A Web Tool to assist in realising and maximising the value of donated items in a charity shop environment

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Project Aims

- Identify solutions based on computing technologies that would assist in realising and maximising the value of donated items in a charity shop environment.
- Develop a prototype to showcase those technologies.
- Raise further discussions regarding this subject.

Project Details

Research Methodology & Requirement Gathering

- The project adopted an action research methodology consisting of two cycles of reflection and action.
- It uses a one-to-one interview as the main method for requirement gathering.

Application Architecture & Design

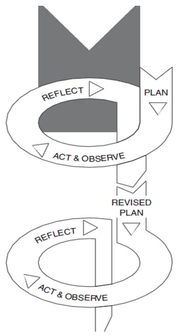
- The application was built using a Model-View-Controller (MVC) architecture
- Flow diagrams for both the buyer-end and worker/admin-end were created before the development process. Those show the main steps and interactions involved in the application's processes.
- ERD was also created to depict the relationships between the main entities in the application database.

Testing

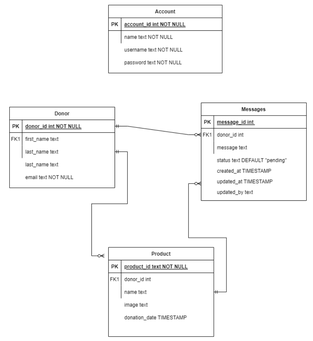
- For testing, the black-box method was applied. Also known as the functional testing, it revolves around the user-end perspective.

Project Details/Diagrams

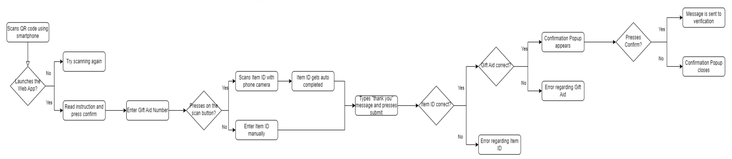
Action Research Methodology



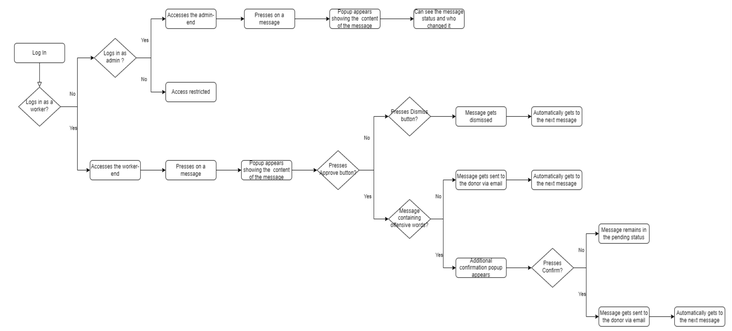
Entity Relationship Diagram



Buyer-end flow diagram



Worker/Admin-end flow diagram

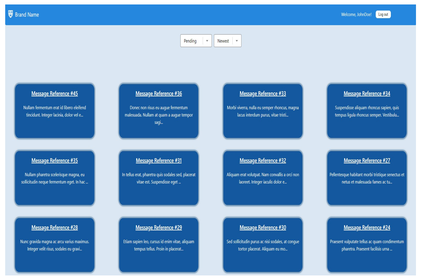


Project Details/Results

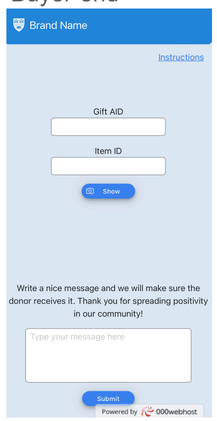
Product description

- Message-passing application.
- Primary objective is to provide a platform that allows buyers to send personalised "thank you" notes to the donors of their purchased item.
- It features a message moderation functionality available to the charity shop workers.
- Designated admin page on which it can be viewed who changed the message status.

Worker-end



Buyer-end



Results/Findings/Highlights

- Newly attracted donors are lost after the first donation.
- The QR technology its on its peak of usage and studies predict that will grow in popularity.
- People's perception of value can be influenced by the human touch.
- Value can be either financial or social/sentimental
- If the application would influence a minimum of two donors per month to return, it would be cost-neutral.

Conclusions/Future Work

Conclusion

- Computing technologies were used to showcase how the sentimental value of donated items can be increased.
- The application can potentially help with donor engagement, making the susceptible for return visits.
- The QR technology cannot be used at its full potential with the current systems in a charity shop.

Future Work

- Further studies could investigate how the Quick Response technology can be implemented and potentially replace the traditional barcodes in the Point of Sale systems.

Bibliography

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