

Evaluation of the Product⁶

1. Design

- a. The application should have inbuilt validation checks in place for each field and consequently, separate error messages should be generated for each type of validation error.

Met, the client did not find a problem, validation checks were mostly appropriate and no complaints were found

- b. Donations inflow and outflow must be logged accurately.

Met, Client was satisfied with the logging of donations. Records were accurate at all times

2. Donors

- a. The program should allow the users to sign into and out of their accounts and create new accounts.

Met, The client didn't find a problem

- b. For each donatable item, the donors should be able to see the price per unit and they should be shown the calculated price for the donation that is being made after entering the number of donations.

Met, The client didn't find an issue in this functionality

- c. All donations that the user makes must be logged accurately in the database

See 1B

- d. The application should display the top donor (user with most donations) (to promote more donations)

Met, The client was impressed with the creativity of this function

- e. The application should inform donors about the availability of each type of item.

Met, The client was impressed with the implementation of this function

3. Receivers

- a. Account can only be registered with a unique identification number (CNIC) in a valid format for receivers.

Met, The client did not find an issue

- b. Receivers should be able to login to their account using their CNIC and username

Met, Client was satisfied and did not raise an issue

- c. User should be able to check the availability of items currently in stock

Met, Client was especially impressed by the dynamic nature of the table showing item availability

- d. Users should be able to print a receipt of the donations that they get

Met, the client did not point out any issues here

⁶ Appx 1 – Final Interview

2. Recommendations for Future Improvements

Overall, the application works well to a certain extent but many additional changes could be made to ensure that the application is as efficient and convenient to use as possible besides improving security.

Further improvements that were suggested by the client⁷ and users included:

a. Help Messages

Though extra care has been taken to ensure that the application is user friendly yet users might get confused about how to operate it. To tackle this issue, a help message containing instructions could be shown on each page.

b. Hashes and Salts

Currently, the passwords are stored in the database in a plaintext format. To improve the security and privacy of the passwords, the passwords could be hashed using a Hash function and stored in the database. Additionally, Salts could be added to the end of the hashes to prevent duplicity of hashes.

c. Administrators Configuration Settings

The client suggested that an Administrator Settings menu could be added into the application which would allow administrators to change the cost price of the different donated items as they may require to update prices, from time to time.

d. More Error Messages

Some extreme cases and abnormal scenarios might not have been accounted for. More trouble shooting and user testing can be used to find these scenarios. Error messages could be displayed for these cases using JOptionPane.

e. Banking System

According to the client, the product has improved the consistency of the records. Currently, the donors pay for their donations at a manned counter and this increases the chances of human error. To make the system fully autonomous, the client suggested integrating an online banking system into the application which would allow the user to pay for their donated items directly without having to pay in person. This could be achieved by integrating an Application Programming Interface (API) banking service into the application.

Word Count: 280 words

⁷ Appx 1 - Final Interview