1. Problem Statement:

To design a system to support the rural women by selling the homemade products through online platform.

2. Objectives:
- To design a system that will help the rural women to sell their handmade products in reasonable price.
- To design a system that will be user friendly and very easy to use.
- To ensure the comfort for the users while using the system.
- To design a system that will provide a platform between the buyers and sellers where they will interact with each other directly and none of them will be cheated.

3. Motivation:
- We have observed that some the business organizations for example "Aarong" they collect their products from the rural women and sell their products at a high price but the rural women are paid a small portion of the dividend. So we have tried to design a system that will provide a platform for the rural women to sell their products in their expected price.
- As the business organizations sell their product at a high price so middle class people can't afford them. But by using the system they will be able to buy the tasteful products in reasonable price.

4. Introduction:

In Bangladesh, most of the people of the country lives in villages. We notice that the rural women have different types of skills. But in most cases there is lack of opportunities, so they remain unemployed. This system will provide them the opportunity to become self-reliance.

Moreover, some of them gets the opportunity by selling their handmade products to different business organizations like "Aarong", but this organization buy the products at low costs and sells them at a high price. So, the women are being cheated.

On the other hand, most of the people living in the country can hardly afford them. Sometimes they face difficulties. This system will provide the customers to buy the products at a reasonable price. It seems like "All happiness within means".

In the system we have tried to ensure all the comforts for the users while using the system. We have tried to make the system as user friendly as possible. Moreover as the buyers and sellers will interact with each other directly, there is no chance of any users being cheated. So proper use of the system may have a significant effect on the society.

5. System Over View:

In our system, we have designed an android application for the users. We have designed a website for the admin in which system can be controlled.

There are two types of users: sellers and buyers.

- For both of them there is registration and login process. We have tried to make registration process as easy as possible: scanning national Identity card and giving some additional information.
- Both of them will be able to see list of all the products and list of all sellers.
- They can order any of the product. For ordering 40% of the price of the product should be paid using bkash application.

Additional features for the seller:

- One can add new product.
- One can see list of all of his product.
- If any of one's product is unavailable he can delete that product.
- One can see list of the orders he has received.
- If one has completed any order he can confirm that work has been , then that order will not be shown in the list.
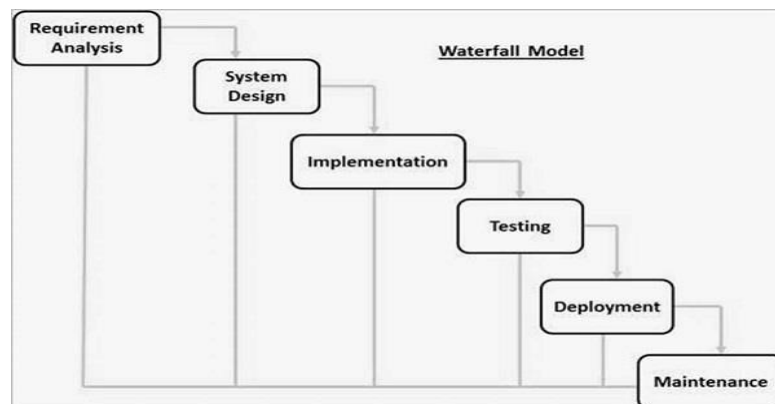

Figure 1.1: Waterfall SDLC Model

Data-flow Diagram: A data-flow diagram is a way of representing a flow of data through a process or a system.
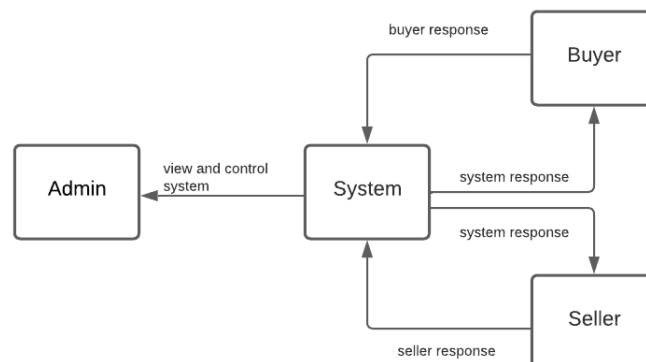

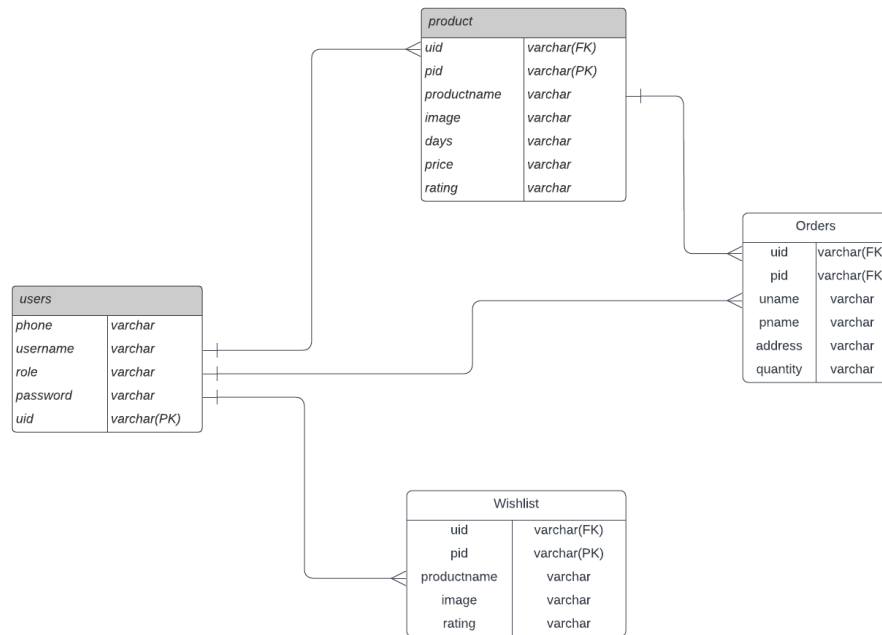Figure 1.2: High Level Representation of Data-flow Diagram

ER Diagram:

Figure 1.3: ER diagram of the system

6. Implementation:

We have developed the system into two parts.

- Android Application: We have developed the android application in java language. Firebase have been used for handling the backend of the application.
- Website: We have developed a website for handling admin panel using HTML, CSS, Javascript.

7. System Functionality:

i)Registration: We have tried to make the registration process as simple as possible. As the users includes rural women, it will be painful for them to give many information for registration. So in this system they have to give the image of their national Id card and provide username, password, role of user and phone number.

Figure 1.4: National ID scanning page for registration

Figure 1.5: Registration page for giving the addition information during registration.

ii)Login: We have used firebase authentication for login registration method. Login method is as same as the normal login. After login if one was registered as seller then application will take him to the seller home page and if one was registered as buyer then it will take him to customer home page.
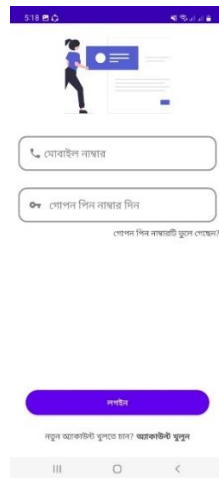
Figure 1.6: Login page

iii)Foget password: If one user has forgotten his password during login, then the system will provide him the facilities to reset the password through OTP verification.

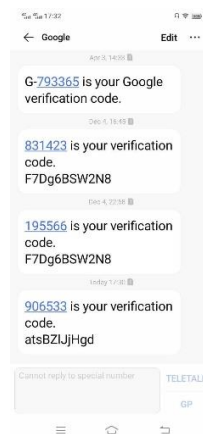Figure 1.7: Forget password page

Figure 1.8: OTP receive message
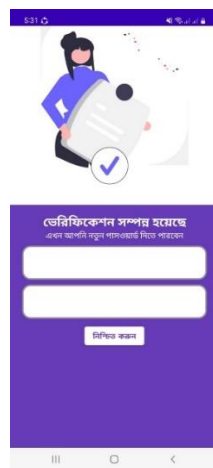
Figure 1.9: Page for entering verification code

Figure 1.10: Page for entering new password

iv) Profile page: Buyer's and seller's profile page is almost same. List of products will be shown in the profile page. There is also an option for see the list of the artists.
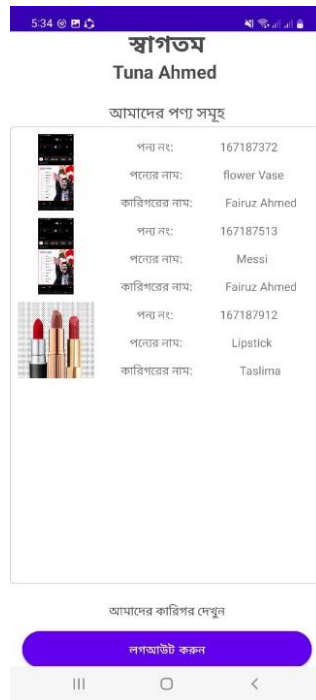

Figure 1.11: Seller home page

Figure 1.12: Customer home page.

v)Artist list show: Here user will see the list of all artist. If the user clicks on any artist, list of products of that particular user will be shown.
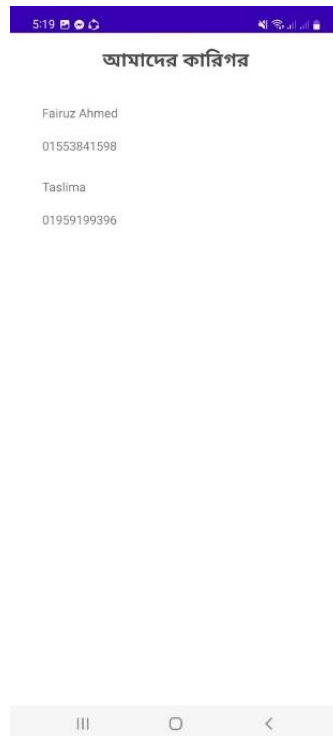

Figure 13: Page for showing all the seller

Figure 14: Page for showing product of a particular artist

vi.Order: Here customer can order a particular product. He has to provide the address and quantity. For ordering he have to pay 40% price of the product using bkash application.

Figure 15: Order page of a customer

vii)Seller profile page: Here a seller will be able to see the list of all his orders and by clicking on each of them he will be able to see the detail description of that order. Moreover, here he will be able to see the list of all his products and by clicking on each of them he will be able to see the detail description of that product.
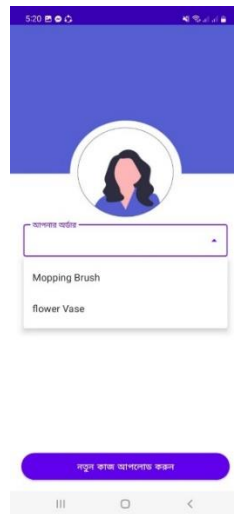
Figure 1.16: Profile page showing the order's list of a seller

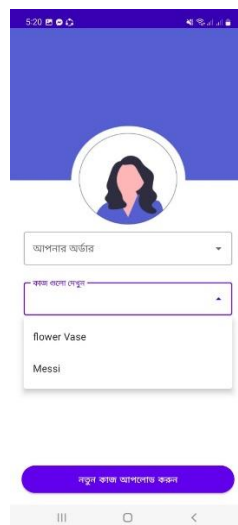Figure 1.17: Page for showing order details of a particular order

Figure 1.18: Profile page showing the list of work owned by a seller

Figure 1.19: Product details of his own product

viii)Upload Work: Here he will be able to upload his product with detailed description.

Figure 1.20: Page for uploading new work

ix) Wishlist: Here a customer will be able to see the list of the products which he likes.

Figure 1.21: Page for wishlist

x)Product Details: This page is shown for the Customer where they can do additional things like giving rates of product or adding product to wish list.
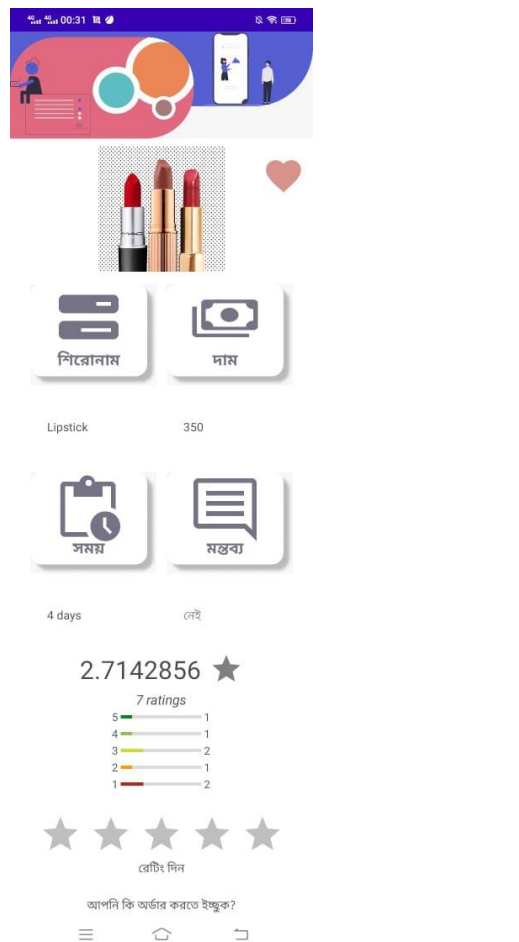

Figure 1.22: Product Details Page

xi)Website: It is for the admin. Here admin will be able to see and control all users, all products and all orders.
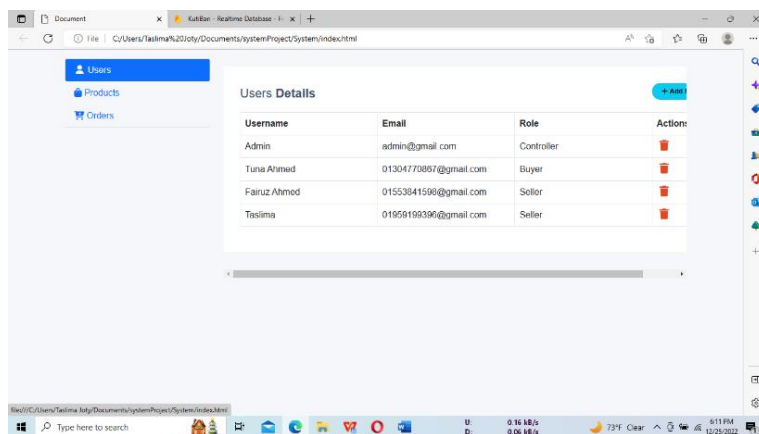

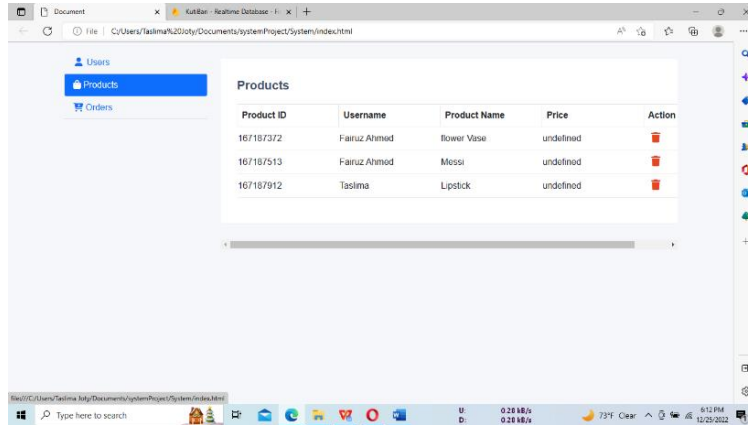Figure 1.23: Page for showing the list of users in the website

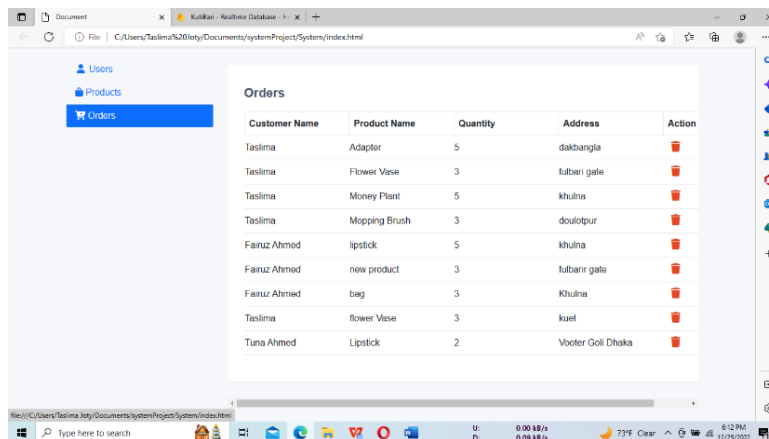Figure 1.24: Page for showing the list of products in the website

Figure 1.25: Page for showing the list of orders in the website

8. *Limitations:*

- We have tried to add machine learning in the rating system. But we were unable to do that because of lacking of proper dataset.
- We couldn't categorize the products using Machine Learning which might be more user friendly. But we failed to do that.

9. *Conclusion:*

We have tried to make the system as user friendly as possible. Our main purpose is to support the rural women. We have tried our best to make our purpose successful. By designing the system our knowledge about the designing has been enriched which will be very useful in our future life.

10. References:

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