

## 1) Background

Welcome to our innovative lost and found application! Our platform is designed to assist users in recovering their lost items and reuniting them with their rightful owners. Whether it's a valuable items, a lost personal belonging, or even a missing loved one, our application provides a comprehensive set of features to help you in your search.

To begin using our application, users can easily register an account. The registration process is simple and requires basic information to create a secure and personalized account. Once registered, users can log in to the application and use all the application features.

Users can contribute to the community by uploading details and descriptions of the lost items. By providing comprehensive information about the lost item that they found, including photos and relevant descriptions. Our application provides a powerful search functionality that enables users to effortlessly look for their lost items. Users can enter specific details such as item descriptions, locations, or any relevant information to narrow down the search results and increase the chances of finding their belongings.

Upon logging in, users are presented with a user-friendly home page where they can navigate through various sections and explore the application's offerings. In addition, users have the option to engage in real-time chat conversations with other users to help them to know if these items actually belongs to this user or not or to meet together to give the user his item.

Our application contains QR code technology. Users can generate and display their unique QR codes, which can be scanned by others to access limited information about the user, such as contact details or a brief description and this additional feature that maybe someone put his QR code on his important items or on his car that if someone need to communicate with the owner of this car for any reason he can use the code Users have the option to upload their personal information securely. This information remains private.

Additionally, users can create notifications for items they possess after they upload their important items on the application,thereby receiving alerts when someone reports a similar item as lost.

Our application includes a dedicated child section for parents who have lost their children. This section allows users to search for their missing child by uploading a picture, increasing the chances of locating and reuniting with their loved ones quickly.

Our lost and found application is the ideal solution for anyone seeking assistance in recovering lost items or locating missing individuals. We are committed to providing a reliable and efficient platform that connects people and helps restore what is rightfully theirs.

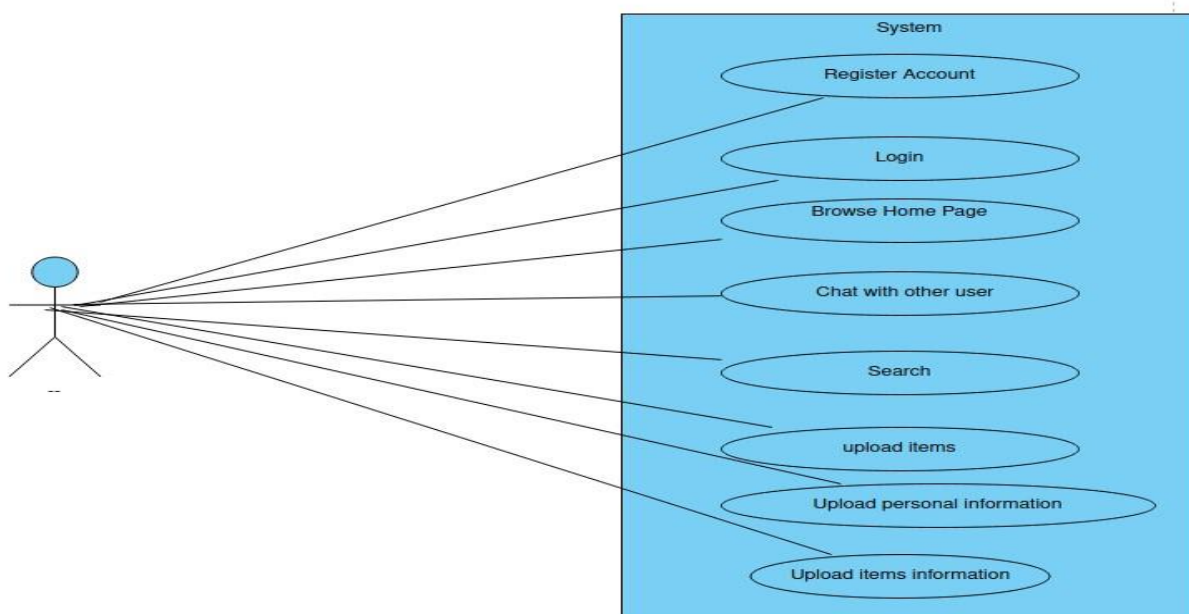
## 2) functional user requirements

- \* The user can register account
- \* The user can login to the account after registration
- \* The user can brows the home page
- \* The user can chat with another user to make sure that he is the correct one
- \* The user can search about his lost items
- \* The user can upload the lost stuff
- \* The user can use QR code to see other user information
- \* The user can upload his personal information
- \* The user can upload his items to make a notification when something nearly lost
- \* The user can use child section if his child lost so he can search about him by picture

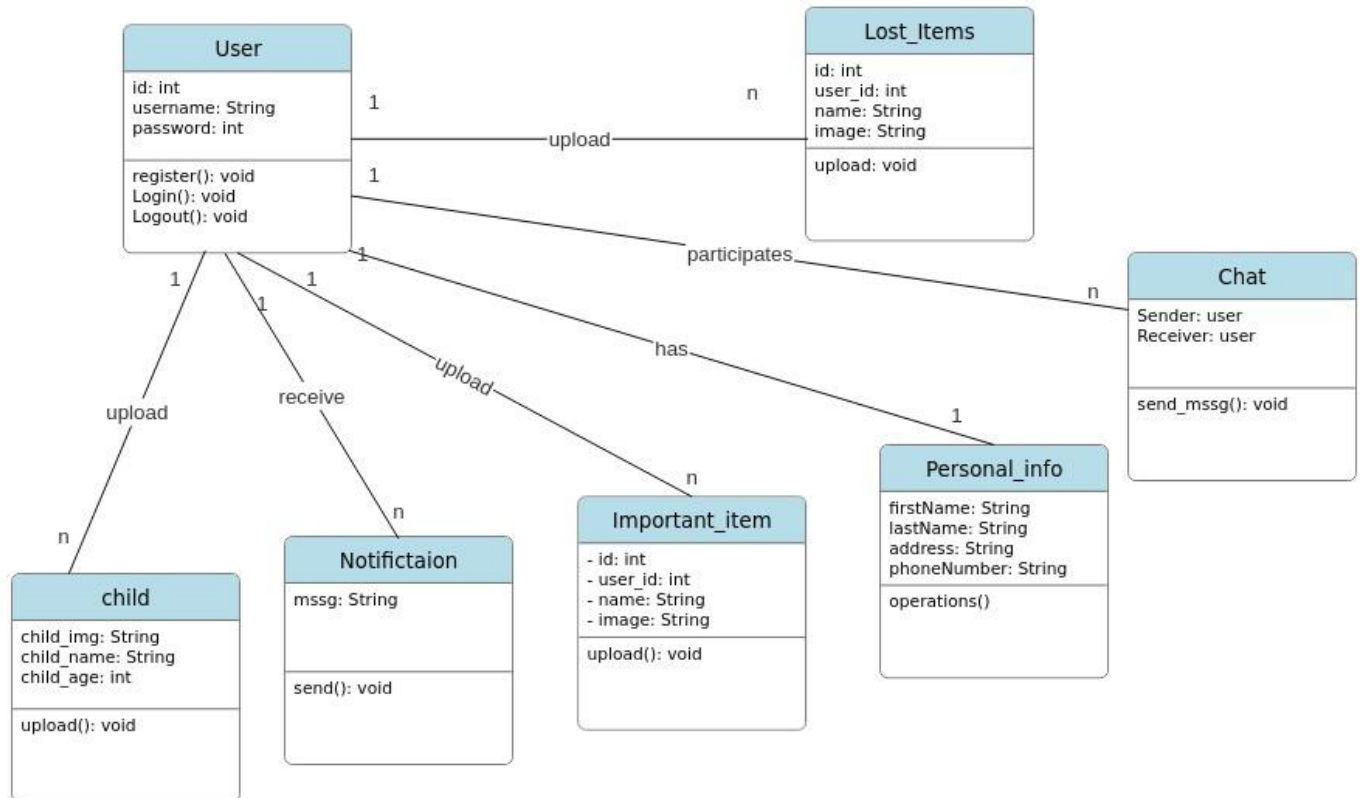
## 3) Competition

1. Identify key variables: Identify key data that the user may lose and need to search for, such as names, places, things, etc.
2. Designing an effective search interface: Creating an interface that allows the user to enter missing data and carry out the search quickly and easily.
3. Improving performance and accuracy: Testing and improving search algorithms to ensure good performance and accuracy in results.
4. Error management and boundary checking: You must ensure that errors are avoided and search boundaries are handled appropriately to provide a smooth user experience.

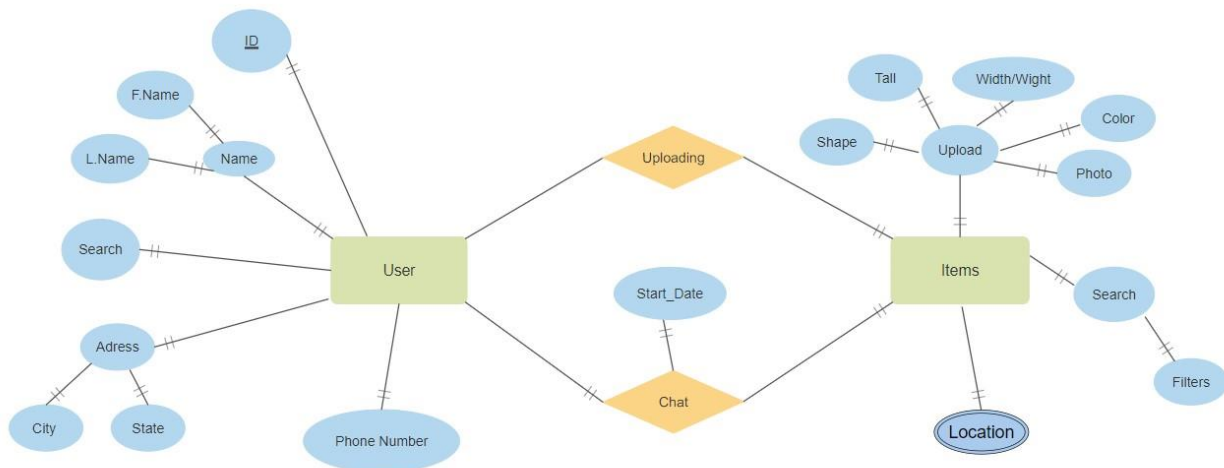
## 4) Use Case



## 5) Class diagram



## 6) ERD



## 7) Activity diagram

