things like food and clothing, as well as conduct other functions like adding categories and viewing bookings for veterinary clinics.
2. **Programming languages:** Flutter makes use of Google created the programming language Dart with online and mobile application developers in mind. It is intended for the development of iOS, Android, and web applications. Being compatible with all cutting-edge online browsers, mobile devices, and even web servers is one of the language's objectives. It goes without saying that we will utilize Dart as we will be utilizing the Flutter framework. There are numerous parallels between Dart and other programming languages including Java, C, Swift, and Kotlin. Since Java is the most familiar language we know, we found that Dart is very comparable to it. This makes learning a new language easier and more straightforward.

4.4 Server Side:

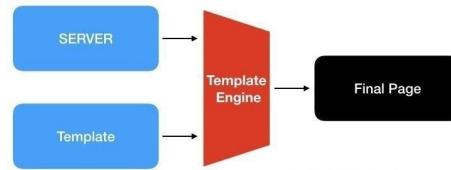
1. **Frameworks:** We used the open-source Node.JS framework for websites and mobile apps on the server side. A single-threaded, open-source, cross-platform runtime environment called Node.js is used to create server-side and networking applications that are quick and scalable. It is effective and appropriate for real-time applications because it uses an event-driven, non-blocking I/O architecture and is powered by the V8 JavaScript runtime engine.

This framework's advantages are:

- (a) **Productivity.**
- (b) **Simplicity.**
- (c) **Speed.**
- (d) **Multi-platform.**
- (e) **Maintainability.**



We make use of the Express.js framework, a quick, robust, and easy-to-use asynchronous form rendering and form rendering control framework for Node.js. facilitates server and route routing. It facilitates the development of different web apps using template arguments. We can render HTML pages dynamically thanks to it. Express.js is used because of its quick and efficient I/O operations.



In addition, Firebase Database is used for conversation. A cloud-hosted database is known as a real-time database. JSON-formatted data is kept up to date with every client that is connected in real time. All of your clients share a real-time database instance and get updates immediately when you develop cross-platform apps using the JavaScript SDK and the Apple and Android platforms. It's suitable for conversation.

2. **Programming languages:** JavaScript is the primary component of Node.js. You may create excellent front-end and back-end apps with JavaScript by utilizing several JavaScript-based frameworks. Node.JS etc.

4.5 IDEs and Code Editors

Cartfique: Microsoft's Visual Studio code editor, which is cross-platform, free, and enables rapid editing for a variety of programming languages, is what we used to develop our application. A class designer, database schema designer, web designer, and support for Git are among the many built-in features it offers. Additionally, we used Logo Maker to create a logo for our project.

1. **Version Control:** We required a way to integrate code and exchange work because we were a team. In order to achieve this, we created two GitHub repositories—one for the front end and one for the back end—and occasionally used Google Drive.
2. **API Endpoints Testing:** We have to test every endpoint before integrating it with the client because our application uses a

RESTful API in the back-end server. We utilized Postman to accomplish this. A fantastic tool for breaking down RESTful APIs is Postman. We may use PUT, PATCH, DELETE, and a number of other request types with Postman. This utility contains nearly all of the features that a developer may require.

4.6 Database Structure

In the majority of applications, the database is crucial, particularly for reading, editing, and removing data. It also gives the application purpose and allows for data backup. Since our application depends directly on the database, which shows data, we chose a NoSQL database since there were few relationships between various collections and it was simple to utilize the API.

4.6.1 Database - NoSQL:

Because it makes it simple for developers to create apps using documents, we decided to construct our schema without a relational database. Unlike XML, MongoDB stores documents in JSON format, which is based on JavaScript. As previously said, Node.js will be used to build the application's backend, and MongoDB is a great tool for Node.js application prototyping. Your data is kept as JSON objects in a MongoDB database. Unlike SQL databases, which involve merging various tables to create a document, most of the time, all of the data related to the object may be found in a single document. A NoSQL database application called MongoDB can handle documents that resemble JSON and have an optional schema.

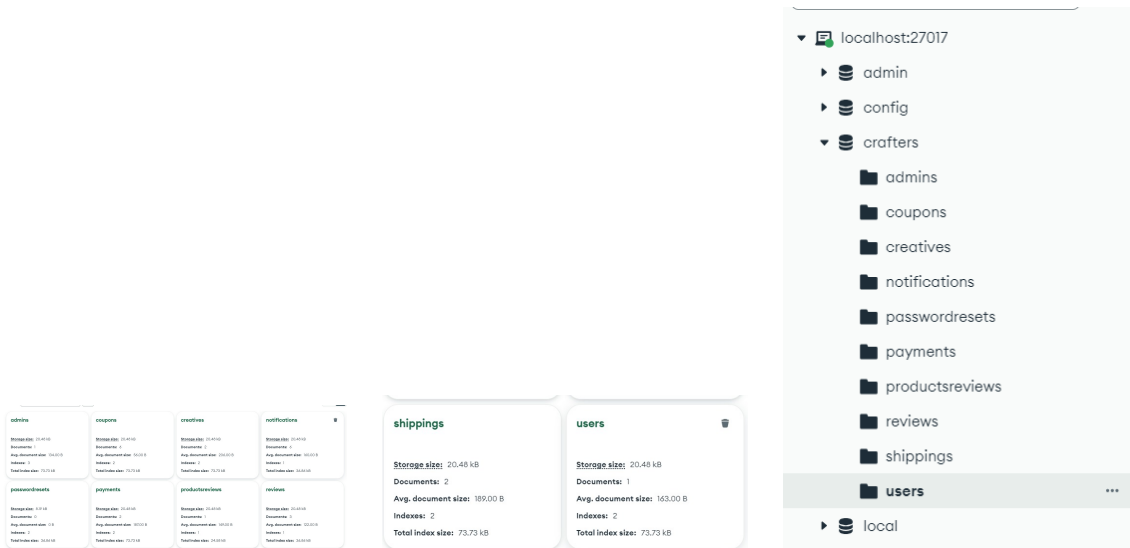


Figure 4.1: Shopping online

4.7 Features of The Application

4.7.1 Implementation

In this section, we'll dive into the details of each part of the system. All the tools, methods and libraries used are discussed in detail.

4.7.2 Mobile Application

1. **Welcome Screens:** The Welcome Page is where visitors first enter the application, offering a straightforward and user-friendly design. Its two obvious options, ****Sign In**** and ****Sign Up****, provide a smooth experience for both new and returning users. While the Sign Up button enables new users to register and build their profiles, the Sign In button guides current users to log in and access their account. With a focus on simplicity of use and rapid access to the app's functionality, this page is intended to be both aesthetically pleasing and intuitive.



2. **SignUp Screen:** If a user does not have an account, they can create a new one by providing the necessary information. The user is required to enter a valid email address so that the application can send a verification message to confirm their identity. Once verified, all their data will be stored in the MySQL database.

The sign up as user is different from the sign up as creative because the information is different.

The sign-up screen contains four text fields for the user's name, email, password, and confirm password. When the user presses

the sign-up button, their account will be created based on the user model in both Firebase and the MySQL database.

The account will only be created if the following conditions are met:

- (a) All text fields are filled.
- (b) The email is not already registered by another user and valid because There is a verification code to rely on.
- (c) The password is at least 6 characters long and contains both uppercase and lowercase letters.

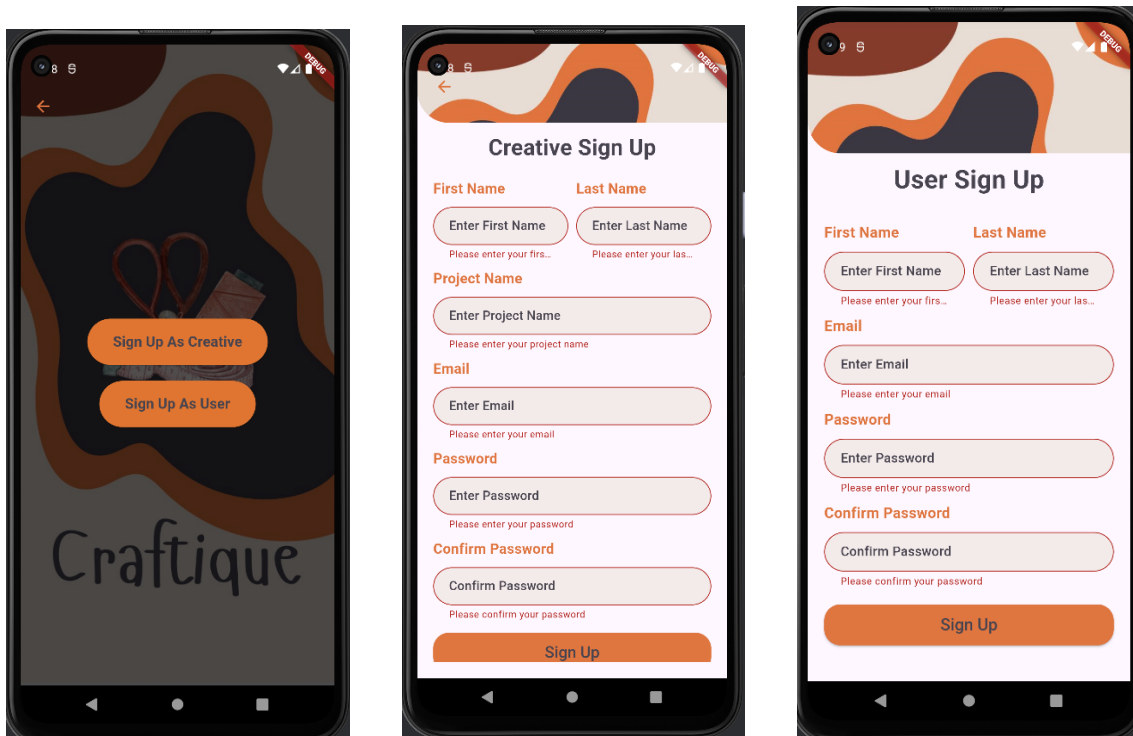


Figure 4.2: sign up

3. **Email verification Screen:**After clicking on sign up, the email will be verified. To confirm the registration process, verification will be done through email verification as shown:

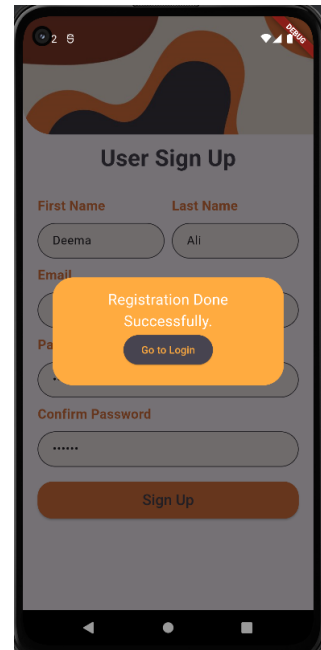
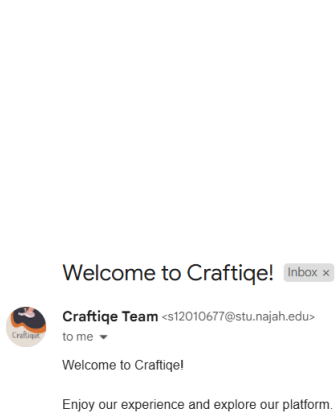


Figure 4.3: Email Verification

4. **Forgot Password Screen:**Users must provide a code that was issued to their registered email address as identification in order to reset their password. By limiting the legitimate account owner’s ability to reset the password, this technique increases security. As the sample below shows, this type of email verification is commonly used for identity identification while changing passwords.

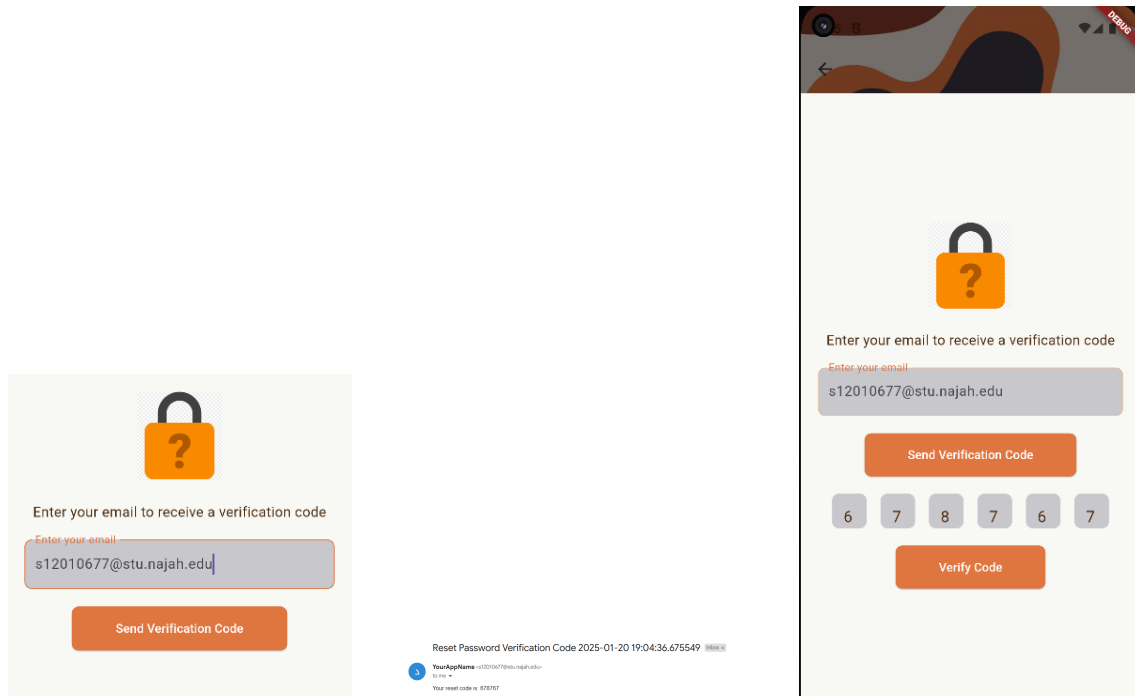


Figure 4.4: Forgot password

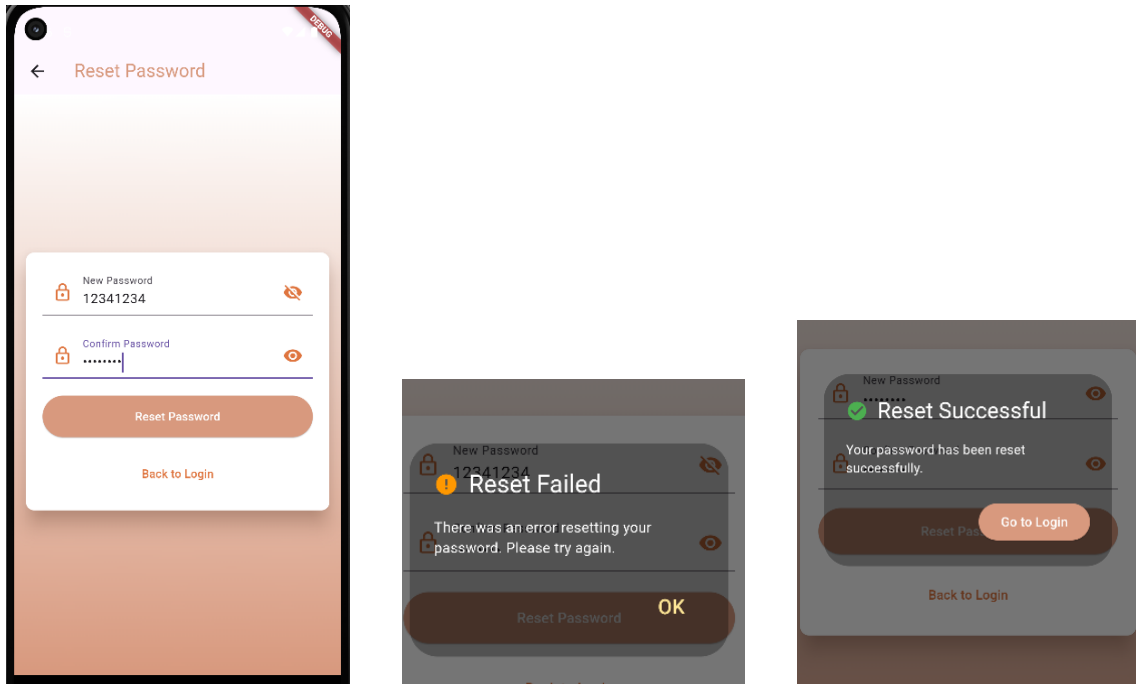


Figure 4.5: Forgot password

5. **Login Screen:** A user needs to have an account in order to log in. If not, they can make one by going to the registration page. The user might try to log in by entering their email address and password. The application will display a warning message if any required fields are left unfilled or if the information is inaccurate. Two text fields one for the user's email address and another for their password are present on the login screen. There's also a sign-in button that takes you to the home screen, but it only works when certain prerequisites are satisfied.
 - (a) The two text fields are filled up.
 - (b) Both Firebase and DB have properly verified the email address and password.
 - (c) The password is the same as the one linked to the given email address.

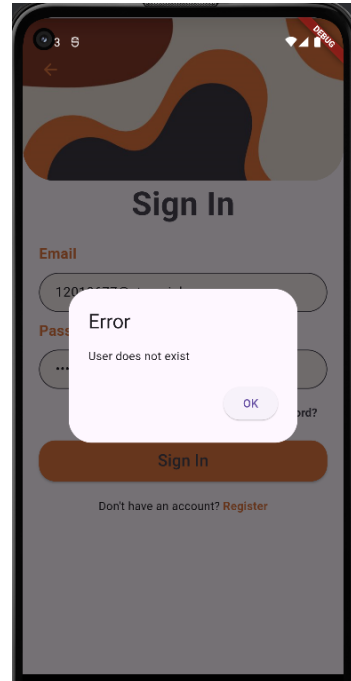
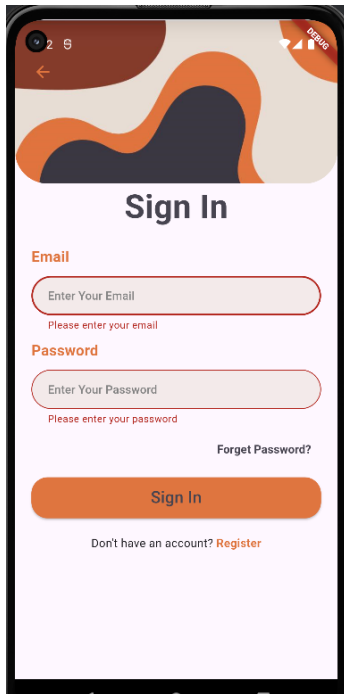


Figure 4.6: Sign in

6. **Home Screen:** Home screen contains components represents all the services in the app as following: Slider: contains 2 slides represents all main pages, when slide tapped it will navigate to the corresponding page.

Button bar(nab bar): contains 5 options:

- (a) Home Screen.
- (b) Favorites Screen.
- (c) Shopping Screen.
- (d) Shopping Cart Screen.
- (e) Profile Screen.

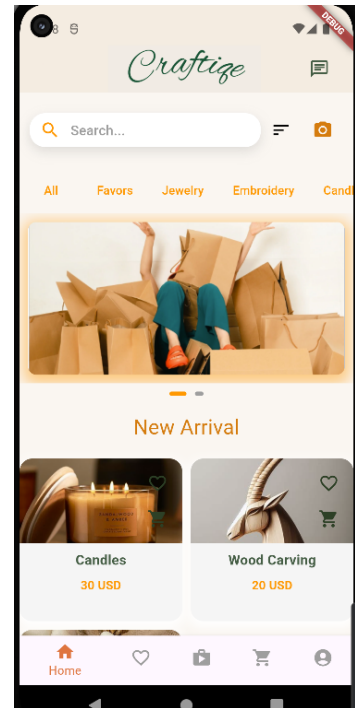
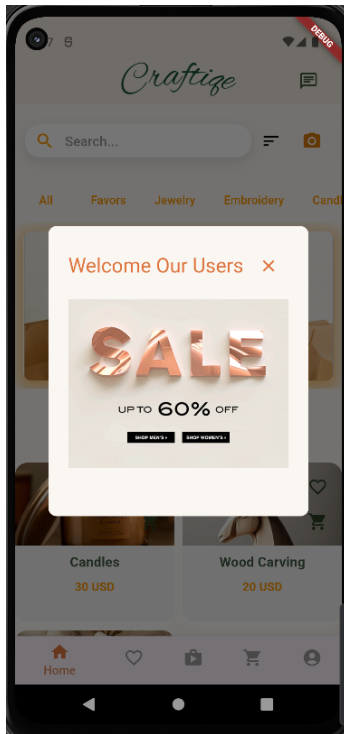


Figure 4.7: Sign in

7. **Shop Screen:** Every product is shown as a card on the shop screen, enabling category sorting and product presentation. A user can also utilize the product's name and price to search for any product. Any product can be added to the shopping cart or list of favorite items for later review, or it can be removed from the cart or favorite icon.

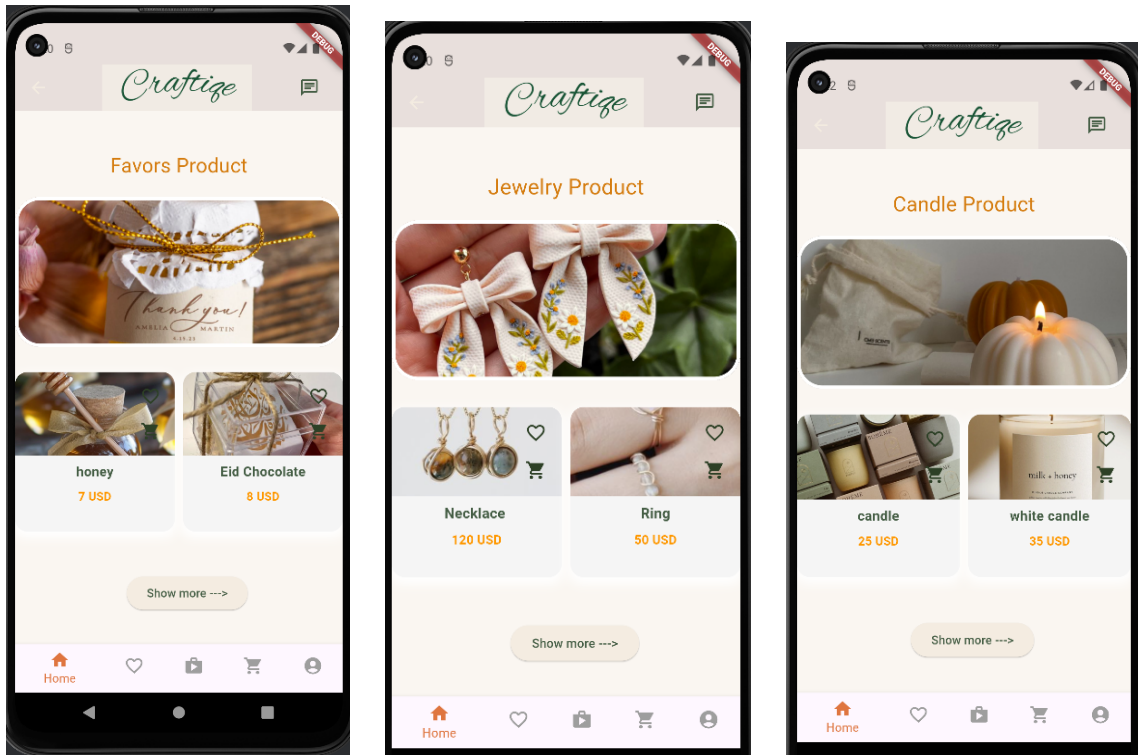


Figure 4.8: Shopping online

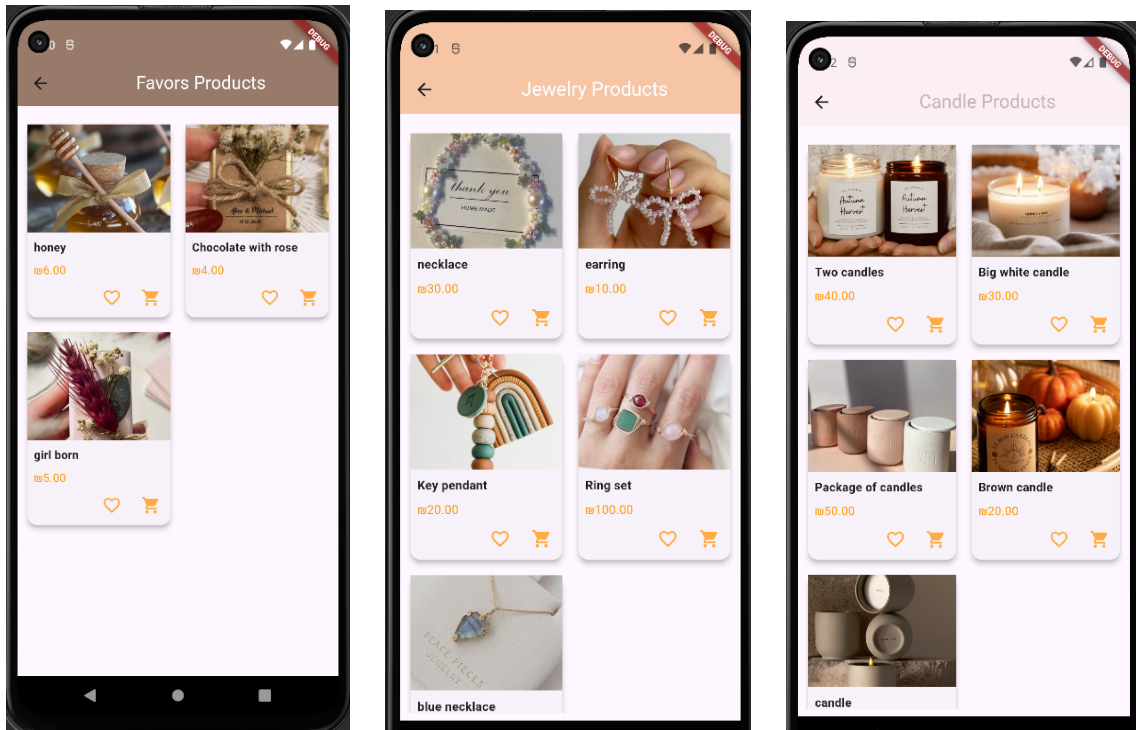


Figure 4.9: Shopping online

8. **Search & Sorting:** To improve user convenience, the application has a Search and Sorting feature. Users can quickly and effectively obtain desired things by searching for any product by name. Furthermore, users can arrange products according to price using the sorting feature, either from highest to lowest or lowest to highest price, giving them more browsing flexibility and accommodating their own tastes. All consumers are guaranteed a seamless and customized purchasing experience thanks to this functionality. **These pictures show the search section in the application:**

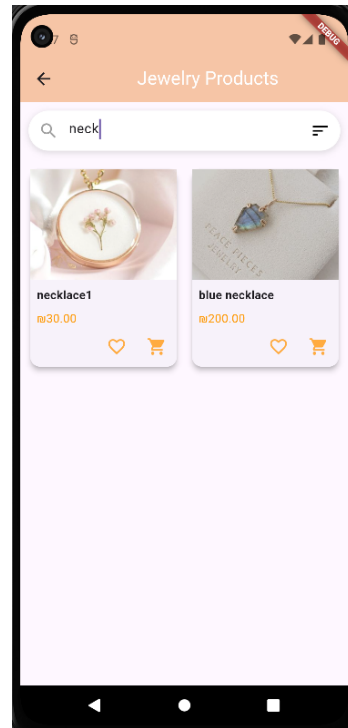
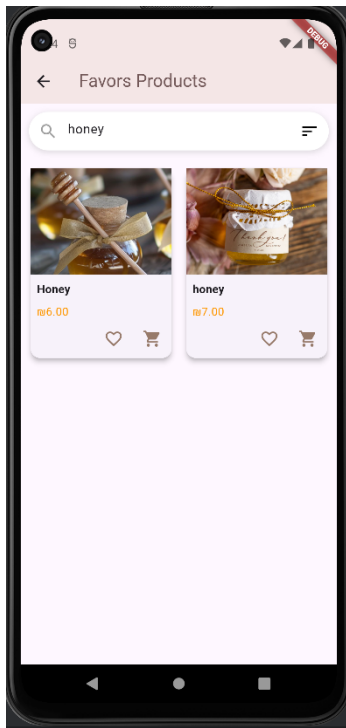


Figure 4.10: Search Section

These pictures show the sorting section according to price:

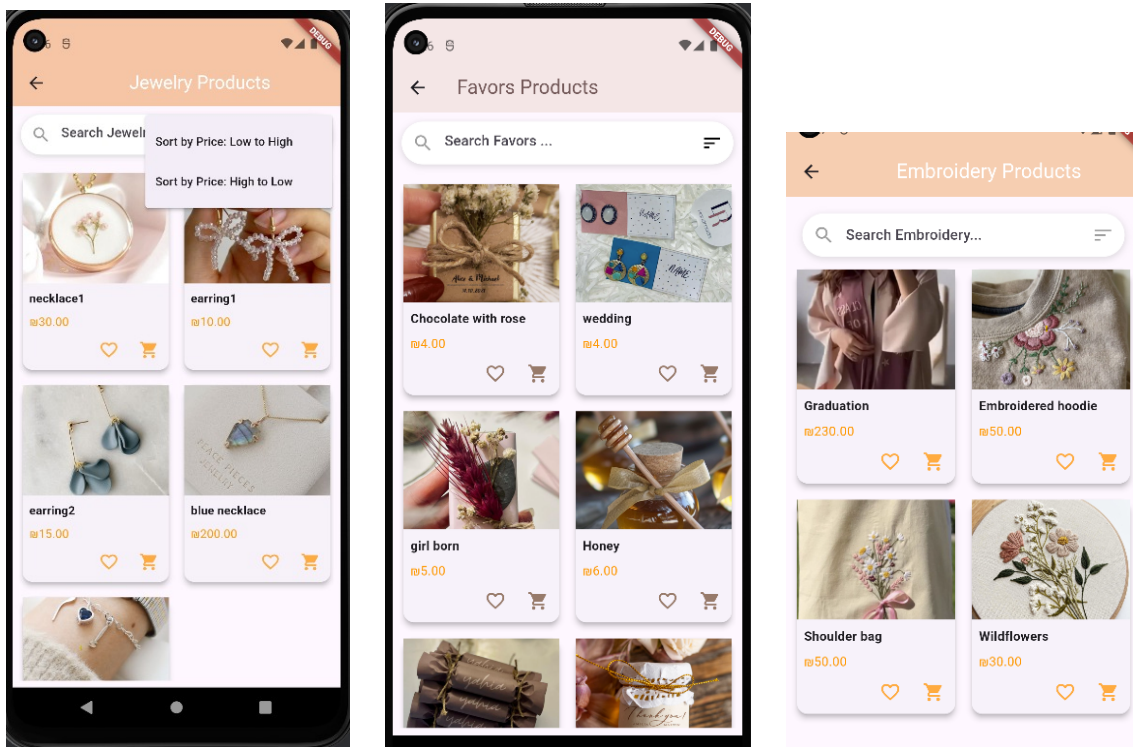


Figure 4.11: Sorting Section

9. **Product details:** Users can learn more about a chosen product using the thorough and intuitive interface provided by the **Product Details** page. The product image, name, price, and rating are all clearly displayed on this comprehensive page that the consumer is taken to when they click on a product. The "+" and "-" buttons allow users to change the product's quantity, while the "Add to Cart" button allows them to add the item straight to their cart. The page also has a **Reviews** part where consumers may rate the product, read other people's reviews, and even post their own. Users can also assess similar reviews if they exist. Additionally, the page has a **Description** part that provides additional information about the product's characteristics and specifics, facilitating customers' ability to make educated decisions.

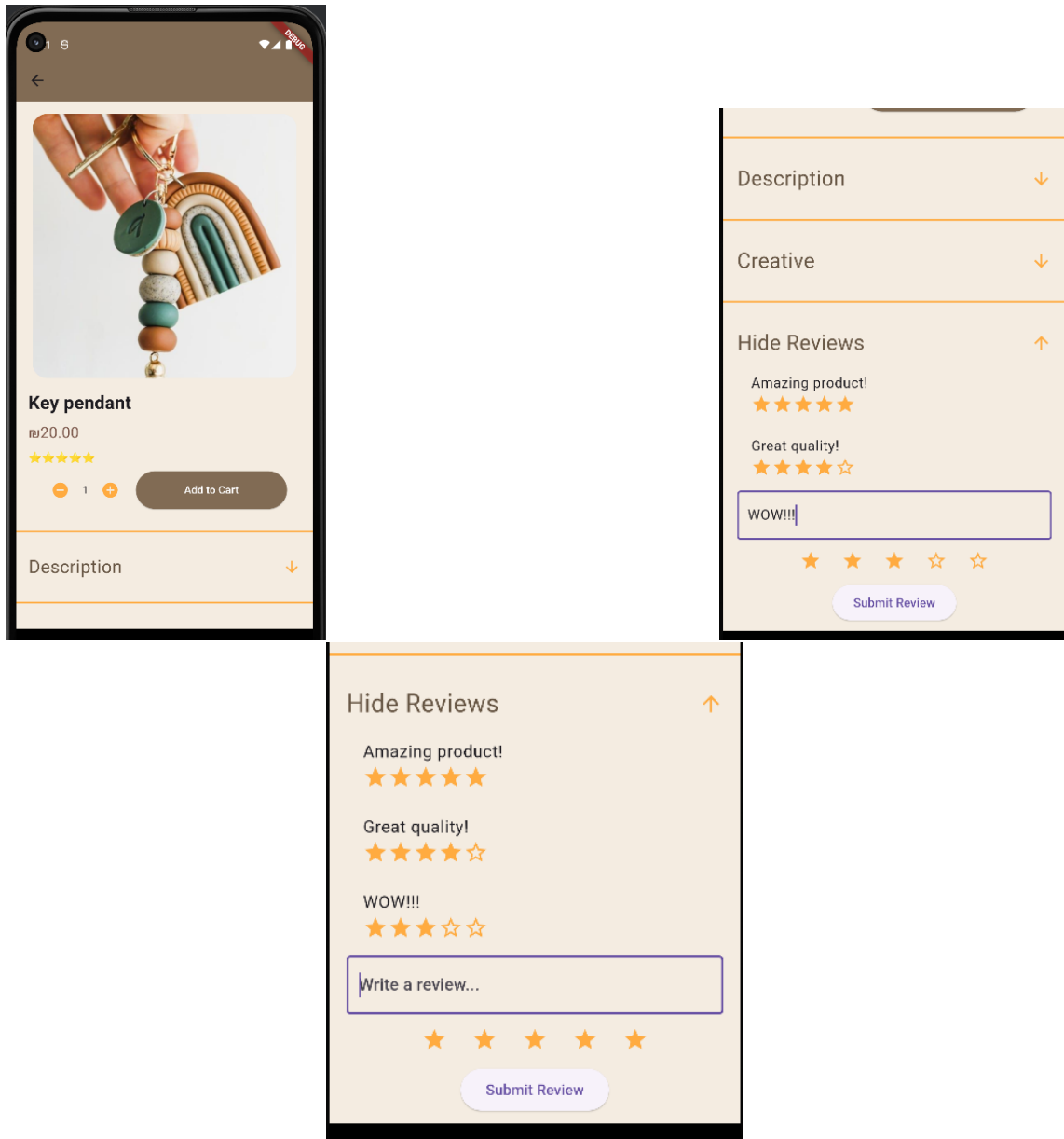


Figure 4.12: Product Details

10. **Shop now:** A detailed list of all the deals is displayed to the user when they click the Shop Now icon. The consumer can peruse the available discounts because each offer is presented in an easy-to-

read manner. The user is directed to a page listing every product that is part of the deal after choosing a specific one. The consumer can see comprehensive product details, including the original and discounted prices, by clicking on any product in the offer. This promotes openness and makes it simpler for the user to assess the deal's worth. This simplified procedure guarantees a seamless buying experience by assisting customers in moving from perusing deals to making purchases.

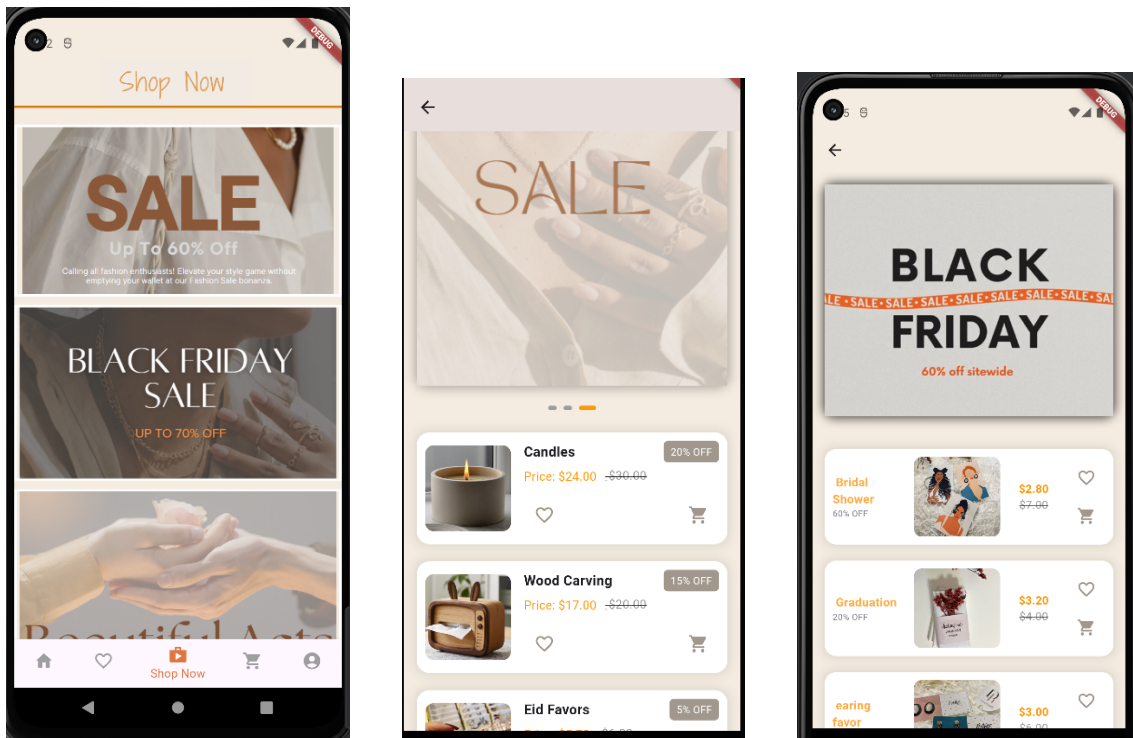


Figure 4.13: Sales

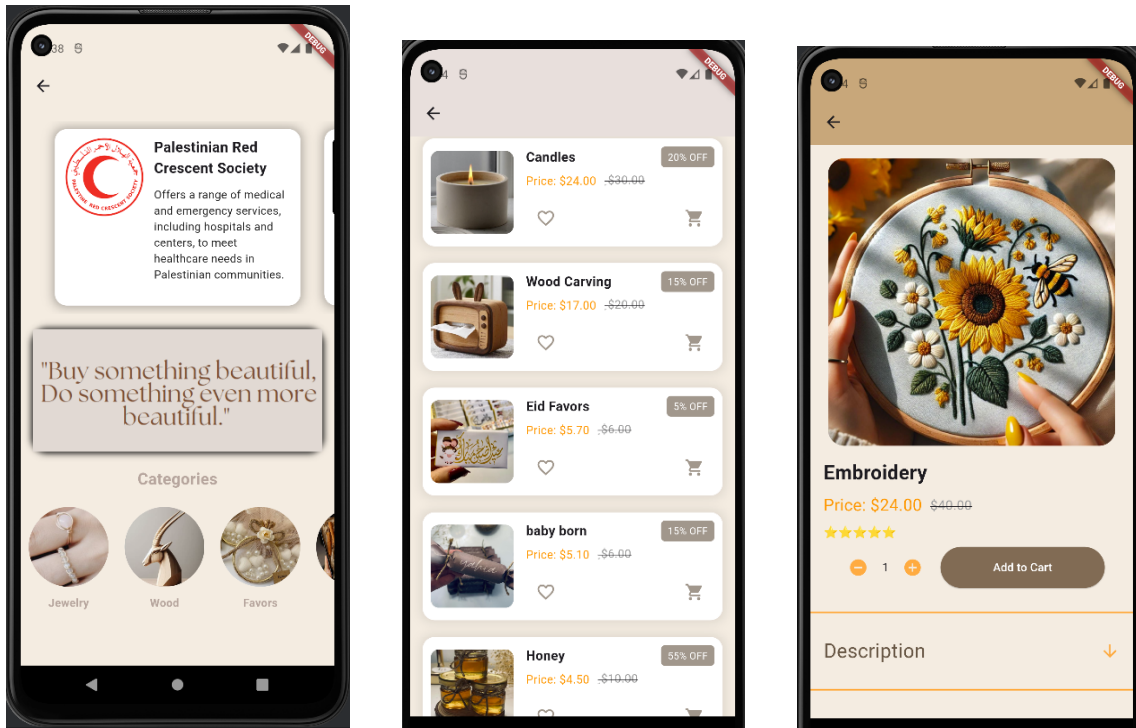


Figure 4.14: Shop Now

11. **Favorites Screen:** The Favorites screen displays all the products that the user has selected and marked as favorites. It provides an organized view of the user's preferred items, making it easy to access them at any time. From this screen, the user has the option to either remove items from their favorites list or add them directly to the shopping cart for purchase. This feature enhances the user experience by offering quick access to saved products and streamlining the shopping process.

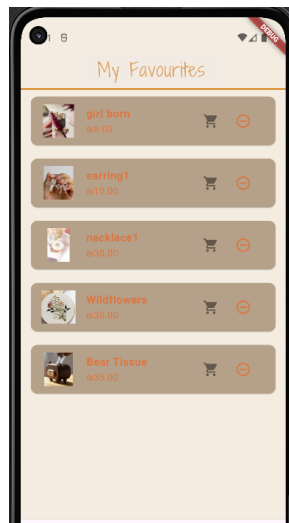


Figure 4.15: favorite Screen

12. **Shopping cart Screen:**The consumer can simply add any item to his shopping cart on this page and proceed to the checkout. The trolley will be empty when it starts. The product will then be added to the cart when we use the Product Details Screen and click the "add to cart" button. The total price of every item in the cart is determined and displayed on the cart page. We have

the option to add, remove, or alter the number of products in our cart.

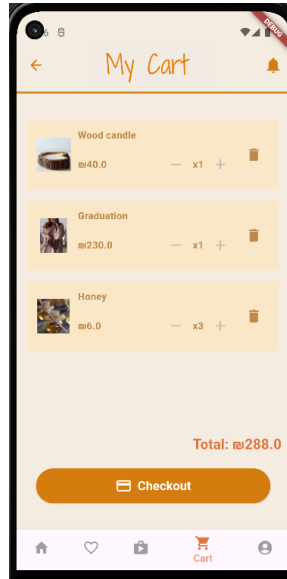


Figure 4.16: shopping cart

13. **Place order Screen:**In order to finish the purchase procedure, the user must indicate here the payment type (cash or card) and the delivery mode (hand receipt or delivery to the lesson he already

added), as indicated below:

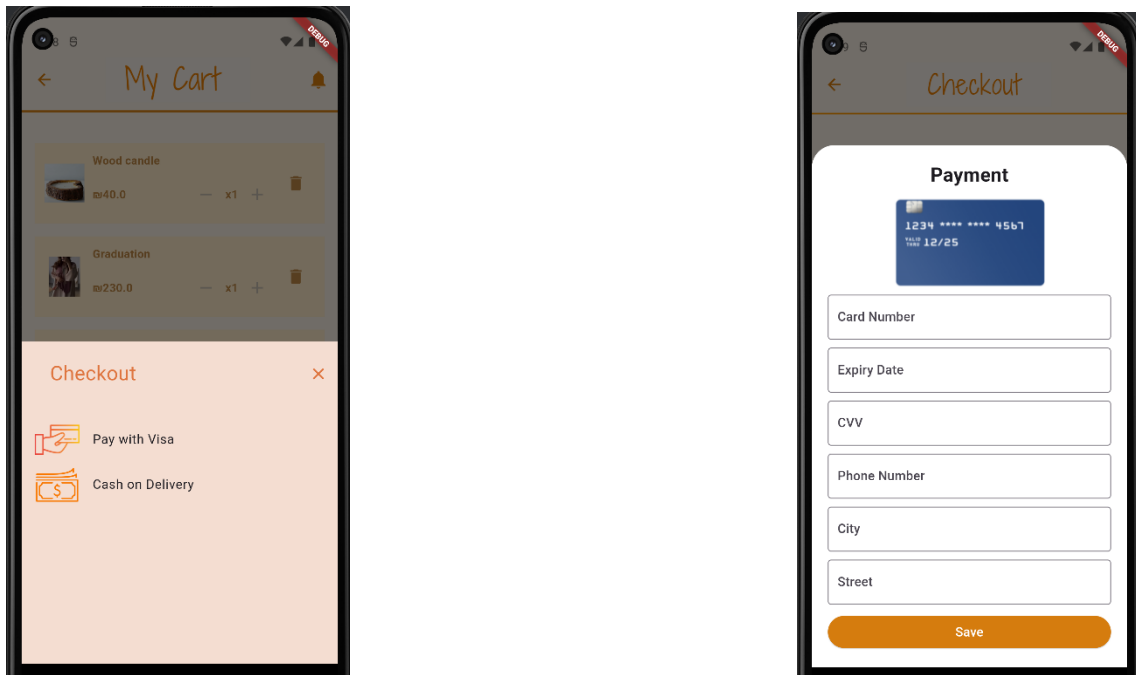


Figure 4.17: Place order

14. **Add address Screen:**By choosing their location and entering it, the user can manually add delivery destinations within the program. The address will be added to the user's delivery address list when they click the button.

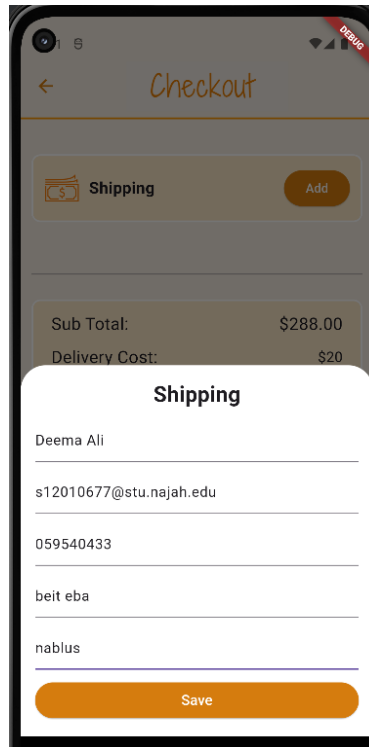


Figure 4.18: Add address

15. **Order Details Screen:**The invoice for that order, which includes the products that were ordered, their number and price, and the total cost including delivery, will show up after clicking the details button on the previous page.

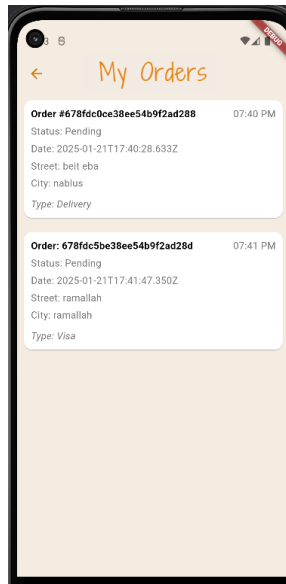


Figure 4.19: Order details

16. **Checkout with Discount Coupon :** During the checkout process, users can apply a discount coupon to reduce the total bill amount. By entering a valid coupon code, the system automatically calculates the discount and updates the final price. This feature allows users to save money and enhances their shopping experience by providing additional value during the payment process.

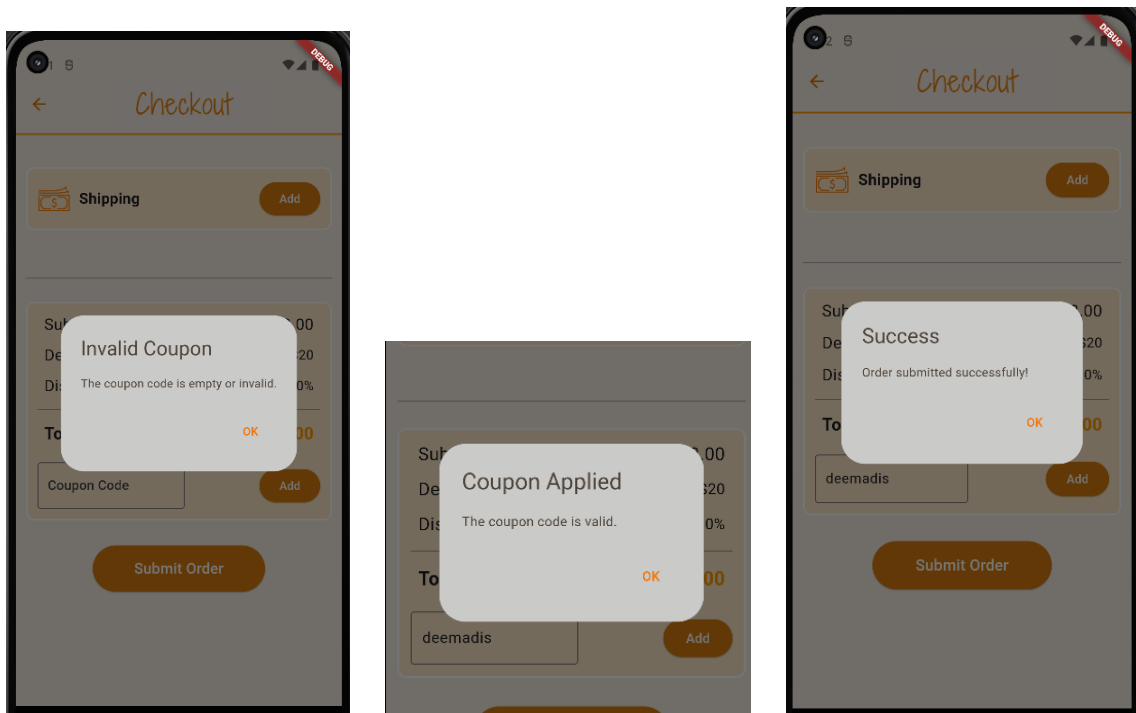


Figure 4.20: Checkout with Discount Coupon

17. **Chat Screen:** For any questions or explanations regarding particular things, users can speak with the product's creative designer directly using the chat option. For instance, a user can inquire about a product's ingredients, applications, and customization possibilities if they are interested in it. Because customers can get comprehensive information about the products they are interested in, this feature offers a personalized purchasing experience. Users can also ask questions regarding special requests or changes to make sure their needs are satisfied. The user and the creative designer gain trust as a result of this dynamic connection, which also increases user happiness.

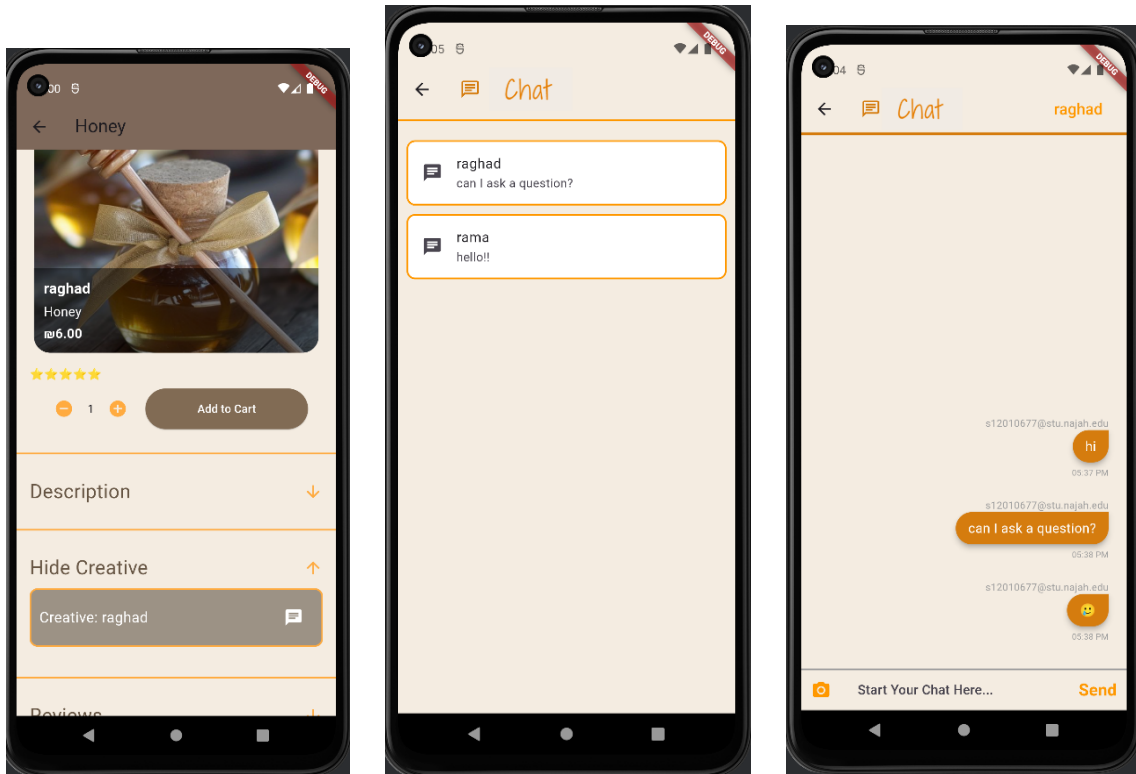


Figure 4.21: Checkout with Discount Coupon

18. **Profile Screen:** Users can access a wide range of account management options on the Account Screen. It offers sections like My Account for personal account information, My Favorites to show saved products, and My Cart to view things added for purchase. Users can upload or edit their profile image, reset their password, and update their name in the My Account area. All account-related features are centralized on this screen, making it simple for users to view and modify their account preferences.

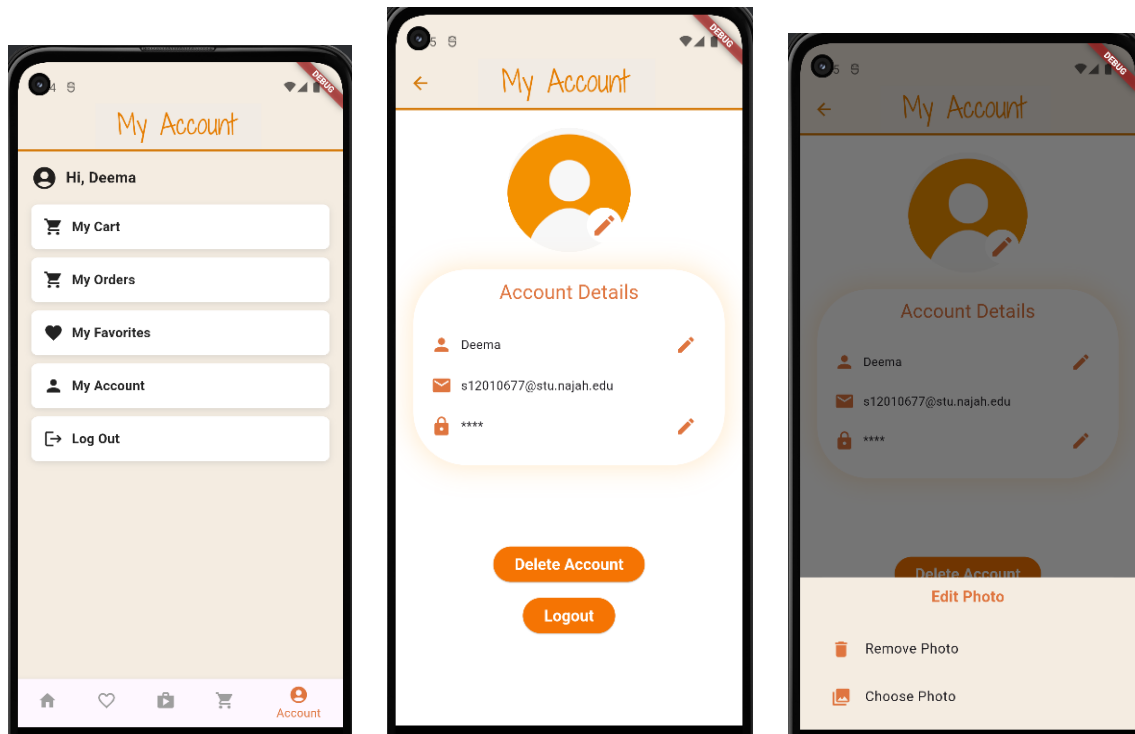


Figure 4.22: Profile

4.7.3 Creative Admin:

1. **Home Screen:** A kind greeting, such as "Welcome, Raghad!" appears at the top of the Welcome Screen, which also has an eye-catching layout. A sizable "Add New Product" button in the middle makes it simple to add new products. Below this, it shows the creator's previous creations in a neat grid arrangement, complete with editing possibilities for each one. A **Bottom Navigation Bar** with icons to move between the application's many sections makes it simple for users to switch between functions.

The navigation bar at the bottom includes the following icons for quick access to different sections:

- (a) **Sales and Discounts:** shows current sales information, special offers, and discounts.

- (b) **Analytics:** displays sales performance data and analysis.
- (c) **Recent Orders:** lists the most recent orders placed by customers.
- (d) **Chat:** Enables communication with customers.
- (e) **Profile:** provides access to creator information and account settings.

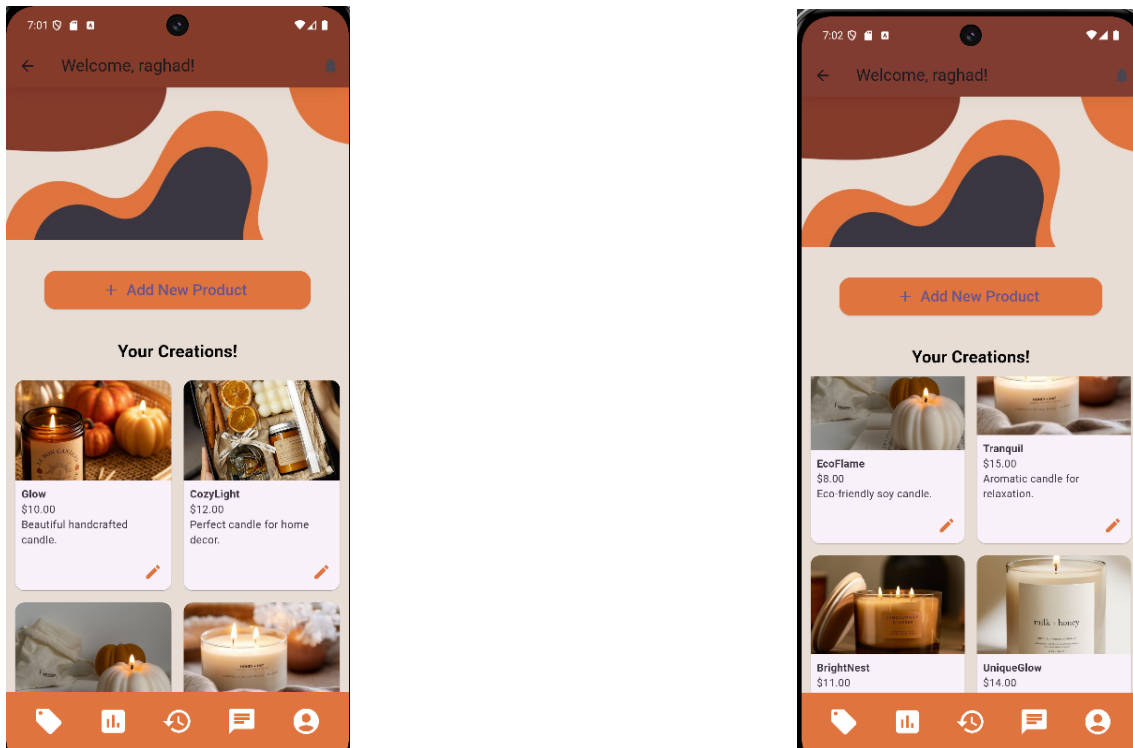


Figure 4.23: entry screen

I can modify any detail about the product :

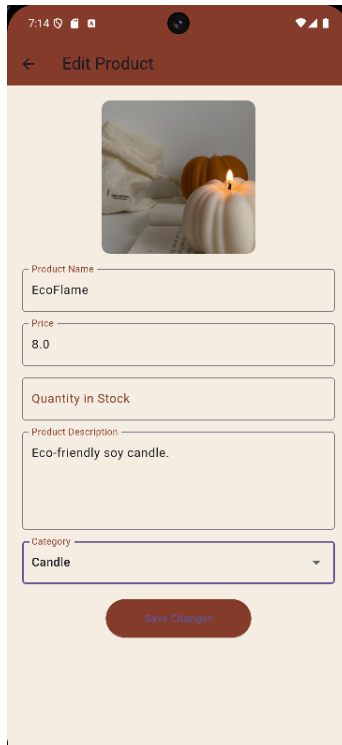


Figure 4.24: notification

2. **Notifications** Clicking the Notifications icon in the bottom navigation bar brings up a screen with the creator's list of notifications. Among the updates included in these notifications are:
- (a) **New Order Received:** Details about recently placed orders, including product names and quantities.
 - (b) **Out of Stock Alert:** Notifications about products that are out of stock.
 - (c) **Message from Customer:** Alerts for customer inquiries or messages.
 - (d) **Discount Coupon Used:** Updates on the usage of discount coupons by customers.

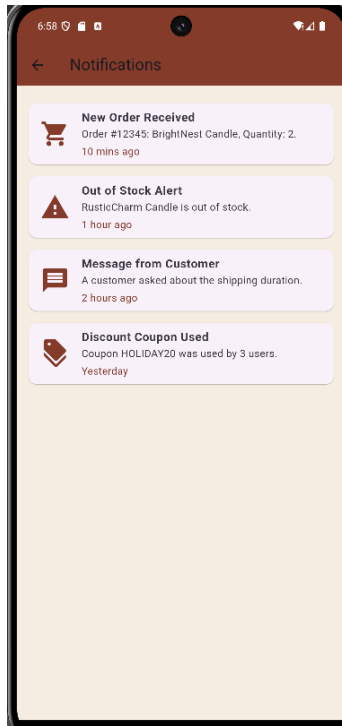


Figure 4.25: notification

- 3. Add new product:** The creator is taken to a screen specifically designed for adding a new product when they click the ****Add New Product**** button. The developer can input the product name, price, quantity, and a brief description on this screen, as well as upload an image of the product by tapping on the appropriate spot. The creator can also choose the relevant category from a dropdown menu and specify how long it will take to prepare the product. After completing the necessary fields, the product can be saved by the creator by selecting the ****Add Product**** option, which will add it to their list of products.

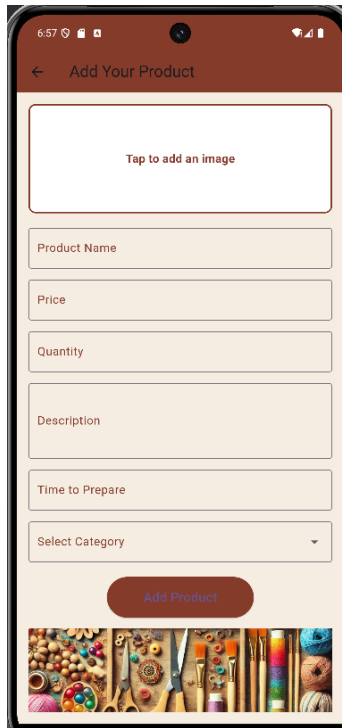


Figure 4.26: add new productscreen

4. **Sales and Discounts:** A detailed overview of all the current sales and discounts that the creator is able to take advantage of can be found in the Sales and Discounts section. Accessing this section brings up a variety of offerings, including unique coupon codes, seasonal bargains, and other motivating promotions. The designer may easily manage and notify their clients about the most recent sales and chances because each promotion is presented in an orderly fashion with distinct names and descriptions.

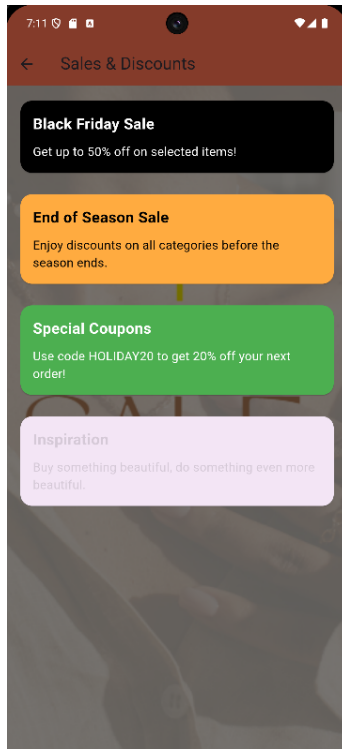


Figure 4.27: sales and discounts

Selecting a particular campaign, like "Black Friday Deals," causes the website to show every product that is now part of that offer. The designer is given a clear picture of each product by including its name, price, image, and a brief description. With a few easy steps, the author may quickly manage the promotion in this section by adding new products or deleting current ones. To keep the campaign current and enticing to consumers, they can also alter the products' pricing, description, and other characteristics. The designer can effectively and flexibly maintain complete control over their promotional efforts thanks to this simplified feature.

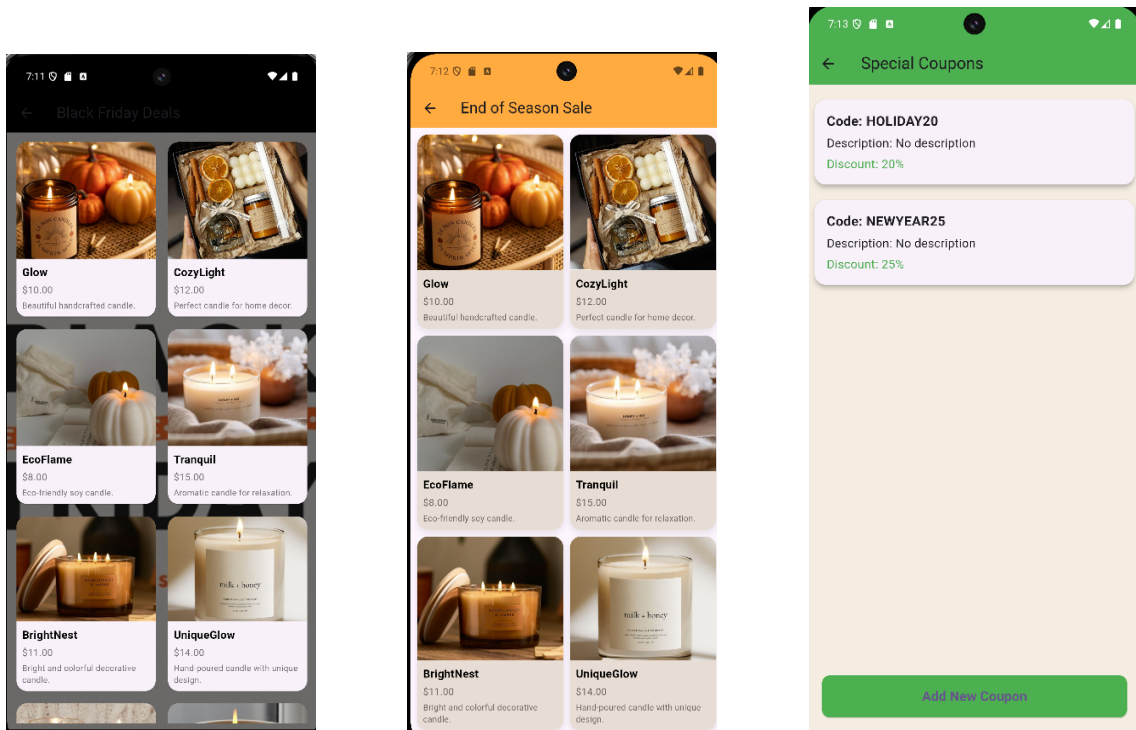


Figure 4.28: sales and discounts

This interface gives you total control over how you handle coupons and deals. Any product may be quickly added to or removed from a particular offer, and all associated information, including price and description, can be easily edited. You can also change the codes, percentages of discounts, or usage data of already-existing coupons. By adjusting the discount code, percentage, and validity time, new coupons can also be made. This guarantees smooth and expert management of promotional offers and merchandise.

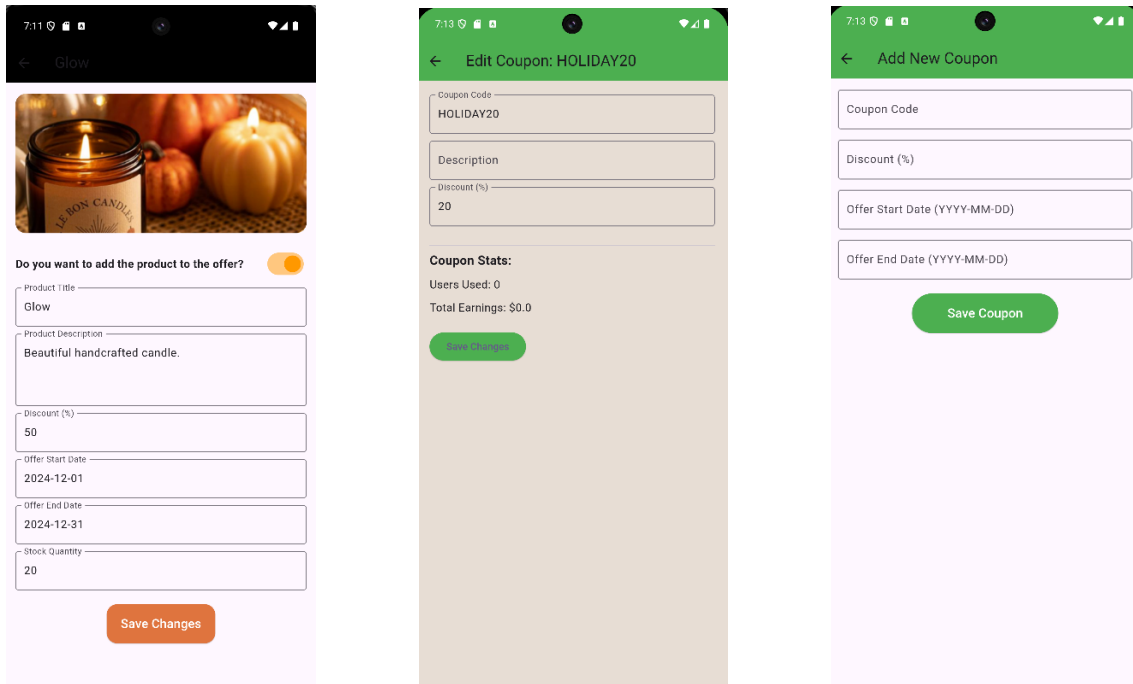


Figure 4.29: sales and discounts

5. **Analytics:** A thorough summary of the creative's product performance and sales numbers can be found in the Analytics section. When the icon is clicked, the user is taken to a page that displays important data, including the total revenue, which is the sum of the profits from all sales and items. Along with client feedback, which includes evaluations and ratings that aid in determining areas for development and gauging customer happiness, it also shows the total sales, which indicates the quantity of things sold. With the help of this function, the creative can monitor developments, evaluate achievements, and make well-informed choices to maximize their business plan.

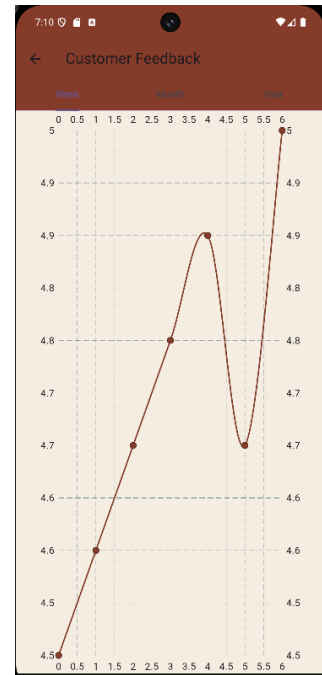
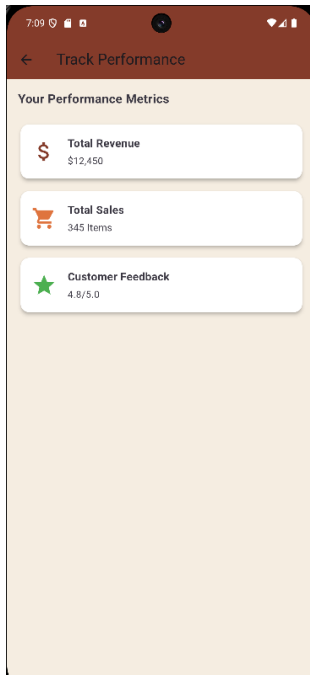


Figure 4.30: Analytics

6. **Recent Orders:** The creative can get a clear, simple, and well-organized overview of the most recent customer transactions in the Recent Orders area. Every order is displayed on a card that includes the items purchased, the total order amount, and the customer's name. The creative is taken to the transaction's details view after choosing an order. The customer's name, mailing address, phone number, and email are among the relevant details that are shown on the **Order Details** page. The page also provides a list of every item that was part of the order, along with the product names, prices, and quantities. The order's entire cost is easily readable at the bottom because to its large emphasis. With the help of this tool, the creative can evaluate and handle orders more effectively and quickly access all the information needed for order processing and customer service.

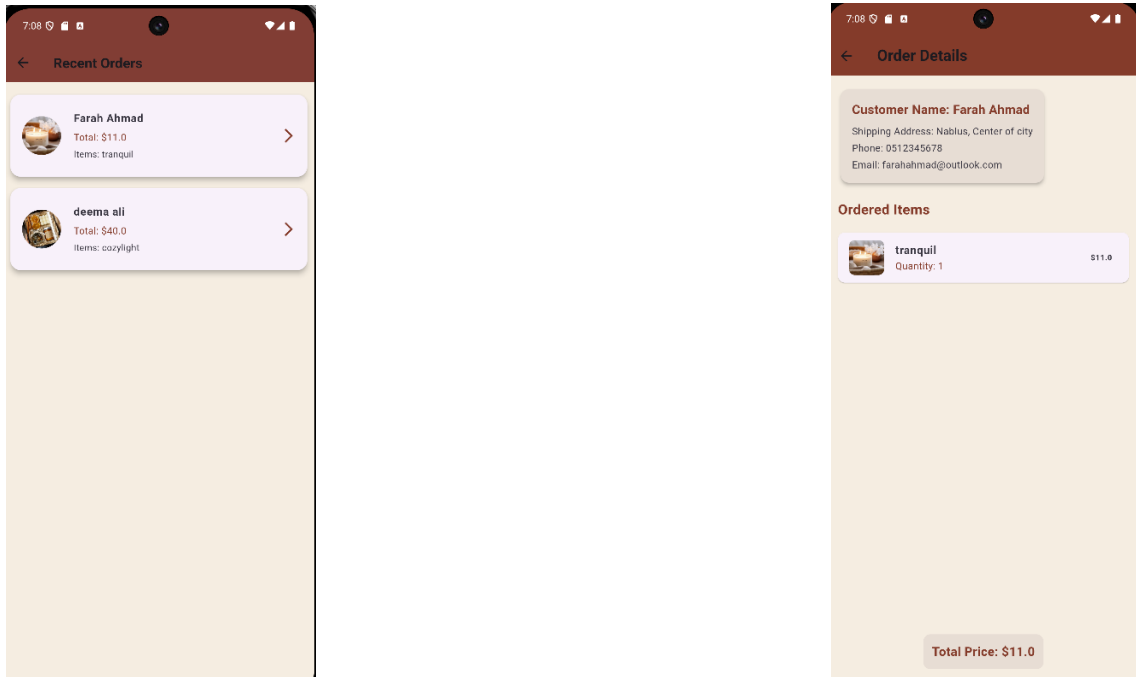


Figure 4.31: Recent Order

7. **Chat:** The application’s Chat Feature facilitates direct communication between the user and the creative, guaranteeing a smooth and customized experience. Users can quickly ask questions about particular handcrafted goods that might not be included in the application right now using this chat feature. Additionally, they can request special orders that include things like distinctive designs, particular colors, or individualized touches to fit their tastes. Users can also ask specific inquiries concerning current products, including what materials were utilized, how big they are, or when they will be delivered. The user might receive clarity and reassurance from the creative’s quick responses to these questions. Because of the trust and cooperation that are fostered by this real-time contact, the application is more than simply a marketplace; it is a location where users and creatives come together to realize

one-of-a-kind, handcrafted ideas.

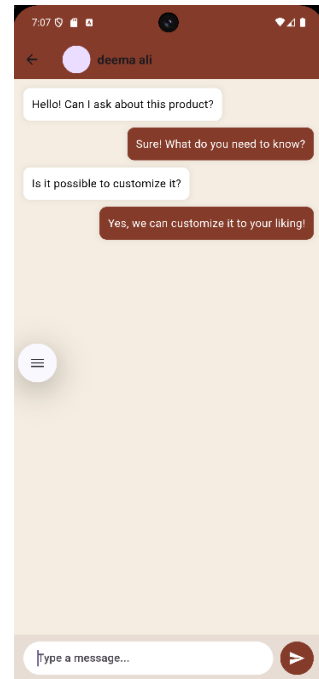
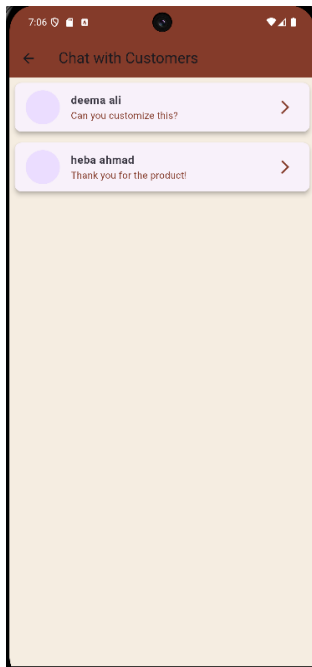
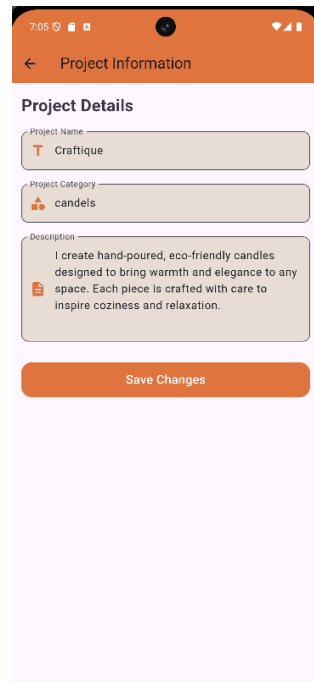
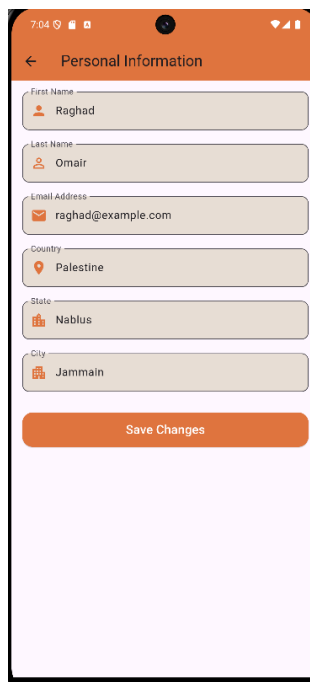
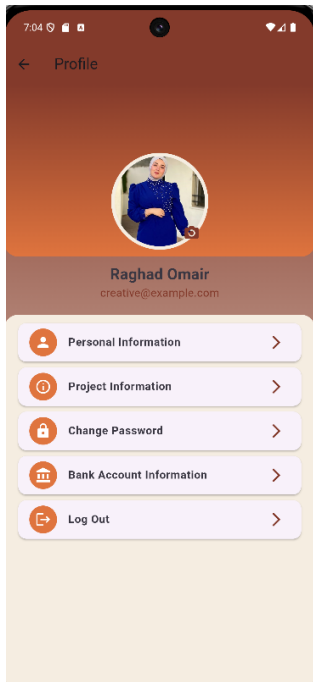


Figure 4.32: chat

- 8. Profile:** Users can easily maintain and update their personal and professional information on the Profile Page. Users have the ability to change personal information including their name, email address, and project-related details. They can also safely update their bank account information, change their password, and access crucial project settings. This feature guarantees creatives complete control over their profile while preserving a polished and customized app experience.



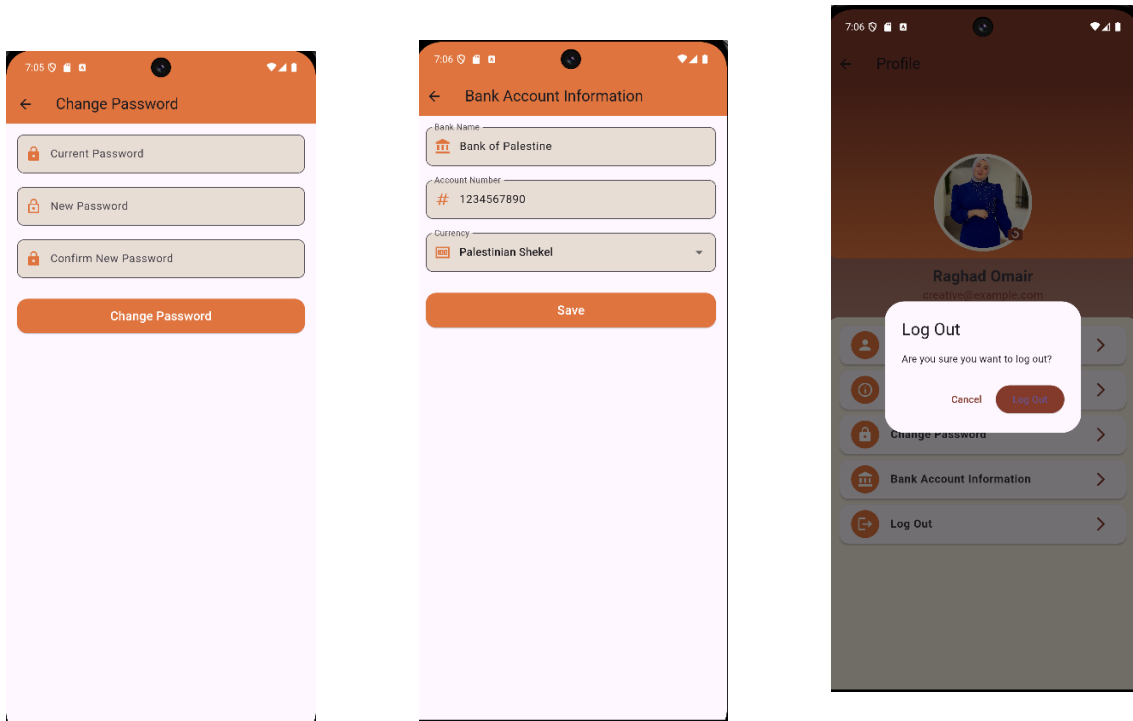


Figure 4.34: Profile

4.7.4 Website:

1. **Charts:** We have two charts:

- (a) First one for new account distribution over years from 2023-2024.
- (b) Second chart is about payment distribution per month.

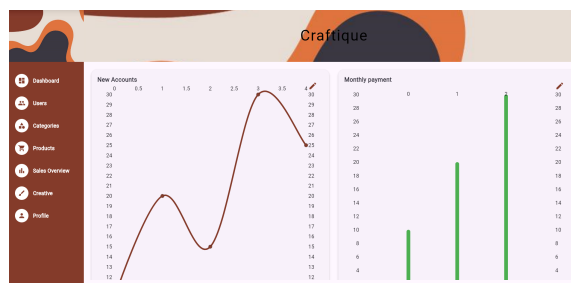
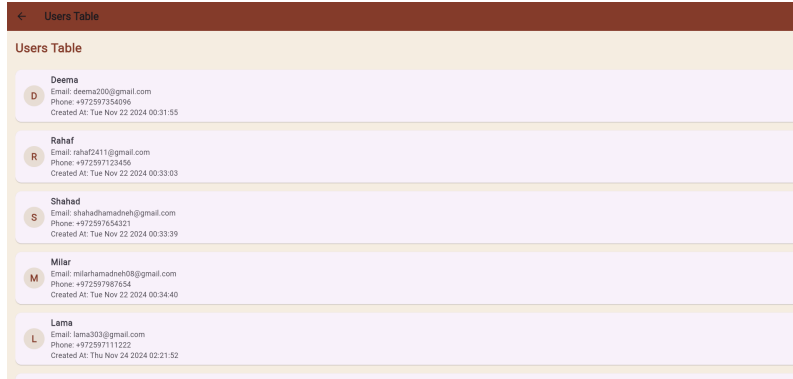


Figure 4.35: dashboard

2. **Tables:** We displayed a table including all of the craftique in the database along with their names, images, and types. All of the significant database tables were shown on these screens, along with add, modify, and delete buttons.

User Table: This user table is used for statistics and monitoring.

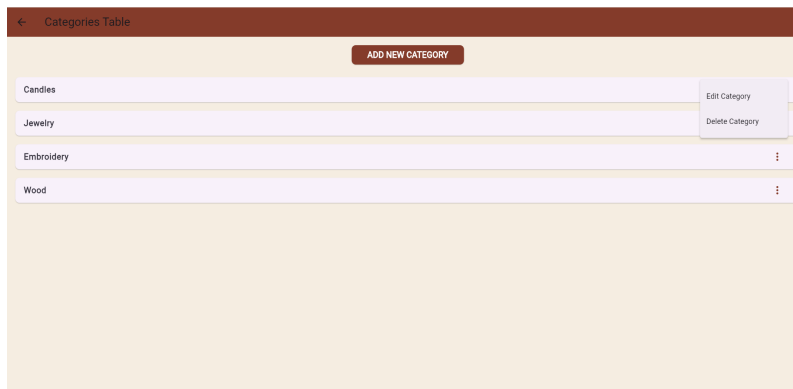


The screenshot shows a mobile application interface for a 'Users Table'. At the top, there is a dark brown header with a back arrow and the text 'Users Table'. Below the header, the title 'Users Table' is displayed. The main content area contains a list of five user entries, each in a light purple rounded rectangle. Each entry includes a circular profile picture with a letter, the user's name, email, phone number, and creation date.

Name	Email	Phone	Created At
Deema	deema200@gmail.com	+972597354096	Tue Nov 22 2024 00:31:55
Rahaf	rahaf2411@gmail.com	+972597123456	Tue Nov 22 2024 00:33:03
Shahad	shahadshahadshah@gmail.com	+972597354021	Tue Nov 22 2024 00:33:39
Milar	milarshahadshah08@gmail.com	+972597987654	Tue Nov 22 2024 00:34:40
Lama	lama303@gmail.com	+972597111222	Thu Nov 24 2024 02:21:52

Figure 4.36: User table

3. Categories Table:



The screenshot shows a mobile application interface for a 'Categories Table'. At the top, there is a dark brown header with a back arrow and the text 'Categories Table'. Below the header, there is a button labeled 'ADD NEW CATEGORY'. The main content area contains a list of four categories in light purple rounded rectangles: 'Candles', 'Jewelry', 'Embroidery', and 'Wood'. Each category has an 'Edit Category' button and a 'Delete Category' button on the right side.

Category	Actions
Candles	Edit Category, Delete Category
Jewelry	Edit Category, Delete Category
Embroidery	Edit Category, Delete Category
Wood	Edit Category, Delete Category

Figure 4.37: category

Delete Category: delete the category from the database.
Edit Category:edit category name.

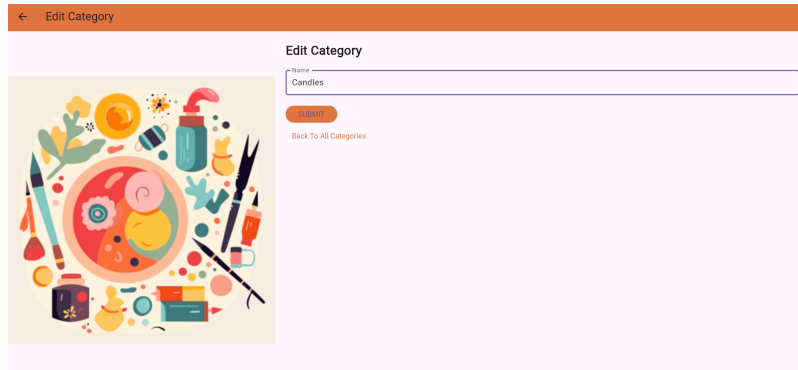


Figure 4.38: Edit category

when i click add new category

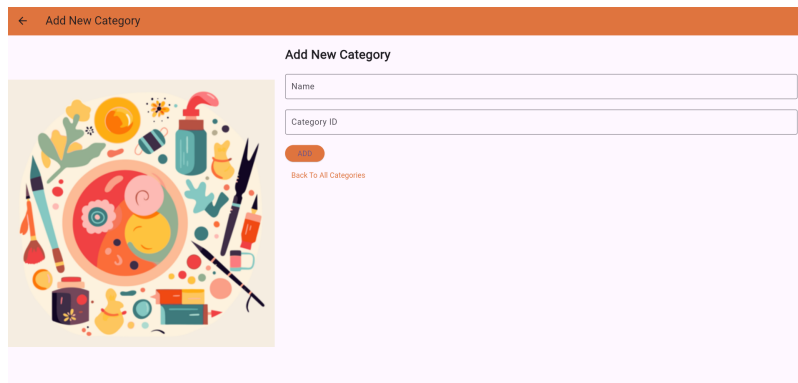


Figure 4.39: Add category

4. **Products:** Shows all product details like image, name, price, quantity,... For this table, we can perform add and delete actions.

Products Table		
	Candle 1 Quantity: 10 Price: \$10 Category: Candles	
	Candle 2 Quantity: 15 Price: \$12 Category: Candles	
	Candle 3 Quantity: 5 Price: \$8 Category: Candles	
	Candle 4 Quantity: 12 Price: \$15 Category: Candles	
	Candle 5 Quantity: 8 Price: \$11 Category: Candles	
	Candle 6 Quantity: 9 Price: \$14 Category: Candles	
	Candle 7 Quantity: 7 Price: \$9 Category: Candles	
	Candle 8 Quantity: 6 Price: \$13 Category: Candles	

Figure 4.40: Product

Edit product: I can edit any information related to the product

Edit Product

Edit Product Details

Product Name
Candle 1

Product Price
10

Product Quantity
10

Product Description
Edit product description here

Save

Figure 4.41: Edit product

5. **Sales overview:** Users can examine performance trends across various time periods by examining the graphical depiction of sales data provided by the application's "Sales Overview" screen. To observe the data distribution, users can change between three categories on the screen: "Week," "Month," and "year." The bar chart is simple and easy to use.

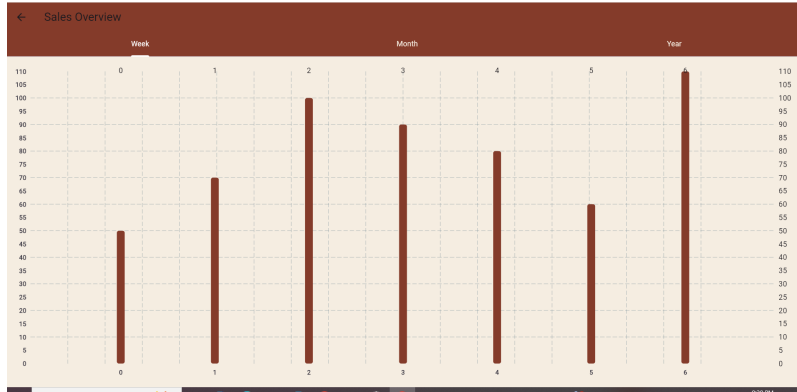


Figure 4.42: sales overview

6. **Creative :** Individual performance is displayed on this screen as a bar chart that shows how many products each person contributed. Below the graphic is an orderly list of additional information, including the quantity of products and the revenue earned by each individual. Comprehensive performance analysis is made possible by the design, which makes it simple for each user to navigate and observe more details. Additionally, every creative who registers on the application will appear on this screen, ensuring that their contributions are tracked and showcased effectively.

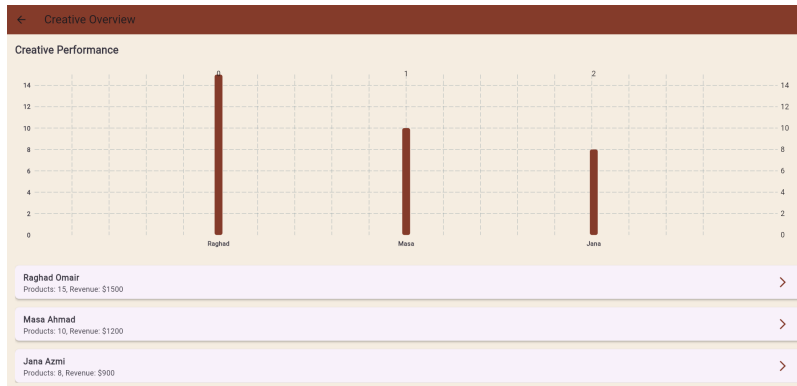


Figure 4.43: creative overview

Creative details:



Figure 4.44: creative details

- Admin Profile:** Administrators can manage their account and project-related information centrally from the Admin Profile panel. A series of options to access personal information, project data, password settings, bank account information, and logout functionality follows the admin's name, email, and profile image at the top for easy identification. With its well-structured layout and eye-catching gradient background, the design guarantees a user-friendly experience.

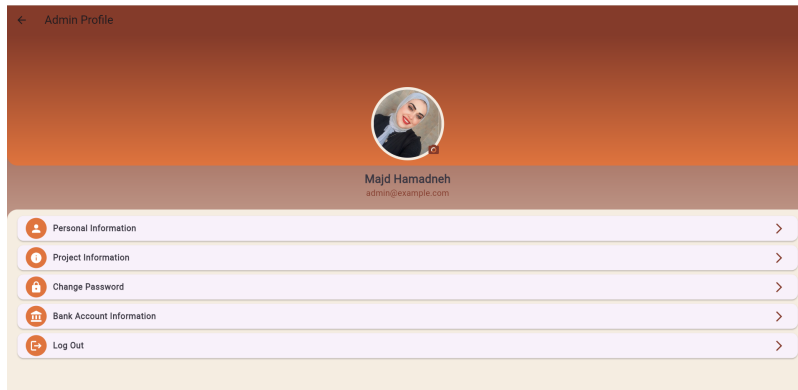


Figure 4.45: admin profile

Personal Information:

The image shows a mobile application screen titled "Personal Information". At the top left, there is a back arrow and the text "Personal Information". Below the title, there are six input fields, each with a label and a right-pointing chevron: "First Name" (value: Majd), "Last Name" (value: Hamadneh), "Email Address" (value: majd@example.com), "Country" (value: Palestine), "State" (value: Nablus), and "City" (value: Asira Al-Shamaliyah). At the bottom of the form, there is a dark red button with the text "Save Changes".

Figure 4.46: personal info

Project Information:

← Project Information

Project Details

Project Name
T Craftique

Project Category
E-Commerce

Description
Craftique is a platform for buying and selling handmade crafts, designed to support artisans and small businesses.

Save Changes

Figure 4.47: project info

Change Password:

← Change Password

Current Password

New Password

Confirm New Password

Change Password

Figure 4.48: change password

Bank Account Information:



Figure 4.49: bank account information

Log Out:

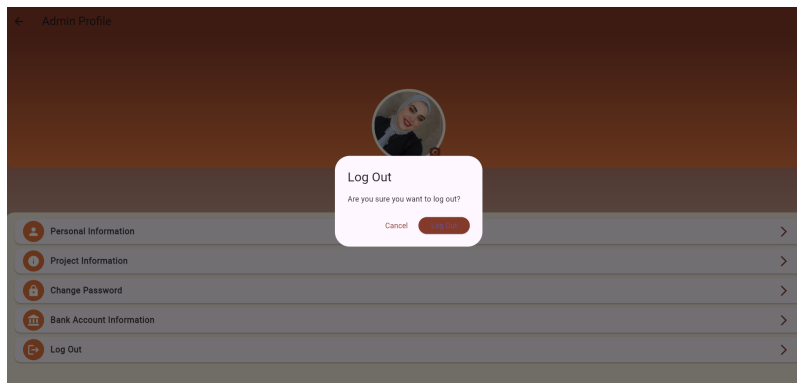


Figure 4.50: logout

4.8 Database and API Server

In order to create a high-performance backend server and implement all of the RESTful APIs, we utilized the Node.js framework in our application. Numerous built-in Node.js functions and libraries helped us implement and build the necessary functionality and methodology.

Chapter 5

Conclusion and Results

used two databases—Firebase for real-time updates and MongoDB as the primary database—as well as a variety of technologies and programming languages, such as Flutter and Node.js. We created a smooth and dynamic application for the Cartique project that makes it simple for users to browse, compare, and buy products. Users can track orders, save their favorite products, and check comprehensive performance metrics for creatives with this customizable app. Furthermore, we included a robust admin panel that gives administrators a user-friendly interface for managing products, tracking sales performance, and updating data with ease. The end product is an effective, user-focused platform designed for administrators and customers alike.

1. **Learning:** Learning new things obviously necessitates thorough research into these things and ensuring that they are used effectively, both of which involve time and effort, given that we have employed new technology that we have never used before. The internet gave us access to a multitude of materials that aided in our learning, and we selected Flutter as our platform in addition to Node.js for back-and-end development and handling two distinct database implementations.
2. **Challenges:**

- (a) Using new programming languages and frameworks made implementation challenging.
- (b) Excessive editors and simulations that strained our laptops.
- (c) Diverse features from various disciplines caused delays in our efforts.
- (d) Difficult to operate with two databases

Chapter 6

Conclusion

1. **Summary:** We have successfully created a cross-platform application for Craftique that is intended to give users who want to buy and manage creative and handmade goods a smooth experience. Through the application, customers can easily track their orders, remember their favorites, and browse and purchase unique products. It also has an easy-to-use admin dashboard that lets administrators effectively change product data, track sales, and manage inventories. Craftique facilitates a smooth relationship between creatives and consumers by including user-friendly interfaces and strong features, guaranteeing a platform that is encouraging for exhibiting creativity and improving the buying experience.
2. **Things we learned:**
 - (a) Using the Flutter framework and the Dart programming language, mobile development.
 - (b) Using the Node.js framework and JavaScript, create a high-performance REST API.
 - (c) Using Postman to test endpoint APIs
 - (d) Create a chat system
 - (e) Working with servers and URL's confidently,

- (f) Dealing with developer APIs and using data from websites in our ejs application
- (g) Working with developed APIs
- (h) Managing GitHub and Git
- (i) Work together with numerous Flutter packages to complete our project.

3. **Recommendations** In computer science and engineering departments, mobile app development has grown in importance and merits further discussion. It will save time and effort for students to take a course that teaches the fundamentals of creating applications.

4. **Future Work:** There are many features we want to add to our software and many more we want to improve, will not stop there.

- (a) In addition to group chats, the chat system will be improved to accommodate voice messages, photos, and videos.
- (b) For simpler and more precise delivery address input, use enhanced map integration and automated geolocation detection.
- (c) By adding the narrative function and the ability to follow and unfollow, the app is becoming more similar to social media.

Chapter 7

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Chapter 8

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