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FACULTY OF ENGINEERING AND INFORMATION TECHNOLOGY

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Craft Hub

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DISCLAIMER STATEMENT

This report was written by students at the Computer Engineering Department, Faculty of Engineering, An-Najah National University. It has not been altered or corrected, other than editorial corrections, as a result of assessment and it may contain language as well as content errors. The views expressed in it together with any outcomes and recommendations are solely those of the student(s). An-Najah National University accepts no responsibility or liability for the consequences of this report being used for a purpose other than the purpose for which it was commissioned.

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ABSTRACT

In this modern era, with the rapid development of technology and the proliferation of online shopping, we have observed that individuals who are interested in entering the field of handmade crafts tend to create online pages to sell their creations. However, the majority of these pages fail to market their products because they do not reach the category that is concerned with these products. As a result, we have introduced our platform CraftHub to bridge the gap between these creators and their potential customers.

CraftHub is an innovative application designed to connect and empower owners of handmade projects, providing a dedicated platform for them to showcase and sell their unique creations and provide an easy way for customers to find them. The application fosters a vibrant community of artisans offering a seamless and visually appealing space for users to discover, connect, and transact.

The platform seamlessly integrates registration functionality for both artisans and users, enabling effortless engagement. This feature allows artisans to showcase their handmade creations while providing users with a personalized experience tailored to their preferences. Through registration, artisans gain access to a dedicated space to display their work, while users can easily explore a wide array of categories to find items that match their interests. Additionally, the platform offers features that streamline browsing, searching, and purchasing within desired categories, ensuring a smooth and enjoyable experience for all users.

CraftHub stands out among the many online shopping apps by providing a distinct platform that showcases artists' ingenuity and improves the chances of selling their items. CraftHub is a unique online platform that specializes in selling handmade goods. It caters to artisans by giving them a platform to display their skills and offers clients a personalized shopping experience based on their preferences for handcrafted products.

CHAPTER 1: INTRODUCTION

1.1 GENERAL BACKGROUND

With the development and advancement of technology, craftsmen and handicrafts owners have resorted to displaying their work on social media pages for the purpose of selling, but the main obstacle they face is reaching the target group interested in purchasing these products.

1.2 OBJECTIVES

The main objective of this project is to design an application that connects craftsmen and people interested in these products instead of creating a general page on social media sites, which often fails to reach the target groups, by allowing these project owners to register on the site so that each of them has a special page to display their work and products, and users also create an account in the application, which allows them to browse the pages of craftsmen and access the desired products in the fastest and easiest way.

1.3 SIGNIFICANCE OR IMPORTANCE OF YOUR WORK

The importance of this work lies in its ability to connect project owners and customers in terms of facilitating communication between them and accessing the required products. Thus, we ensure saving the user time and effort in searching for the desired product and increasing the requests and financial income of the owners of these products.

CHAPTER 2: THEORETICAL BACKGROUND AND PREVIOUS WORK

2.1 THEORETICAL BACKGROUND

There is no doubt that most aspects of life today have become dependent on technology and its uses, and are no longer limited to entertainment, communication between people, and bridging distances, but have developed and extended to the fields of marketing, purchasing, and developing sources of income for individuals, which prompted us to develop an application that combines the features of social networking sites for browsing and following pages and e-commerce applications to create a suitable environment to access the desired product in the easiest way.

2.2 PREVIOUS WORK

For many years, there has been a great interest in developing marketing and trade methods, which prompted people to create applications to market their products via the Internet, in addition to another type of developers who were interested in creating social networking, entertainment and entertainment sites. Recently, the method of creating pages on social networking sites to display their work has spread among users.

These sites have shown great success in increasing the amount of sales for product owners in addition to the great demand from users to buy via the Internet instead of traditional shopping.

However, we noticed that many electronic marketing methods are boring and tend to display industrial products, so craftsmen who use this method to publish their products often fail to reach people interested in this type of business, which prompted us to think about designing an application that increases the opportunity to reach this type of product in an easy and smooth way.

CHAPTER 3: METHODOLOGY

3.1 TECHNICAL CHOICES

Front-end: We chose to use Flutter for developing the front-end of our application and website as you can build native, desktop-quality apps quickly without breaking a sweat. Hot reload in flutter made iteration and debugging super easy which really saved us a lot of time. Its ample assortment of fully customizable widgets and pre-built material components to make an immersive user experience consistent across all platforms.

Back-end: We went with Django as our backend for the application and website because of its versatile feature set, easy to develop build rapidly (Rapid development framework), made up AG Authentication System Fermenting. Django's "batteries-included" mindset also helped us by providing an ORM, admin interface and authentication system out of the box so we could get off the ground running with built in components instead of spending time developing my own that might not be as feature rich or secure. They had successfully used it for high-traffic applications such as Instagram and showed no signs of scalability issues; reassuring us that if we ever needed to scale out our application, this foundation would be a good one. In addition, its vibrant community and rich documentation make it a suitable choice for creating safeguarded web-product with high scalability.

Database: For our application and website, we chose PostgreSQL as the database mostly due to its very feature list and rock-solid data integrity with almost unlimited scaling capabilities. PostgreSQL is renowned for its adherence to ACID compliance which helps it maintain data integrity and hence, best suited for complicated transactions/ critical data. It was flexible for querying and data manipulation due to its support of advanced SQL features like window functions and common table expressions. In addition, the vibrant PostgreSQL community and fast updates eased concerns about active support for sure fixes. In summary — both the performance, extensibility and large community behind PostgreSQL made it the right choice for serving as a backend data storage in our project.

Model controller: In our application we used the MVVM (Model-View-View Model) architecture to make a separation of concerns and increase maintainability. MVVM splits up the application into three big components: Model (data and business logic), View (user interface),View model(mediator between Model and View). By separating the display layer from the business logic, this architecture simplifies code management and testability The View Model is designed to deal with all UI and user interactions the same way regardless of whether your application runs in Android or Jetpack Compose. This framework lets developers work together with even greater ease and ensures the agile development method that an app owner wants to change current feature of update them in a regular manner.

State management: We also use Bloc for state management in our application to keep data and business logic flows clear and structured. Single source of truth Bloc separates Presentation from Business logic Cubit is much more "simple" or incredibly simplistic version of Bloc and yet it makes the handling state changes with minimal boilerplate code simple. In either case, the patterns are built to accommodate Dart's strengths in reactive programming so that updates can be done efficiently on UI based changes and events. Not only did this architecture improve the scalability and maintainability of our code, but it also allowed us to develop a responsive & easy-to-use user experience for all parts of our application.

Chat system backend: We chose Firebase because of its real-time database support and easy integrations with mobile web platforms. Firebase is a real-time database, so it provides synchronization of data across clients in no time and hence we will have instant messaging experience plus updates within the chat system. Going further, there is also the sturdy cloud storage offerings Firebase brings that meant Media and file transfers were seamlessly managed in our chat app. In general, Firebase is the best option to develop a chat system regarding its quick and real-time support which comes with many services that could be used.

3.2 METHODS AND TECHNIQUES

3.2.1 MOBILE PAGES

Welcome Page: In this page the new user has two options to sign up, which is Sign up as an Artist or Sign up as a normal User. The other option is the Sign in Page for already existed users.

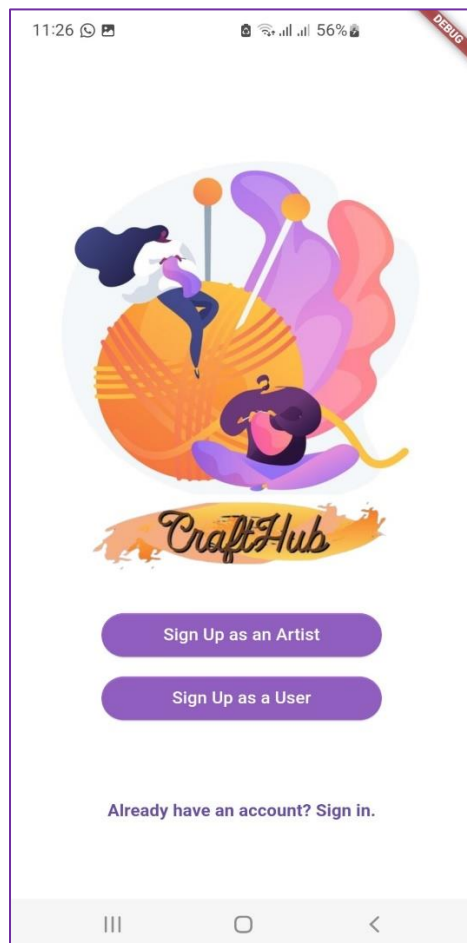
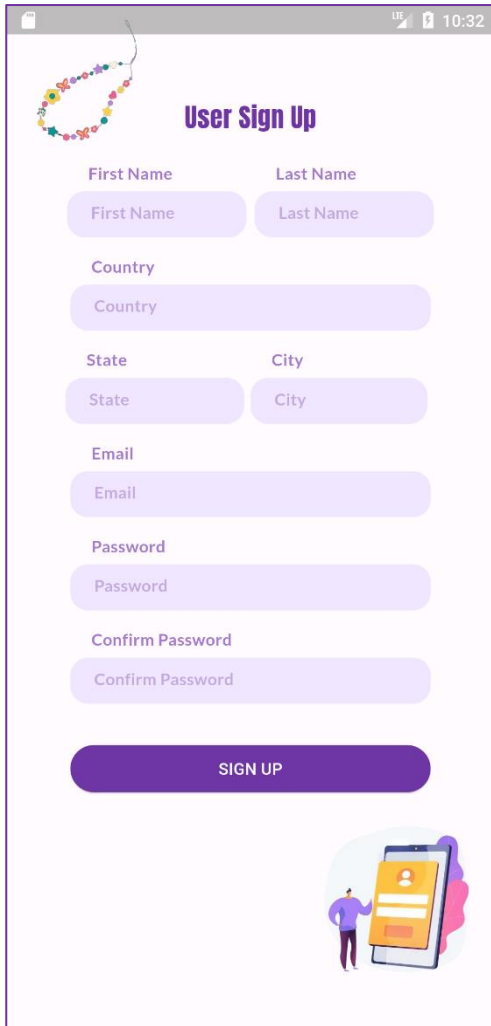


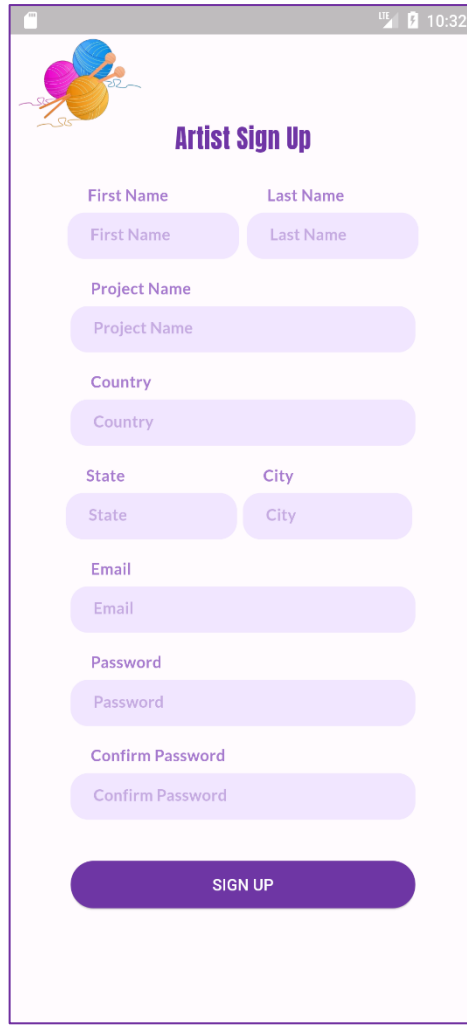
FIGURE 1: WELCOME PAG

Authentication: For authentication we have three different pages: the Artist Sign up page, which guides the artist through a seamless process to register his information and his project information, the User Sign up page that takes the user through straightforward procedure to fill out his details, and the sign in page to takes each user to his home page.



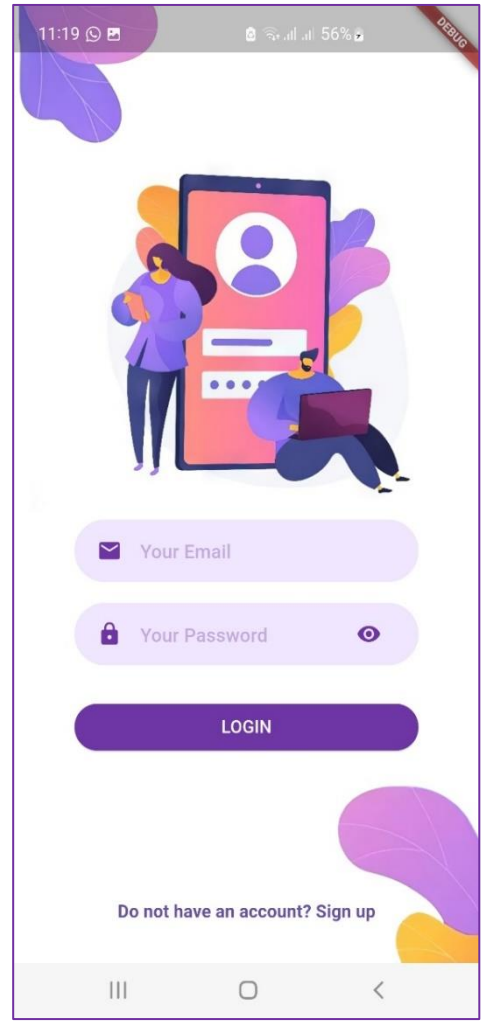
The 'User Sign Up' page features a colorful beaded necklace icon at the top left. The title 'User Sign Up' is centered. The form includes fields for First Name, Last Name, Country, State, City, Email, Password, and Confirm Password. A purple 'SIGN UP' button is at the bottom. An illustration of a person with a smartphone is in the bottom right corner.

FIGURE 2: USER SIGN UP PAGE



The 'Artist Sign Up' page features a colorful yarn and knitting needles icon at the top left. The title 'Artist Sign Up' is centered. The form includes fields for First Name, Last Name, Project Name, Country, State, City, Email, Password, and Confirm Password. A purple 'SIGN UP' button is at the bottom.

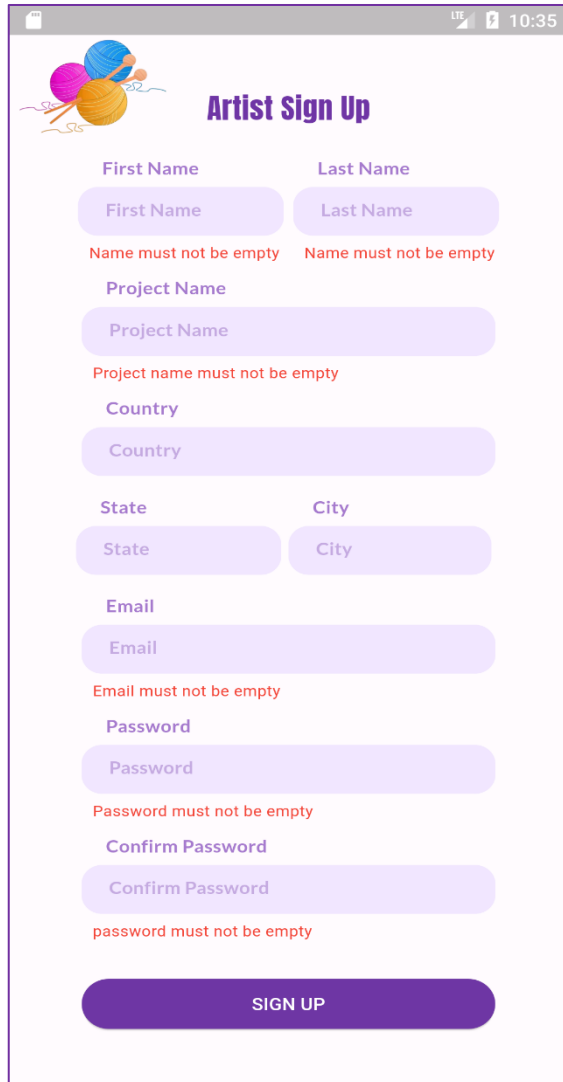
FIGURE 3: ARTIST SIGN UP PAGE



The 'Sign In' page features a large smartphone illustration with a person and a laptop. The title 'Sign In' is centered. The form includes fields for 'Your Email' and 'Your Password' with a toggle for visibility. A purple 'LOGIN' button is at the bottom. A link 'Do not have an account? Sign up' is at the bottom. A 'DEBUG' banner is in the top right corner.

FIGURE 4: SIGN IN PAGE

Validation: Before submitting the sign up and sign in requests to the backend, we first checks that the entered data are valid, so if the data found to be not valid the user gets a chance to correct them, for example we always check if all the fields are not empty, and the email address are following the pattern, the password are at least 8 characters long, and the confirm password is matches the password field in sign up pages.

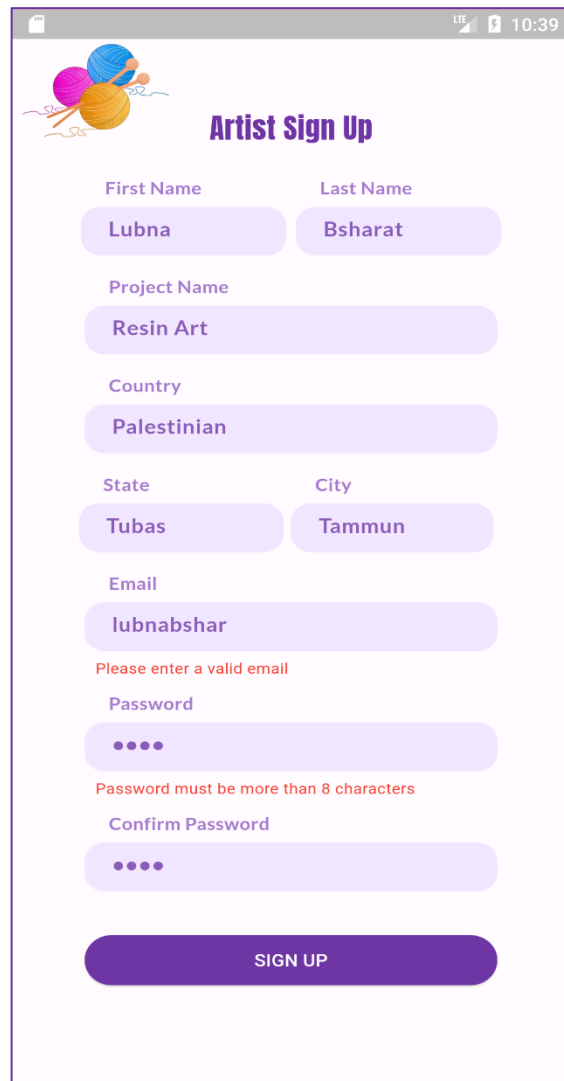


The screenshot shows the 'Artist Sign Up' form with the following fields and validation messages:

- First Name: Empty field with message "Name must not be empty"
- Last Name: Empty field with message "Name must not be empty"
- Project Name: Empty field with message "Project name must not be empty"
- Country: Empty field
- State: Empty field
- City: Empty field
- Email: Empty field with message "Email must not be empty"
- Password: Empty field with message "Password must not be empty"
- Confirm Password: Empty field with message "password must not be empty"

A purple "SIGN UP" button is located at the bottom of the form.

FIGURE 5: EMPTY FIELDS VALIDATION

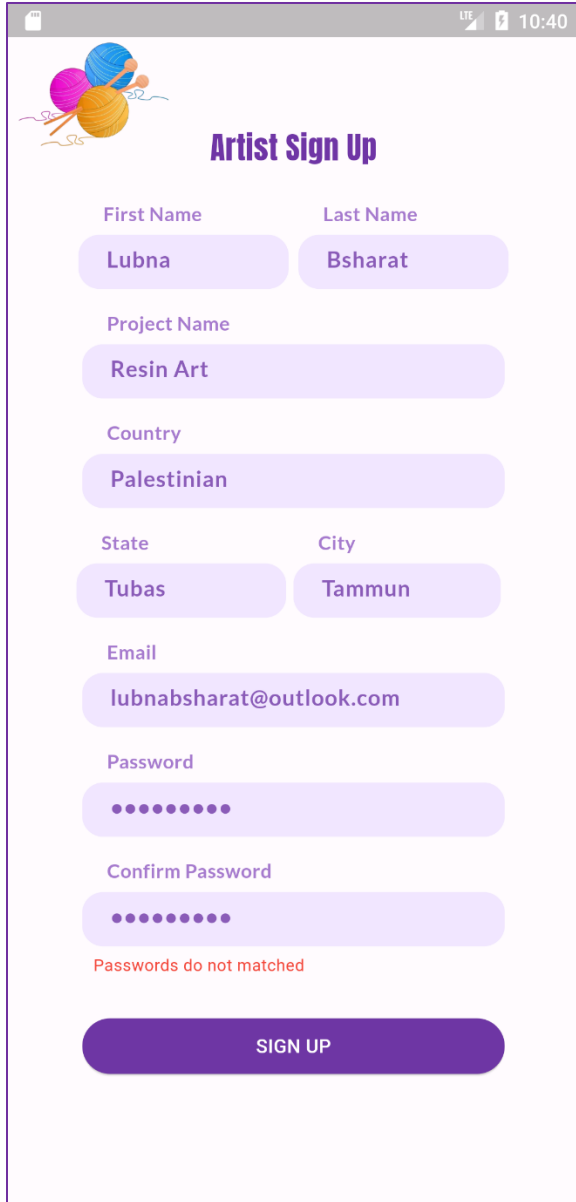


The screenshot shows the 'Artist Sign Up' form with the following fields and validation messages:

- First Name: Filled with "Lubna"
- Last Name: Filled with "Bsharat"
- Project Name: Filled with "Resin Art"
- Country: Filled with "Palestinian"
- State: Filled with "Tubas"
- City: Filled with "Tammun"
- Email: Filled with "lubnabshar" and message "Please enter a valid email"
- Password: Filled with "••••" and message "Password must be more than 8 characters"
- Confirm Password: Filled with "••••"

A purple "SIGN UP" button is located at the bottom of the form.

FIGURE 6: EMAIL PATTERN AND PASSWORD LONG VALIDATION



Artist Sign Up

First Name: Lubna Last Name: Bsharat

Project Name: Resin Art

Country: Palestinian

State: Tubas City: Tammun

Email: lubnabsharat@outlook.com

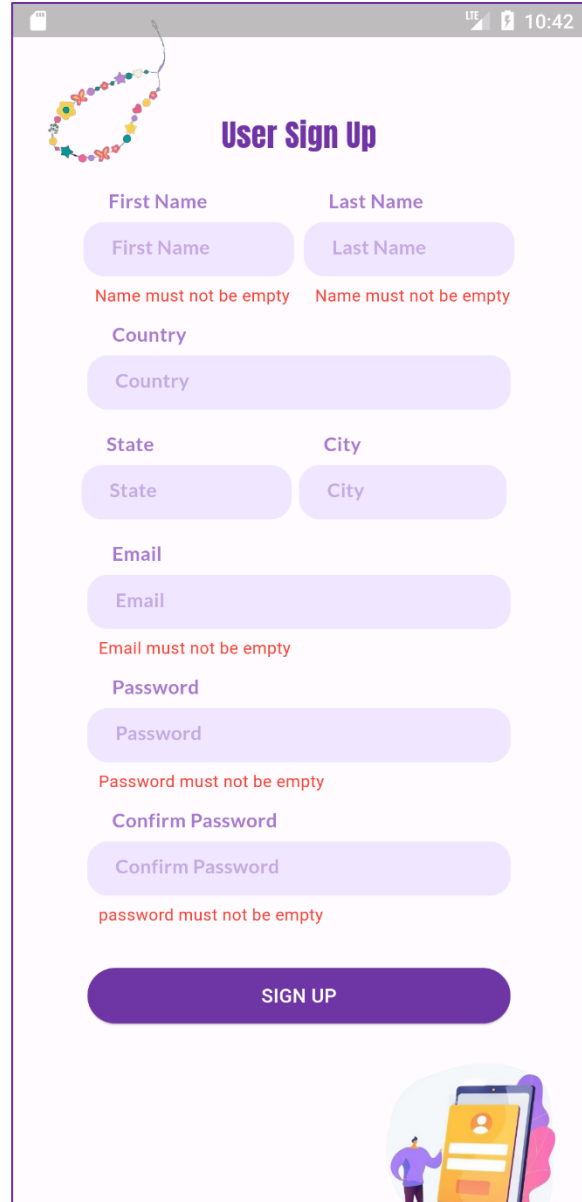
Password: ●●●●●●●●

Confirm Password: ●●●●●●●●

Passwords do not matched

SIGN UP

FIGURE 7: PASSWORDS MATCH VALIDATION



User Sign Up

First Name: First Name Last Name: Last Name

Name must not be empty Name must not be empty

Country: Country

State: State City: City

Email: Email

Email must not be empty

Password: Password

Password must not be empty

Confirm Password: Confirm Password

password must not be empty

SIGN UP

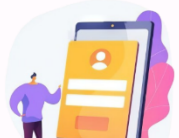
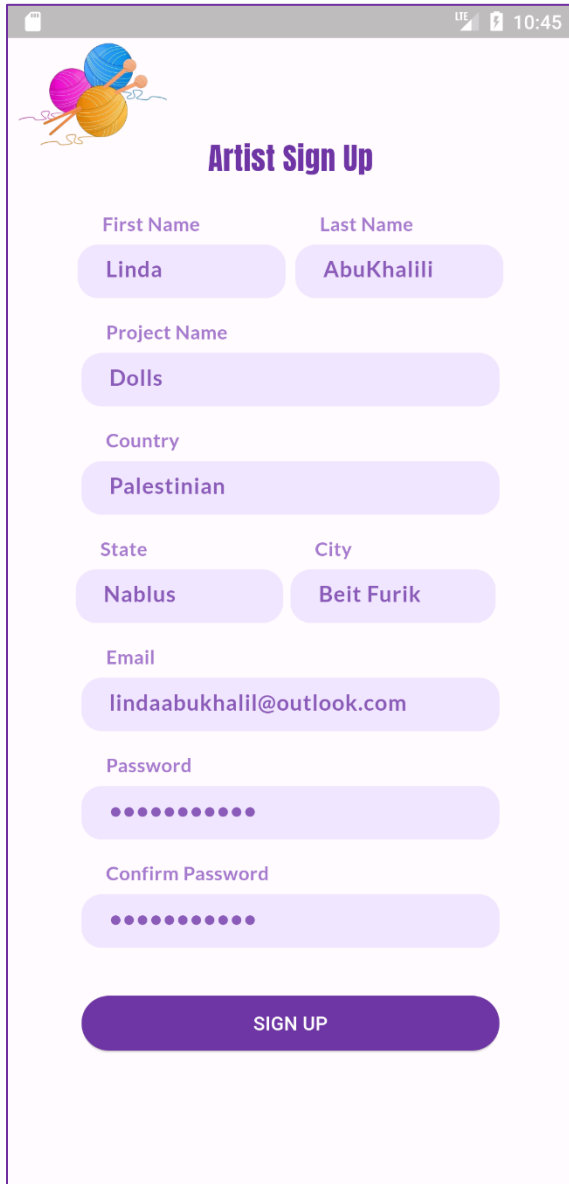


FIGURE 8: EMPTY FIELDS VALIDATION AT USER SIGN UP

Artist Sign up Process: The Artist registration process goes through three phases, the first phase is for the basic information we need to know about that Artist, like Name, Email, Location, Project Name and Password, then the second phase for the more specific information about the Artist and it's project like the Artist Birthday, Gender, Profile Photo and Project Category. The last phase is to add the Artist Bank Account Information, so when the Artist Items get sold the funds will go directly to his Bank Account.



The screenshot shows a mobile application interface for artist registration. At the top left is a logo with colorful yarn balls. The title "Artist Sign Up" is centered. Below it are several input fields, each with a label and a value: "First Name" (Linda), "Last Name" (AbuKhalili), "Project Name" (Dolls), "Country" (Palestinian), "State" (Nablus), "City" (Beit Furik), "Email" (lindaabukhalil@outlook.com), "Password" (represented by dots), and "Confirm Password" (represented by dots). A large purple "SIGN UP" button is at the bottom.

FIGURE 9: ARTIST SIGN UP PAGE FILLED

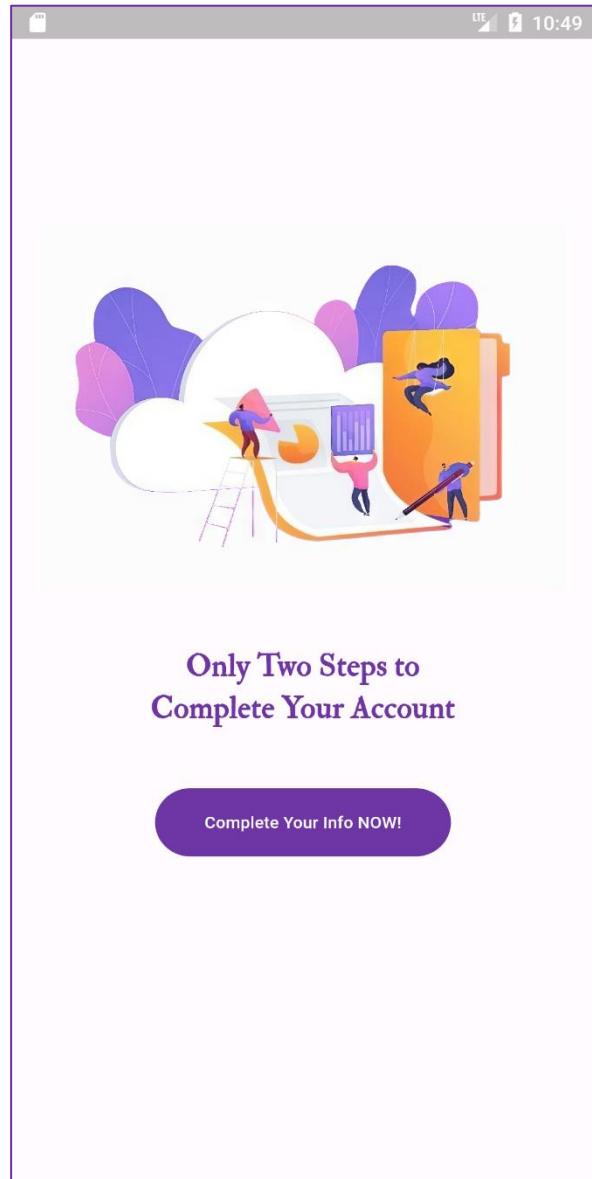


FIGURE 10: TRANSITION PAGE AT ARTIST REGISTRATION

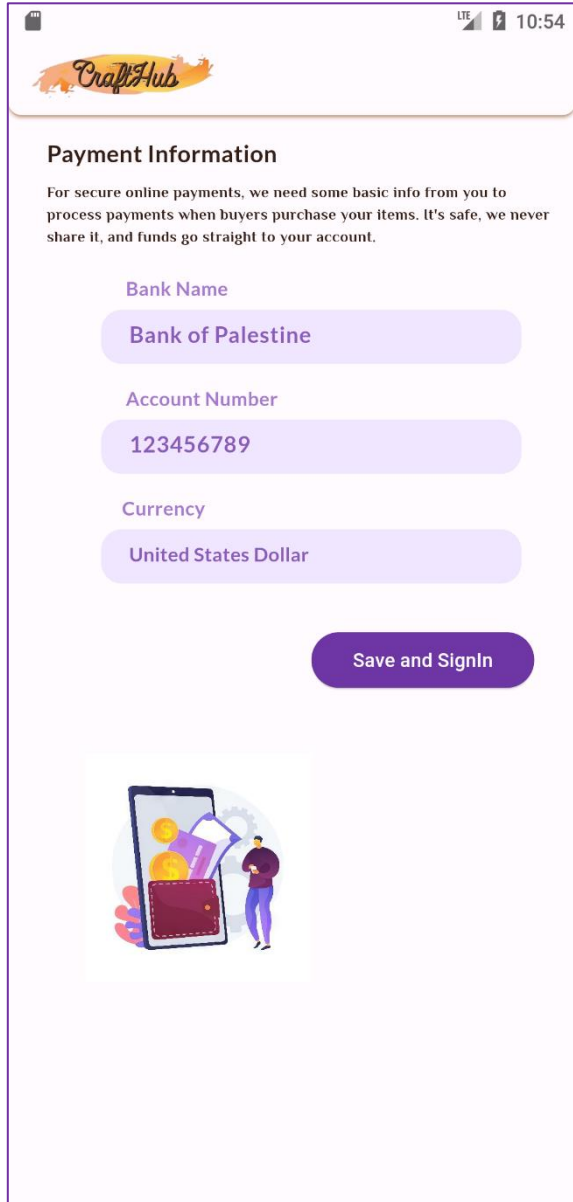


FIGURE 12: PAYMENT INFORMATION COMPLETION FOR ARTIST

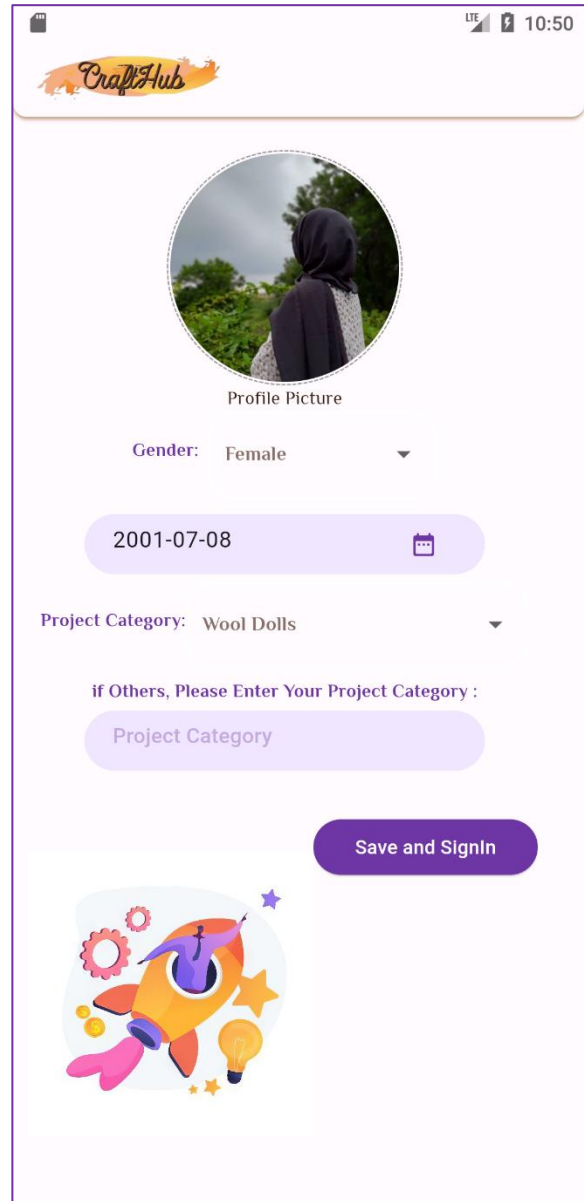


FIGURE 11: PERSONAL INFORMATION COMPLETION FOR ARTIST

User Sign up Process: The User registration process also goes through several phases, the first phase is for the basic information we need to know about that User, like Name, Email, Location, and Password, then the second phase for the more specific information about the User like his Birthday, Gender and Profile Photo. The last phase is to enables the user to select the Categories he interested in, so that will help us to suggest Items from these categories the User might like.

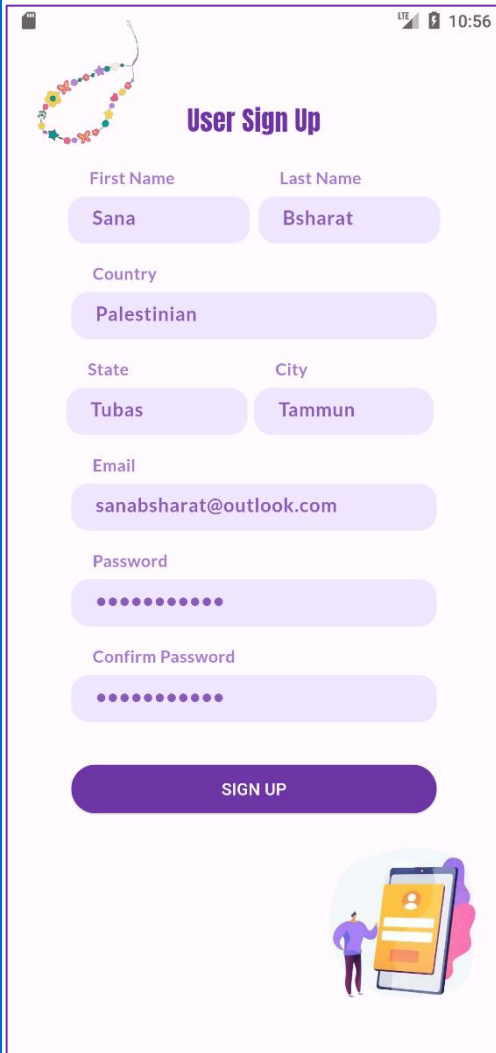


FIGURE 13: USER REGISTRATION PAGE

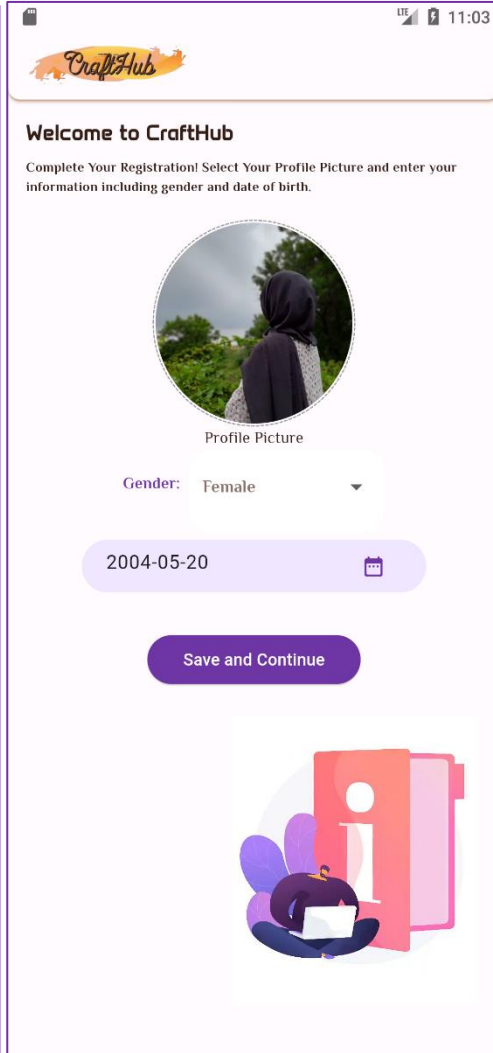


FIGURE 15: USER PERSONAL INFORMATION COMPLETION



FIGURE 14: USER INTESDED IN CATEGORIES

Special Widgets in the Sign-up Process: While handling the Sign-up process for both Artists and Users, we used special widgets for special data formats that were requested. The Date Selector widget is used to select the user's birthday, while the Location Selector is used to identify the Users and Artist locations. The Image Selector allows the user to select an image from the device files to set as the Profile Photo, and the Currency Selector so the Artist can easily choose his bank account currency.

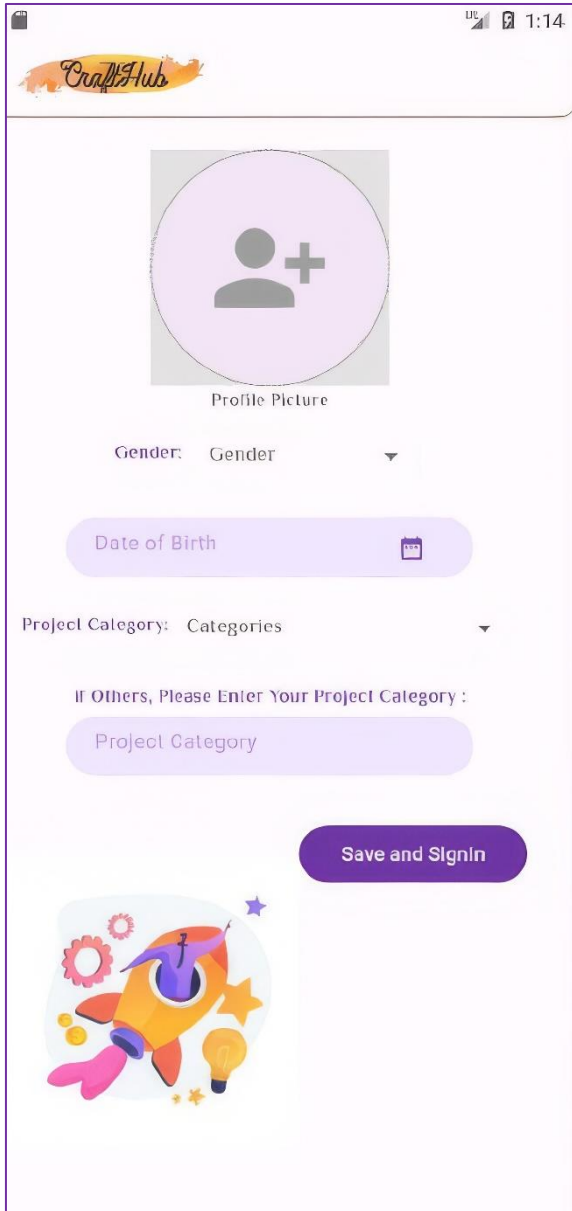


FIGURE 16: IMAGE SELCTION OPTION

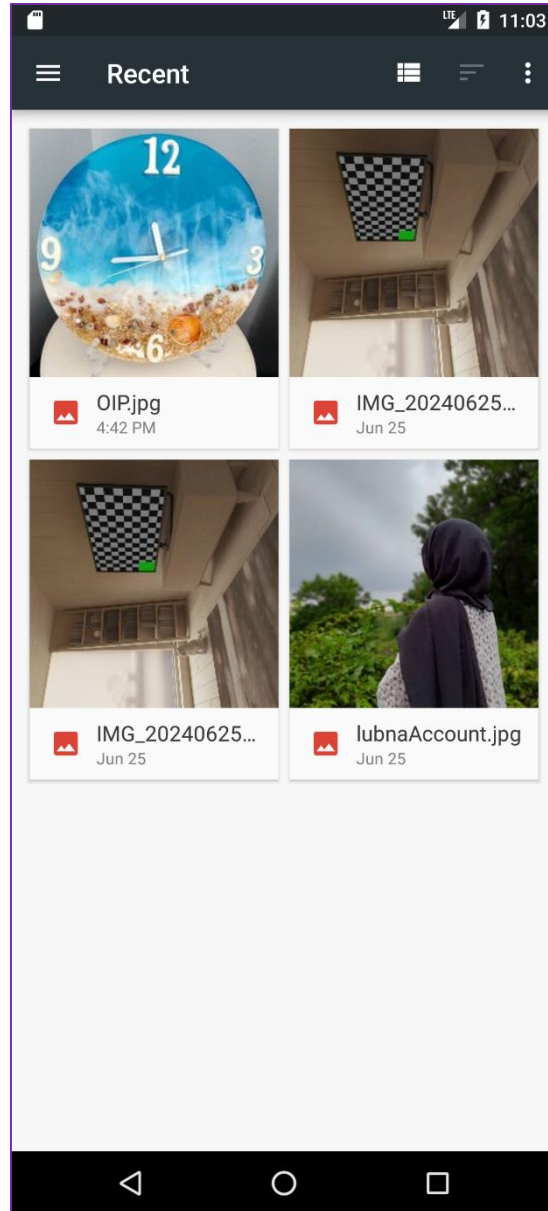


FIGURE 17: GALLERY ACCESS

Once the user taps at add photo icon, the app can reach the phone documents and the user can chose his profile photo.

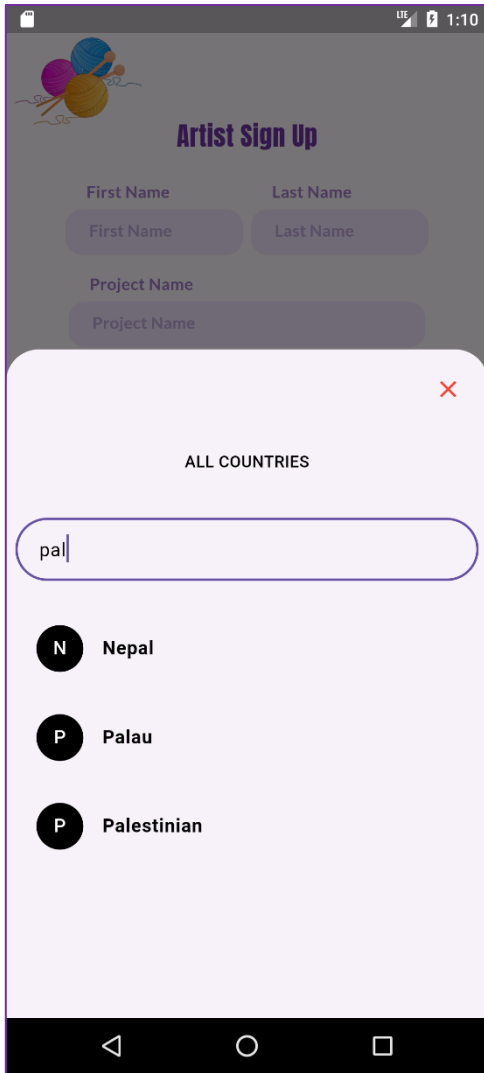


FIGURE 19: COUNTRY SELECTOR

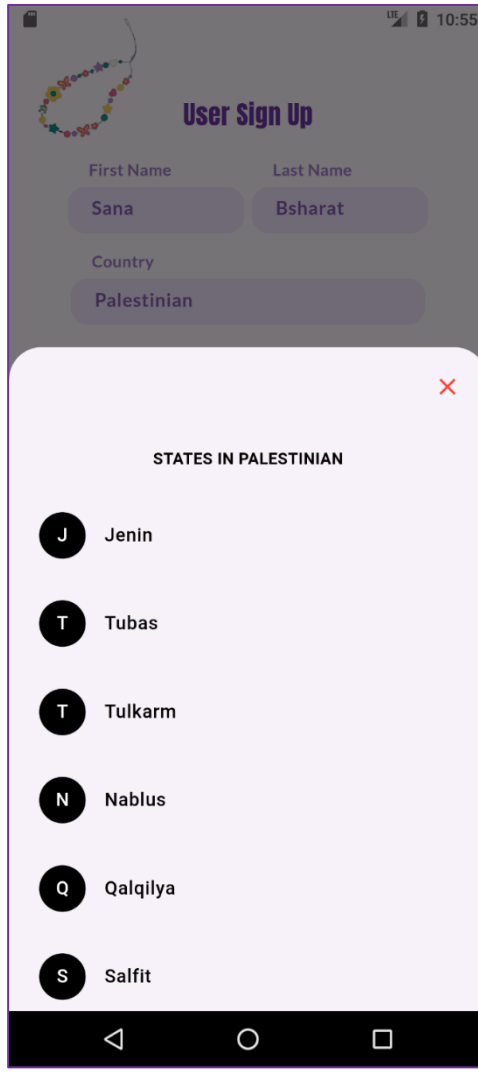


FIGURE 20: STATE SELECTOR WITHIN THE COUNTRY

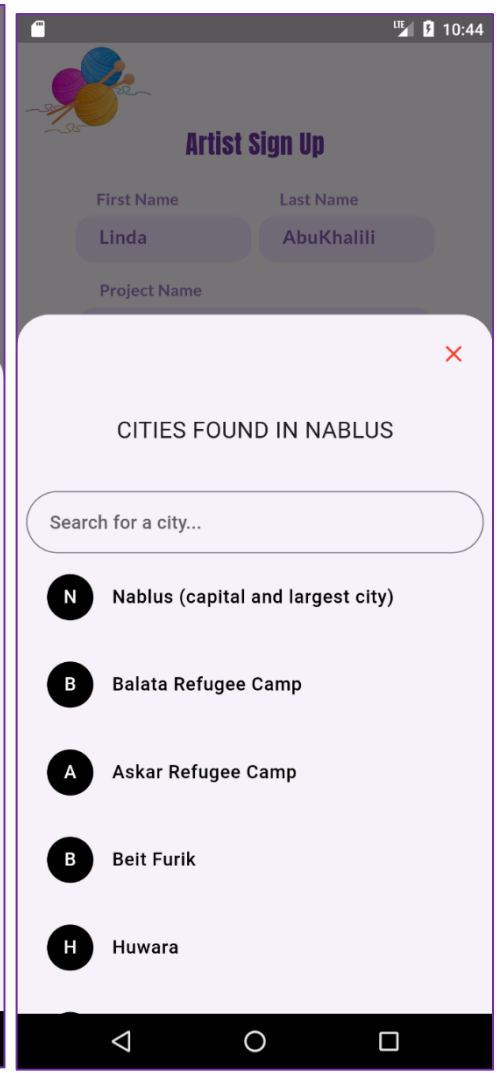


FIGURE 18: CITY SELECTOR WITHIN THE STATE

Using this Widget the user can choose his country's name, followed by his state within that country, and lastly his city of residence.

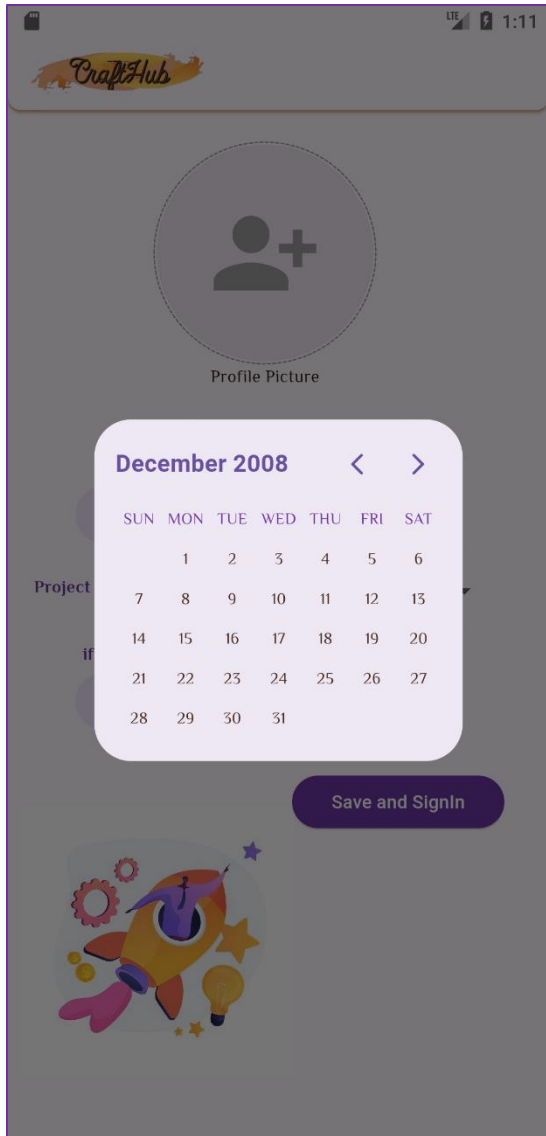


FIGURE 21: DATE SELECTOR

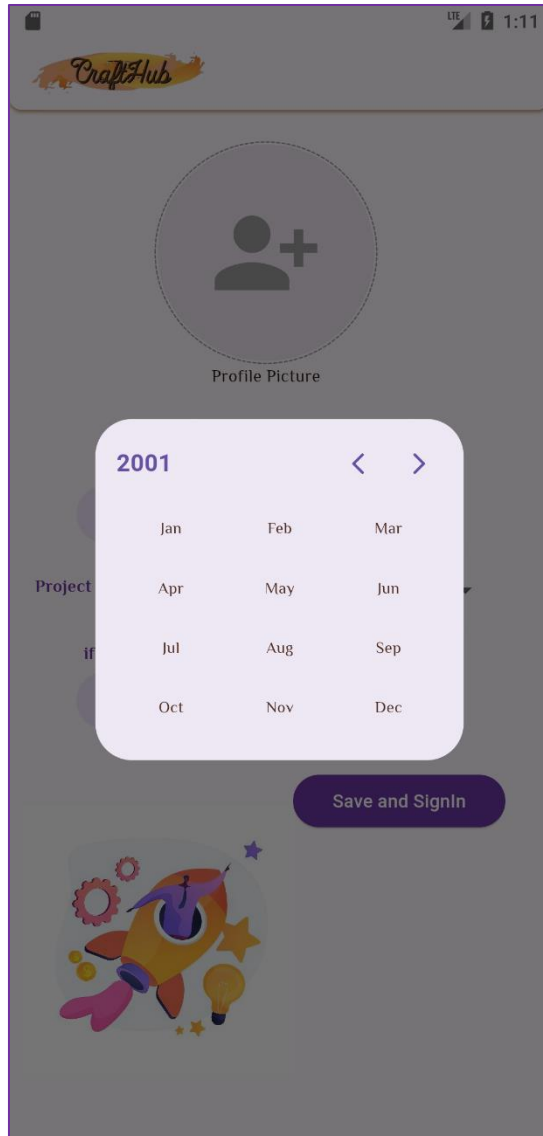


FIGURE 22: YEAR AND MONTH SELECTOR

Using this Widget the user can choose his birthday precisely, specifying the year, month, and day.

Artist Home Page: Once the Artist signs in, he will navigate to the Artist home page. This page contains the Artist Account information, his name, his profile picture, his project name, number of followers, and the category that project belongs to. Also, it contains the Crafts the Artist made and uploaded them to the platform, with the option to sort them. For each Item the Artist will get its name, price, photo, the number of likes and comments on that Item, and how many it has been ordered.

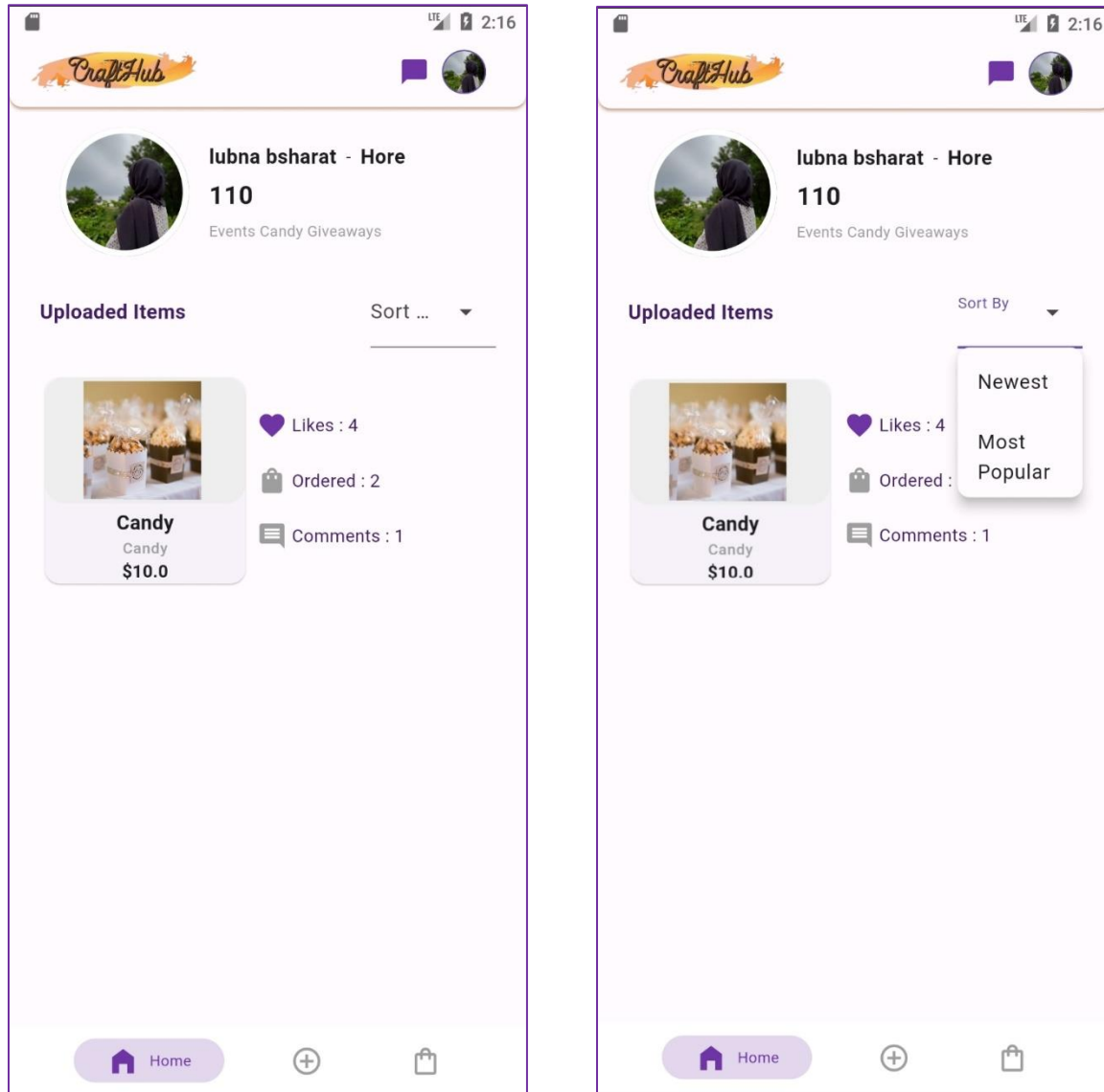


FIGURE 23: ARTIST HOME PAGE WITH SORT OPTION

Artist’s Item Details Page: The Artist can reach the item details page by tapping in the item he wants that appears in the Artist home page. In This page the Artist can retrieve more information about his item, also can easily update the item details and then save the changes, moreover he can delete that Item. one more important thing about this page, the Artist can gets the users comments in that item.

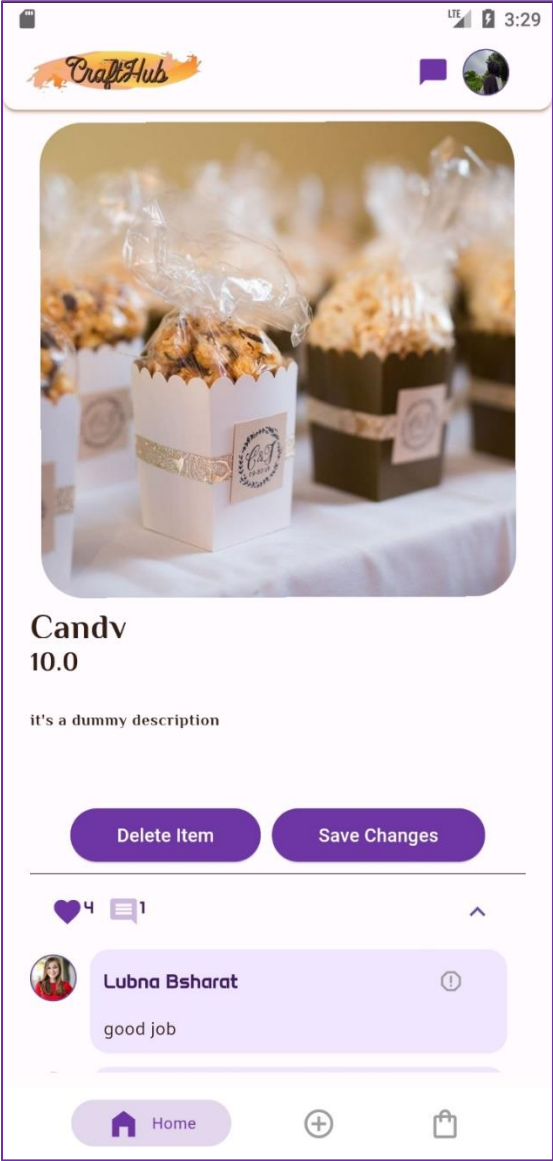


FIGURE 24: ITEM'S DETILES PAGE

Comment Report Page: If the Artist finds a bad comment, he has the option to submit a report to the administrator for examination. If it is determined that the comment violates the rules, it will be deleted by the administrator.

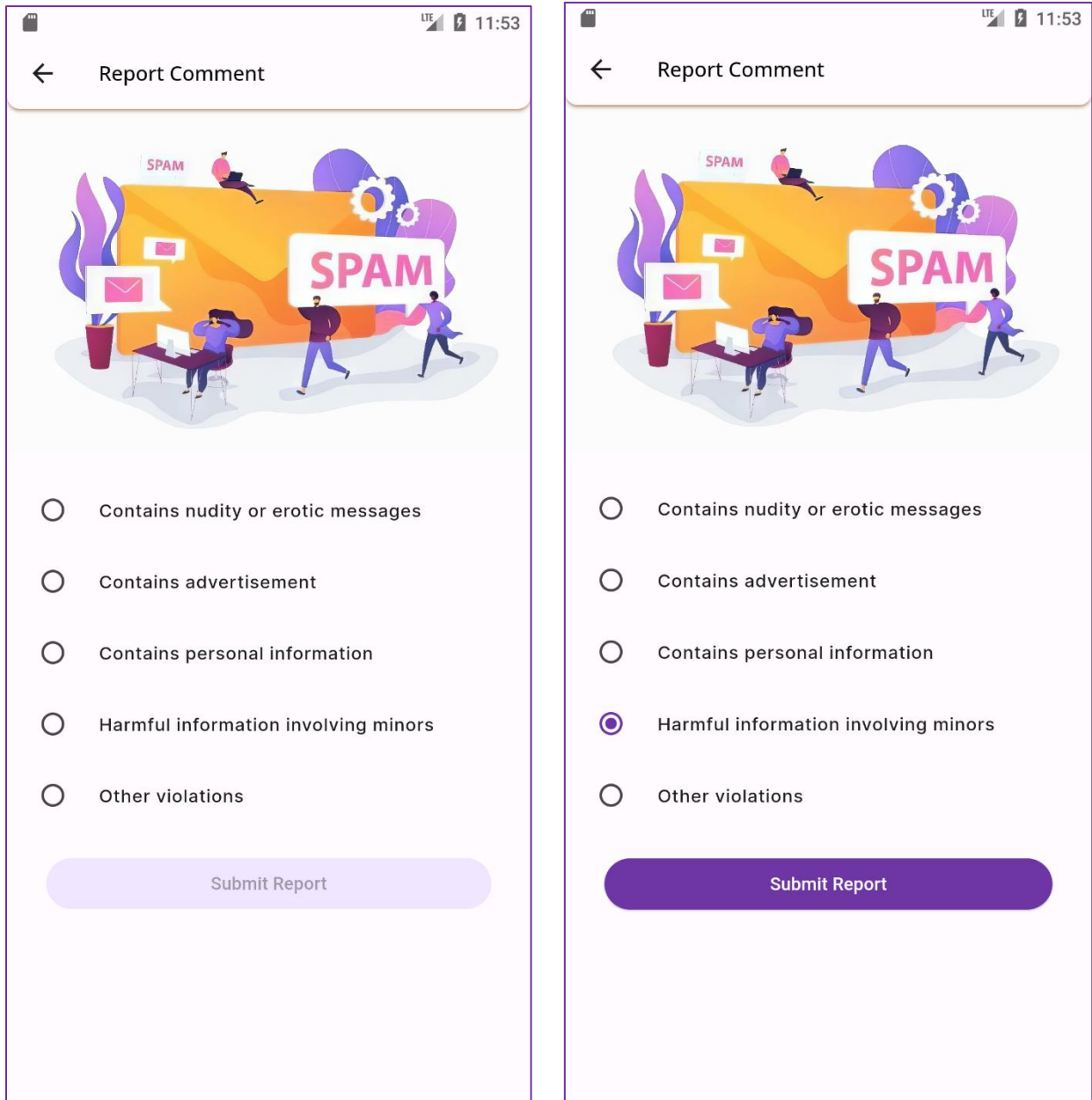


FIGURE 25: REPORT COMMENT PAGE

Add a New Item to the Artist's Items: In this Page the Artist can select his new items details, like the item picture, name, price and description. Once submitted, the new item will be included in the artist's list of objects.

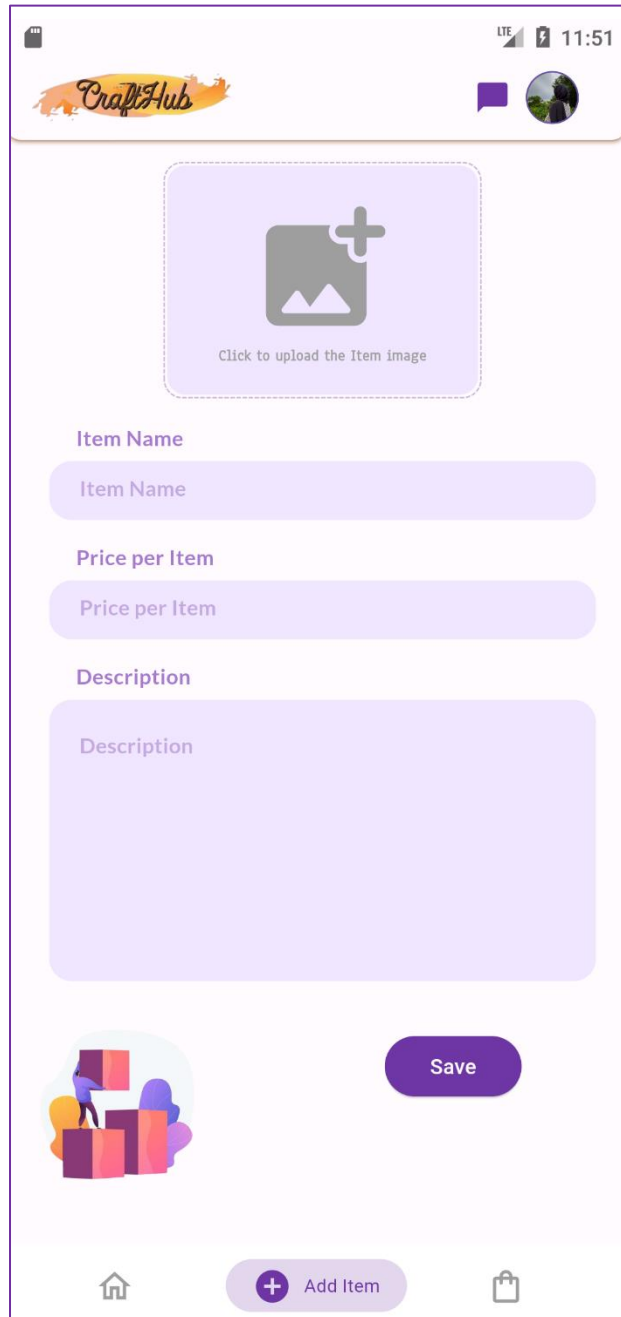


FIGURE 26: ADD NEW ITEM PAGE

Orders Page: In this Page the Artist can reaches the basic information about all the orders he got, like the order id, total price, the ordered date and his states. Also, he can sort them.

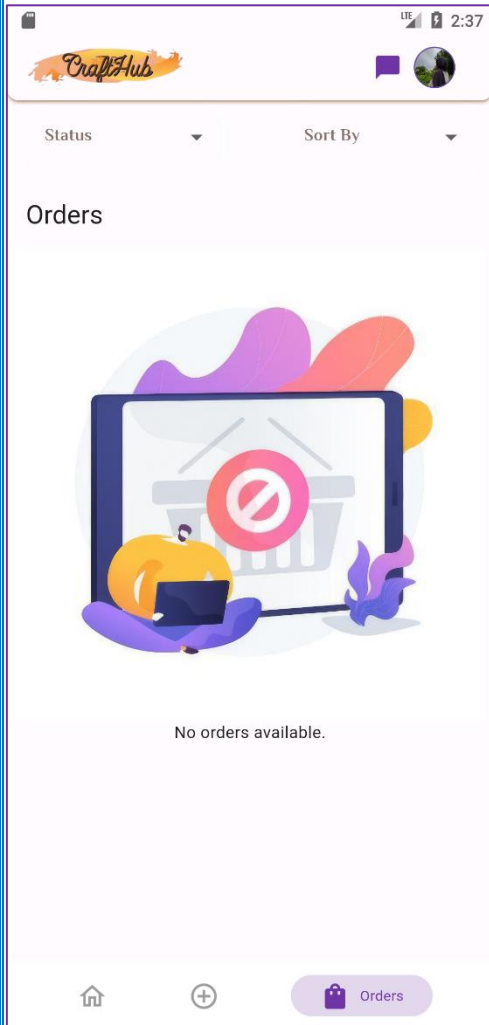


FIGURE 27: NO ORDERS OPTION

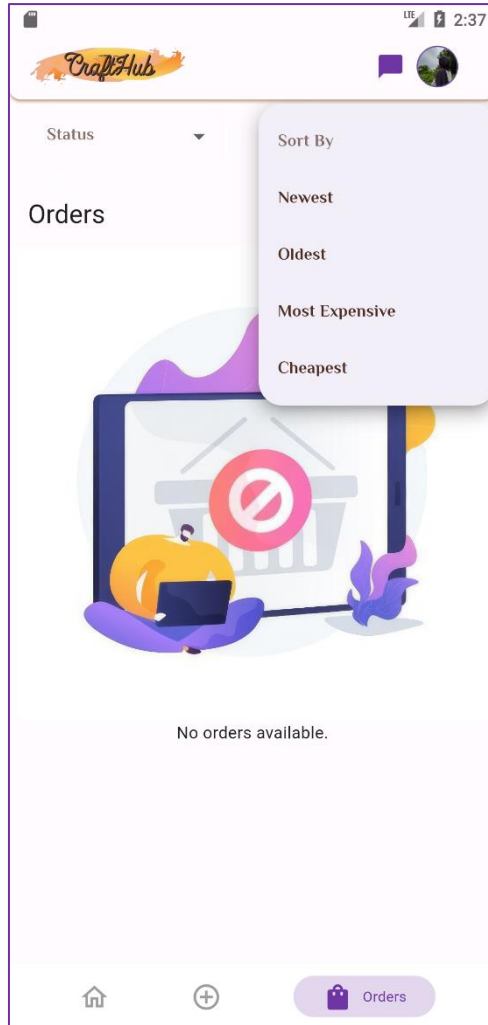


FIGURE 28: SORT OPTIONS



FIGURE 29: ORDERS PAGE

Order's Details Page: In this Page the Artist can reaches more specific information about the order he gets, it will display the customer contact information, name, phone number.

Customer Messaging: If the artist wants to connect the customer, he will be able to do this through the chat system the application supports, he just has to tap at the message button appears at the bottom of the order details page, to open a chat room with the customer, it will enables the artist to send text messages, emojis, images form the gallery and to capture an image then send it. Moreover, the artist can delete the message, or display its details.

Chat Home Page: This page can be reached by the message button at the app bar, it will display all the chatrooms the artist has made, with the ability to reach a specific chat room page to continue chatting.

Artist Account Page: In the account Page the user can reach all his information, with the ability to review and update it. The Artist information is organized in four sections: The personal information section, here the Artist can find information about him, like the name, location, email address. The project information section, which contains the project info, like project name and the category the projects belongs to.

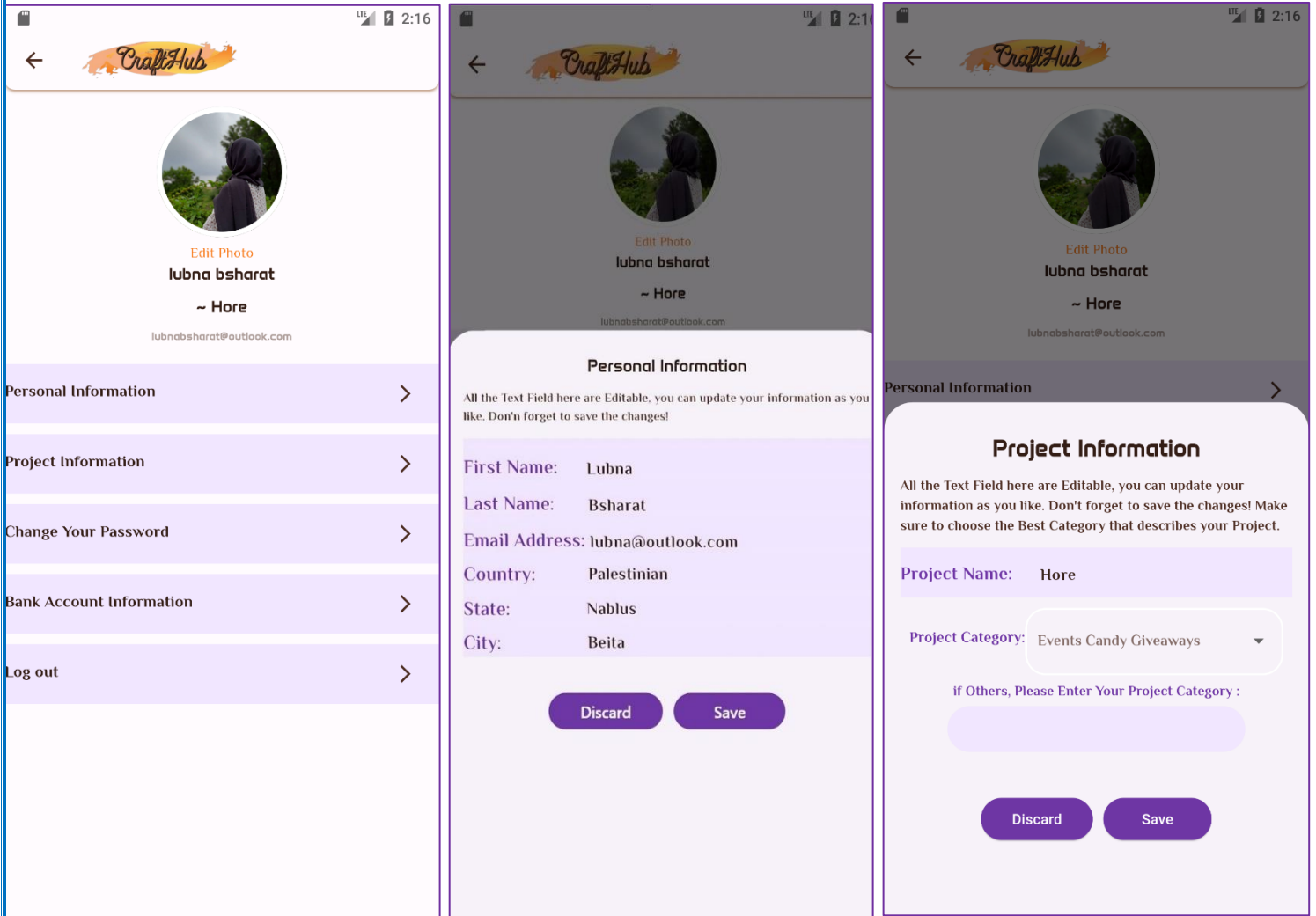


FIGURE 30: ARTIST ACCOUNT PAGE AND PERSONAL INFORMATION AND PROJECT INFORMATION OPTIONS

The Bank information section, which contains the artist bank account information, with the ability to update the information. The last section is enabling the artist to change his password after confirming his current password. In this page the artist can find to sign out.

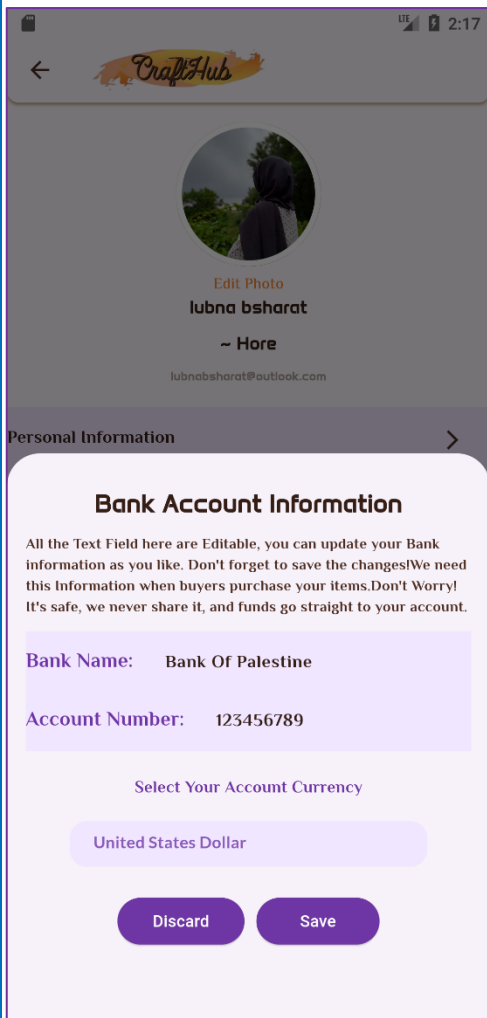


FIGURE 33: BANK INFORMATION PAGE

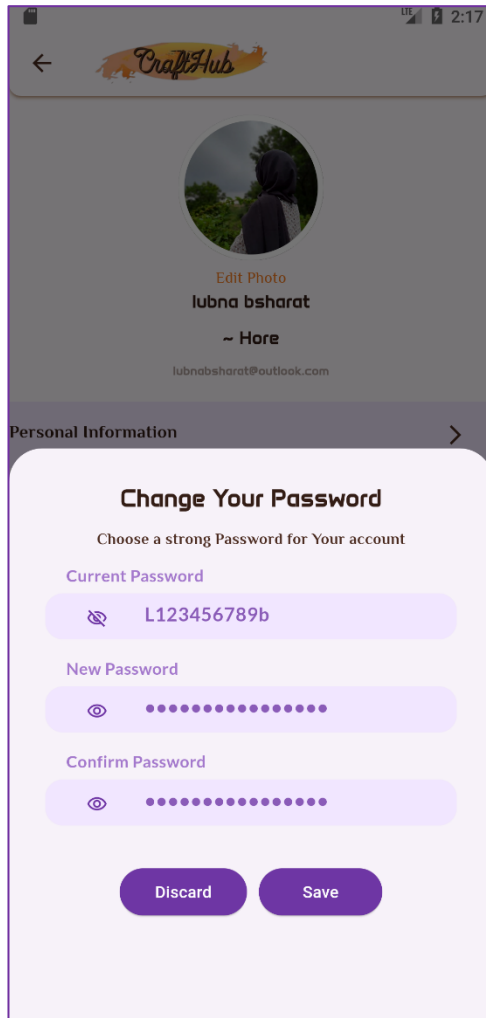


FIGURE 32: CHANGE PASSWORD PAGE

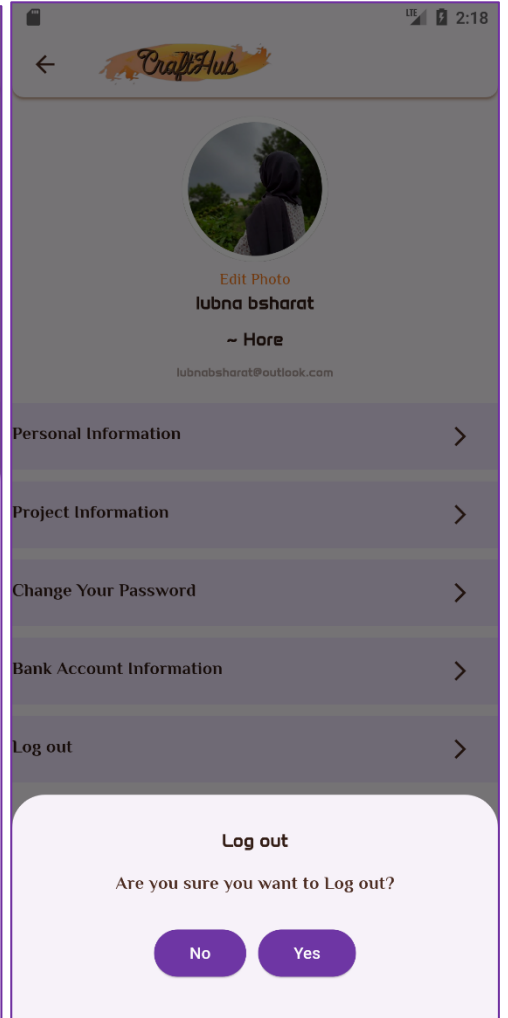


FIGURE 31: LOG OUT OPTION

User Home Page: In the Users home page the user can find all the categories the application supports, and the ability to go through each category items, also the user will find the items the users he follows post.

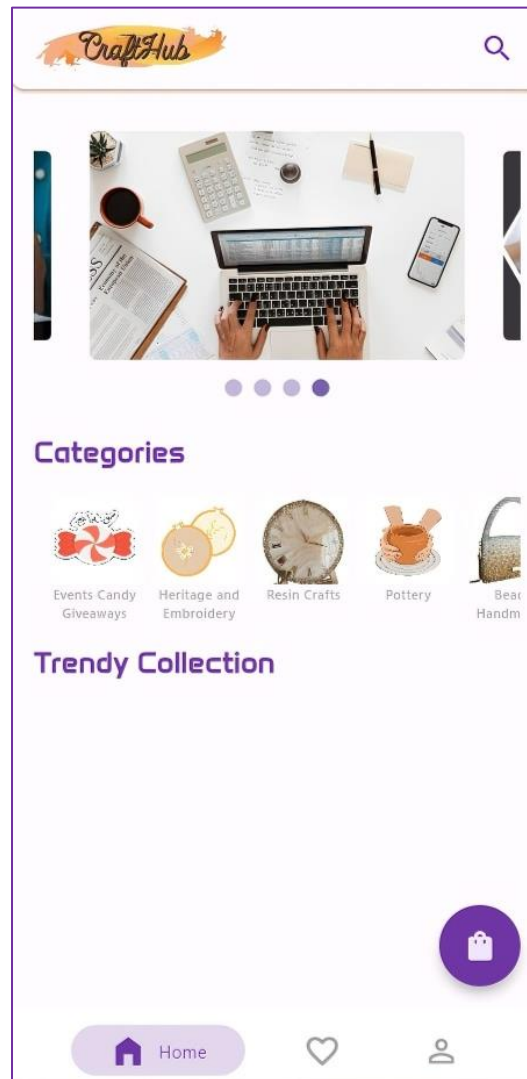


FIGURE 34: USER HOME PAGE

Category Items page: for each category in the application the user can access the list of items belonging to this category and can apply filters to sort them.



FIGURE 35: CATEGORY ITEMS PAGE

Item's details page: for each item in the app the user can reach that item details page to get more info about that item, he also can interact with it by like and comment, and git the other users' interactions. Moreover, he can add the item to favorites or add to the cart.

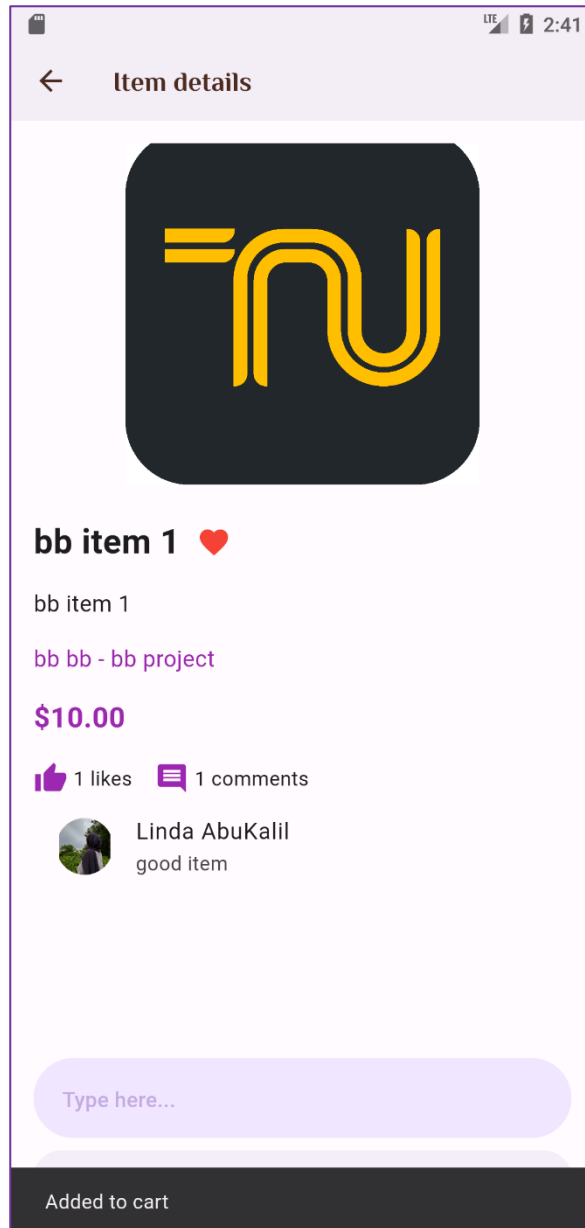


FIGURE 36: ITEM DETAILS PAGE

Item's Artist profile page: if the user likes an item and wants to see more items from that creator, he can access the profile page for the item's artist from the item details page. In the Artist profile page, the user can either follow the artist, message him to ask about something using the chat system, or he can just review the artist's items.

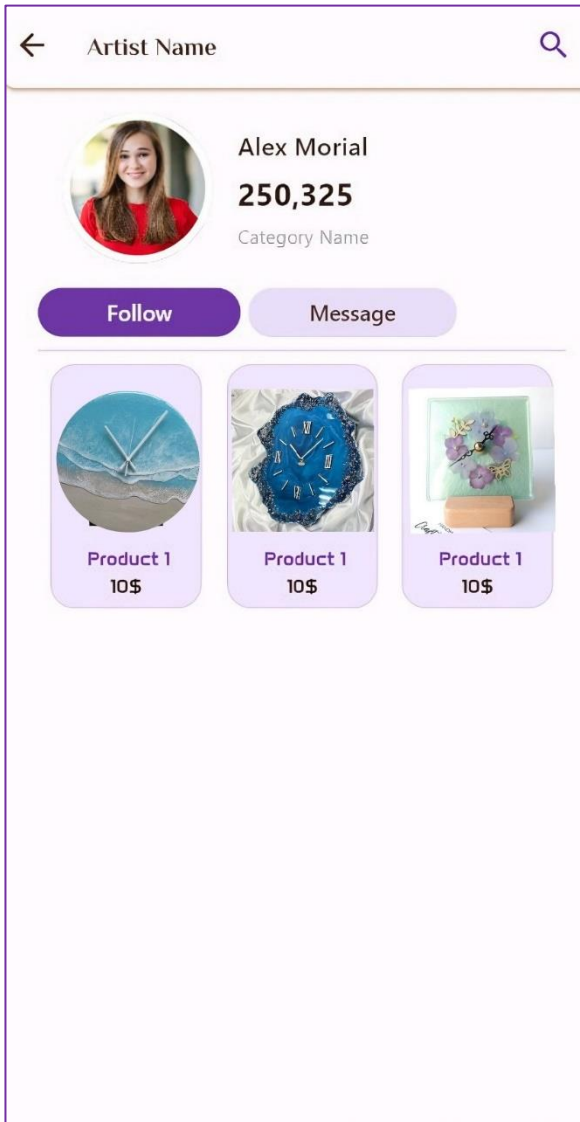


FIGURE 37: ARTIST PROFILE PAGE



FIGURE 38: CHAT ROOM PAGE

Favorites Page: on this page the user can access all the items he already has added to his favorites, from this page the user also can reach each item's details page, to complete the purchase process.

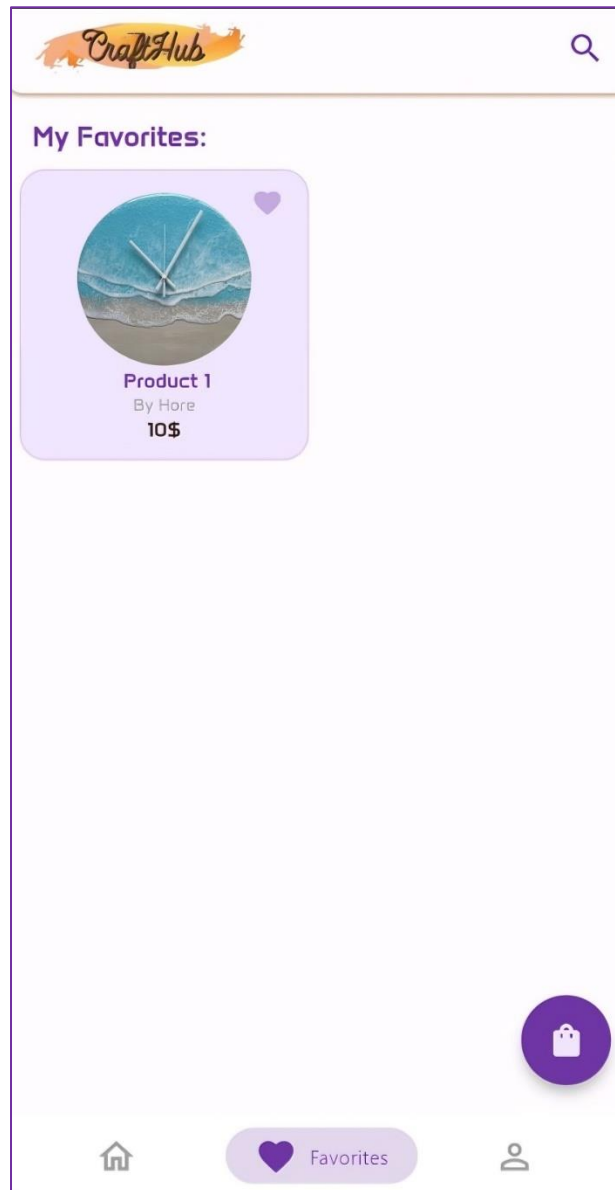


FIGURE 39: FAVOURITES PAGE

Cart Page: on this page the user can reach all the items he added to cart, for each item he can increase or decrease the quantity or even delete the item from the cart. The total price of all the items will always be displayed at the end of the page. After the user finishes his cart design, he can now move to the payment process.

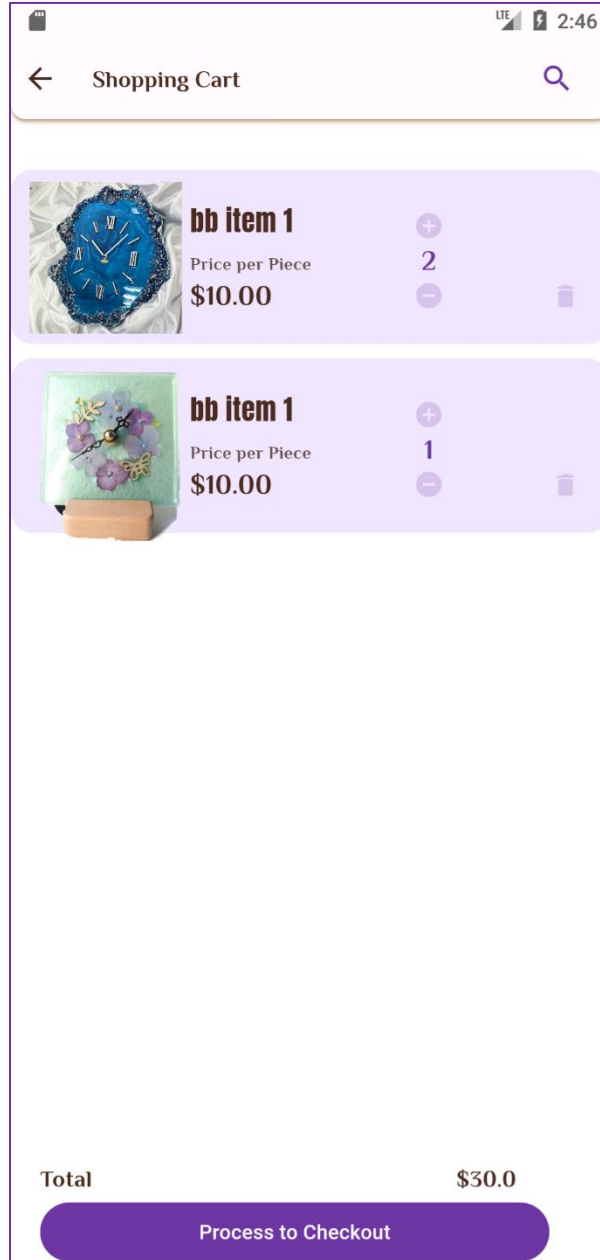


FIGURE 40: SHOPPING CART PAGE

Payment page: on this page the user can choose the payment method he wants between PayPal and Credit Card, for each option this user must enter his information to complete the purchase process.

The screenshot shows a mobile application interface for a payment page. At the top, the title "Payment" is displayed in a dark blue font, with a magnifying glass icon to its right. Below the title, the price "\$30" is shown in a bold, dark blue font. Underneath, the text "Choose payment method:" is followed by two radio button options: "Paypal" (which is selected) and "Credit Card". A paragraph of text instructs the user to log in to their PayPal account and enter required information. Below this, there are two input fields: "Your PayPal Email" with an envelope icon and "Your PalPay Password" with a lock icon and an eye icon. At the bottom, a large, rounded, dark blue button labeled "Complete Payment" is centered.

FIGURE 42: PAYMENT PAGE WITH PAYPAL

The screenshot shows a mobile application interface for a payment page. At the top, the title "Payment" is displayed in a dark blue font, with a magnifying glass icon to its right. Below the title, the price "\$30" is shown in a bold, dark blue font. Underneath, the text "Choose payment method:" is followed by two radio button options: "Paypal" and "Credit Card" (which is selected). A paragraph of text instructs the user to provide credit card details. Below this, there are three input fields: "Card Number" (with a placeholder "XXXX XXXX XXXX"), "EXP. Date" (with a placeholder "DD/MM/YYYY"), and "CVV Code" (with a placeholder "XXX"). Below these, there is a "Name" input field. At the bottom, a large, rounded, dark blue button labeled "Complete Payment" is centered.

FIGURE 41: PAYMENT PAGE WITH CREDIT CARD

Search Page: on this page the user can search for different entities like artists, projects, or items, he just must select the entity he wants, and write the name of the thing he is looking for to find it.

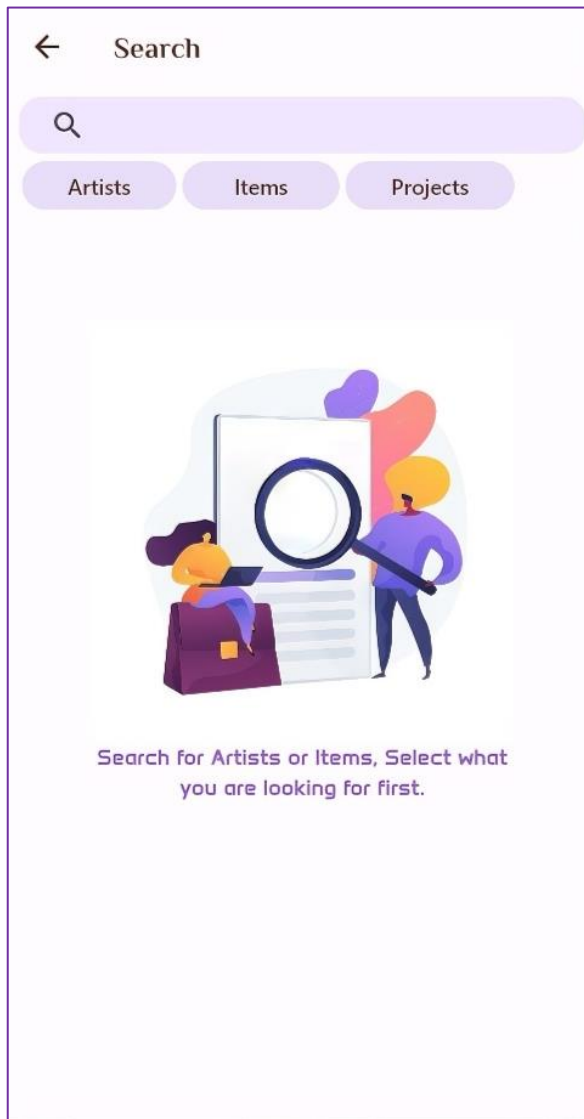


FIGURE 43: SEARCH PAGE



FIGURE 44: SEARCH PAGE WITH RESULT

User's Account Page: The User Account page is not that much different from the Artist Account page; the difference occurs because of the different information required for both users. Here we display the user information with the ability to update them in three sections: The personal information section, the Interested in categories and the change password section. Moreover, the user has the option to log out from his account in this page.

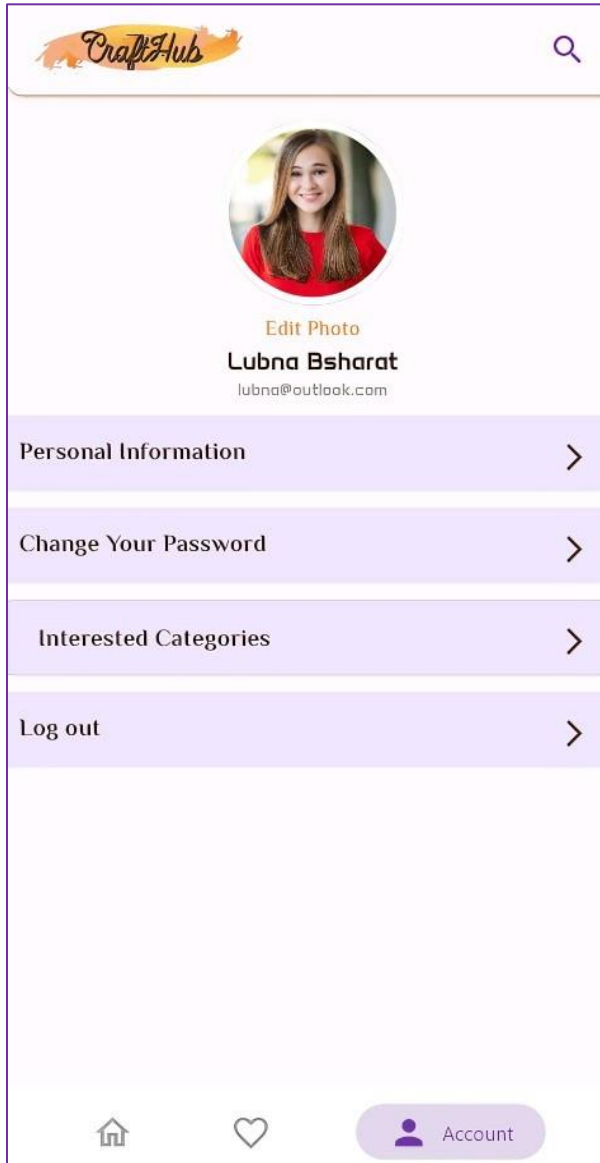


FIGURE 45: USER ACCOUNT PAGE

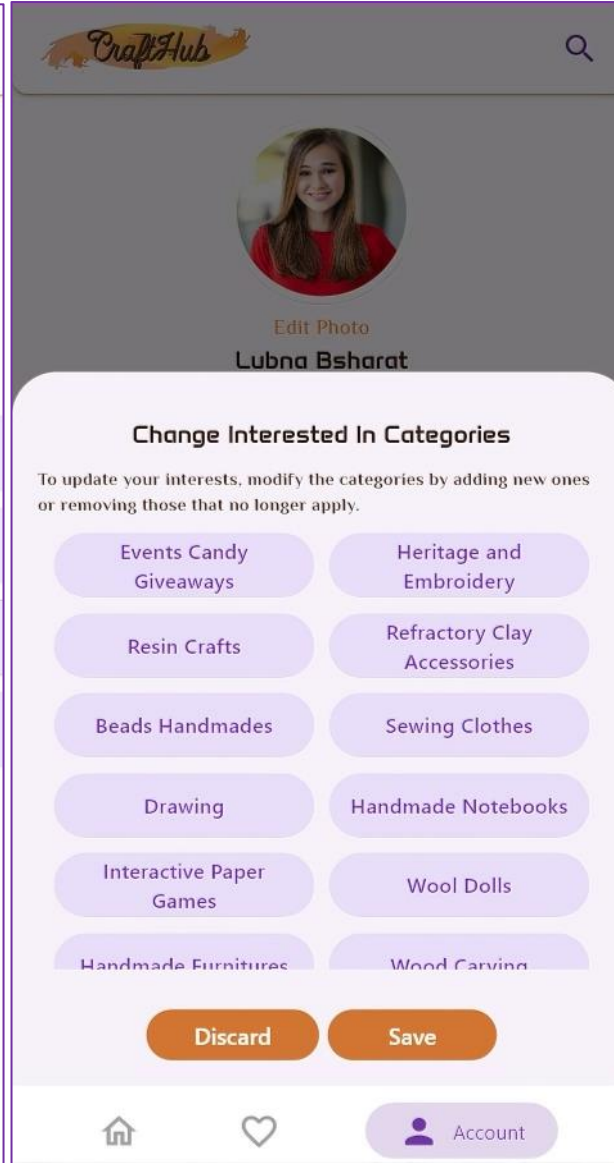


FIGURE 46: INTRESTED IN CATEGORIES

Admins Categories page: the administrator has privileged access to the system's categories, he can review the current categories in the system, add a new one, also he can review the Artists categories suggestions. When an artist registers in the system and cannot find their project category, they can submit a suggestion, the admin will then review these suggestions, and decide which to accept or delete.

Admins Reports page: the users and the artist can submit reports about bad comments in an item, this comment will be reviewed by the admin and if it violates the rules it will be deleted

3.2.2 WEB PAGES

All the functionalities supported by the application are supported in the web page with a better design that suites the web page.

Welcome Page: with the two sign-up options and the sign in option.

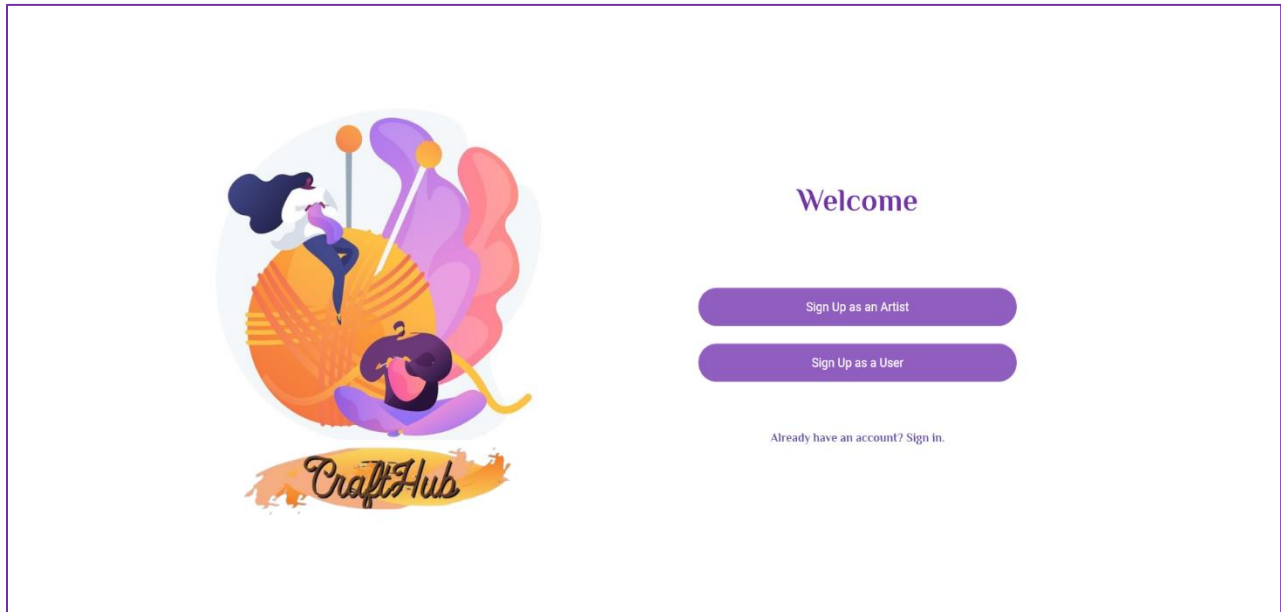


FIGURE 47: WEB WELCOME PAGE

Sign In Page: with the authentication and validation, the user must enter his correct sign in credential to sign in.

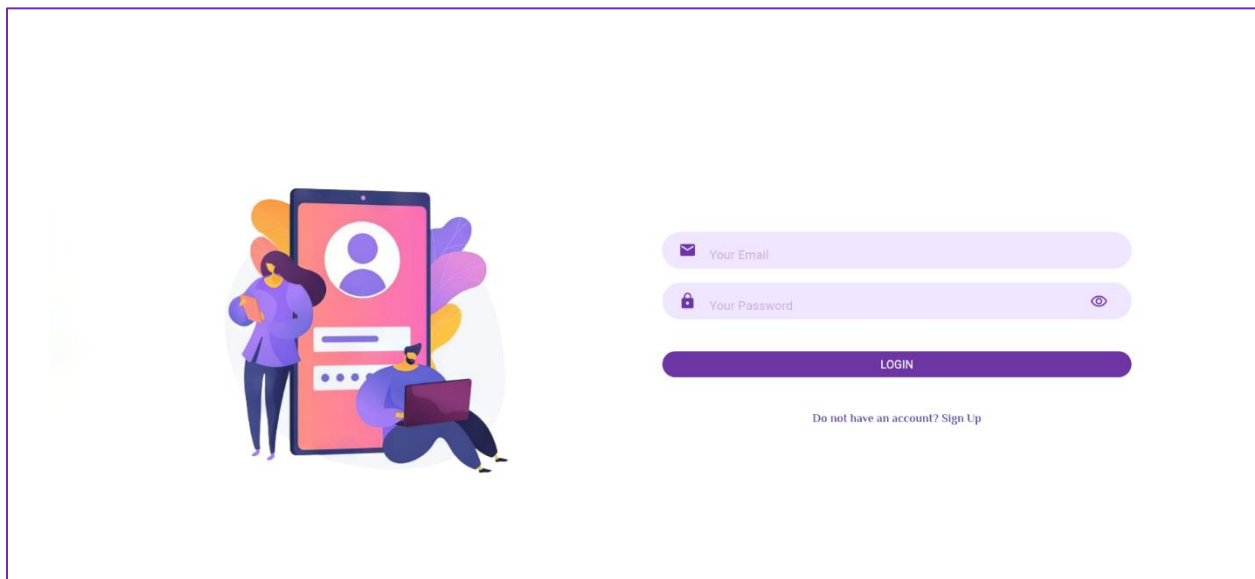
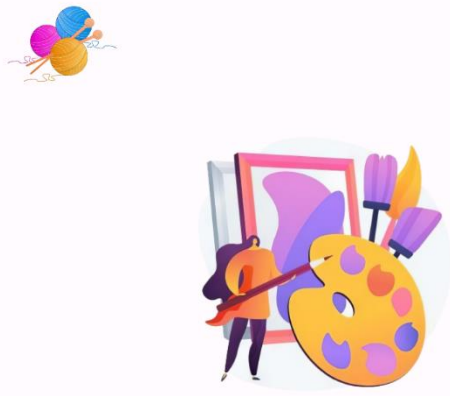


FIGURE 48: WEB SIGN IN PAGE

Artist Sign Up Page



Artist Sign Up

First Name

Last Name

Project Name

Country

State

City

Email

Password

Confirm Password

SIGN UP

FIGURE 49: WEB ARTIST SIGN UP PAGE

Artist Transition at Sign Up Page

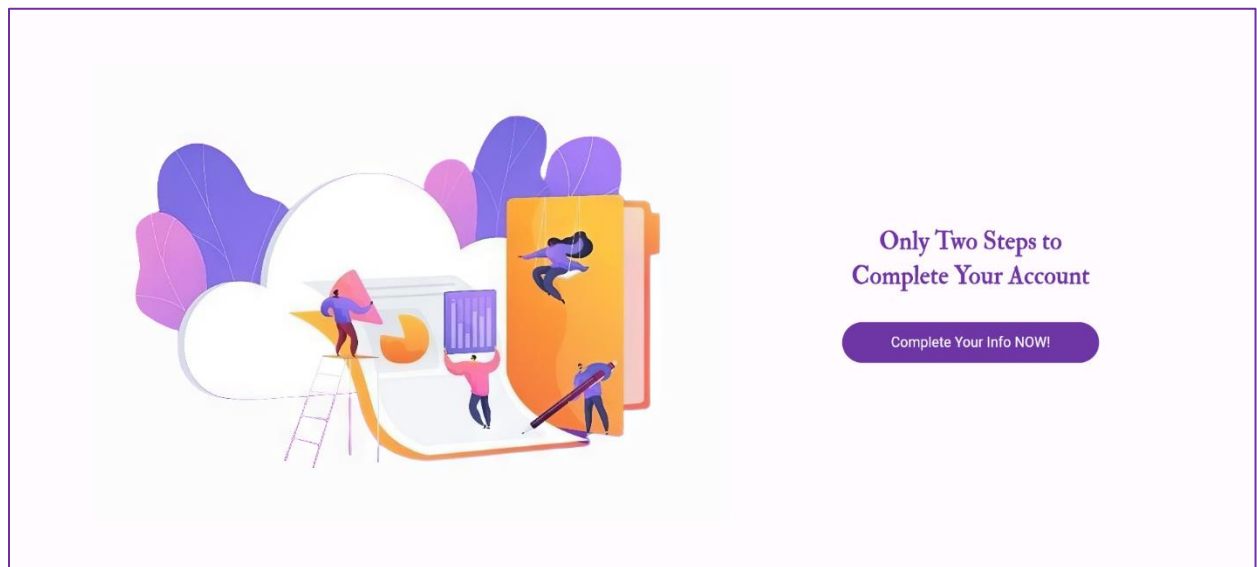
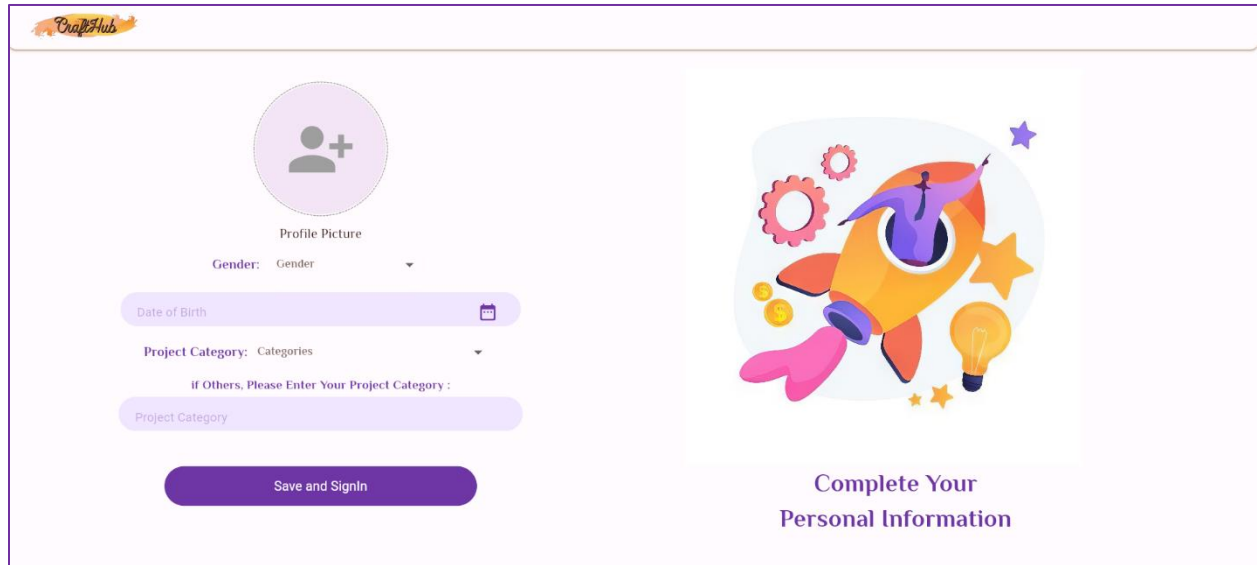


FIGURE 50: WEB ARTIST TRANSITION AT SIGN UP PAGE

Artist Personal Info Completion at Sign Up Page



The screenshot shows the 'CraftHub' sign-up page for an artist. On the left, there is a form with the following fields: a circular profile picture placeholder with a person icon and a plus sign; a 'Gender' dropdown menu; a 'Date of Birth' field with a calendar icon; a 'Project Category' dropdown menu; a text input field for 'Project Category' with the prompt 'If Others, Please Enter Your Project Category :'; and a purple 'Save and Signin' button. On the right, there is a colorful illustration of a rocket ship with a person inside, surrounded by gears, stars, and a lightbulb. Below the illustration, the text reads 'Complete Your Personal Information'.

FIGURE 51: ARTIST PERSONAL INFO COMPLETION AT SIGN UP PAGE

Artist Personal Info Completion at Sign Up Page

CHAPTER 4: DISCUSSION

The need to address an empty niche in the online market of handmade crafts has led CraftHub, a new platform that connects traditional crafts professionals and enthusiasts directly with each other. Modern online shopping era made it even harder for craftspeople to sell their items, because they can hardly promote the handmade over general platforms.

CraftHub works differently it undertakes the initiative of giving all Artisans a place to list their unique Hand-made products and get started on selling from there. Engage with Artisans: The platform integrates registration functionality across both creators and users which increases the level of engagement to create a personalized experience. CraftHub is scalable, secure and has a user-friendly experience due to the use of frontend technologies as Flutter, backend with Django server-side framework real-time sync by Firebase combined PostgreSQL roles for Database management. Where these technologies will lead to more streamlined development as well as a powerful backend and real-time capabilities are essential for any modern e-commerce platform.

CHAPTER 5: CONCLUSION

But, for the stream of artisans looking forward an established online book or promote their handmade craft products - a new solution comes in place as CraftHub which revolutionize into our handicraft world. CraftHub not only helps artisans overcome their sales and marketing challenges but uses emergent tech, combined with a user-centric design to connect them directly to the end-users (consumers in this case) while creating an ecosystem where users feel involved through technology at its core. The effectiveness of the platform can be gauged by its efficiency to simplify browsing, searching and buying processes resulting in elevated user satisfaction followed by an increased engagement. This makes CraftHub unique in the e-commerce space with one of its primary value propositions is that users are served curated experiences based on what hand-made products they like.

As the project ends, CraftHub remains on alert to keep supporting artisans and overall improve handmade crafts industry with its out of the box features along with top grade technological front.

CHAPTER 6: RECOMMENDATION

In the future, we can also improve Craft Hub incrementally by rigorously user-testing more features and iterating on our new UI using feedback from users. Features relating to advanced search filters, personalized recommendations and social sharing among others could make user engagement & retention a lot better. Additionally, they could consider other payment gateways to integrate or add language support for it to cater more towards an international market. In order to grow with the platform, keep it scalable and highly performing you will need regular updates on Django back-end technologies like Firebase.

To achieve the envisioned end-state of a mature, social e-commerce marketplace that offers not only socially driven purchasing decisions but also personalized content and commerce experiences from around the globe, partnerships with artisan communities will be key to driving Craft Hub's growth strategies.

CHAPTER 7: REFERENCES

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