

PAID RESTROOM TRACKER																
GANTT CHART																
4CS A																
Task	May 2024	June 2024					July 2024					August 2024				
	W5	W1	W2	W3	W4	W5	W1	W2	W3	W4	W5	W1	W2	W3	W4	W5
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Project Planning

In May 2024, We started to make a roadmap. The leader, Cristine Joy D. Roa, assigned a task to each member, John Aron Marasigan and Ysmael Tanyag. Cristine Joy Roa is responsible for the front end, John Aron Marasigan is responsible for the back end, and Ysmael Tanyag is responsible for the algorithm called A* and functionalities involving Google API. The team decided to start the development in June 2024, data collection in July 2024, and finish 90-100% of the system by August 2024.

Requirement Analysis

The requirement analysis from May 2024 until June 2024 includes the main functionalities of the application, which tracks the paid restrooms in the Laguna area. The application has an admin side and a user side. The admin side controls the adding, updating, and removing of the tagged paid restroom, as well as viewing and deleting the reviews when inappropriate and viewing the user report. The user side controls the viewing of the map that has tagged paid restrooms across the Laguna area. The user must have a data connection and on-location access while using the application. The user can view the directions in three different ways: as a private car, as a jeep, and as a person, including the miles of the selected paid restroom towards the user's current location. The user can rate, review, and report a paid restroom based on their experience. Also, the application recommends paid restroom based on its nearest and rating.

Design Phase, Frontend Development, Backend Development, Database Setup, and Integration

In June 2024, we started to create the layout, starting from the Loading page to Google login. Then, the design layout for Google login is going to the sprint, wherein the developer will add the database and functionality for logging in with the use of a Google account. Then, the frames are created, starting from the user logged-in page and moving up to the main features of the application. The design for the main functionalities is only for the layout of how the data will be displayed inside the application. Then while the design,

frontend, backend, and database are ongoing, the implementation of A* is also ongoing, and it is tested using the design for that specific activity. As a result, the A* is integrated with the frontend with the options of transportation. Then, the admin login validation is set up in terms of design, functionality, and database in order to log in and explore the features of the admin side. As for the admin features, adding and deleting a tag with its information is the researcher's priority. The add and delete feature is a tool to store it inside the app database directly and also for testing. For the integration of our system, we have combined the components needed based on the flow of the application with their functionalities and requirements needed to perform, such as API integration and database integration. In doing that, the front end communicated with the backend to merge their work and test it to see if it is functioning well as well as the algorithm that will be integrated in Google Maps API.

Data Collection in Laguna

In the 1st week of July 2024, the researchers used the app admin side to tag their current location when visiting the paid restroom location across Cabuyao to San Pedro, Calamba to Los Baños, and Turbina to San Pablo. With that, the researchers also added a location guide to easily navigate the paid restroom whenever it is hard to find or hidden. As of the 1st week of data collection, the researchers encountered that the paid restroom here in Laguna is mostly located in terminals, food parks, and catholic churches. But unfortunately, the paid restrooms inside the mall are forbidden due to the privacy of their mall. So, the researchers found that the kind of culture here in Laguna, terminals, churches, and food parks are tagged as the paid restroom.

Design Phase, Frontend Development, Backend Development, Database Setup, and Testing

In the 2nd week of July 2024, the researchers make the application dynamic in terms of adding and reflecting the tagged paid restroom in the admin and user side. With that, the applications design phase, frontend development, backend development, database setup, and testing are involved.

In the design phase, front-end development is involved in terms of modifying the layout, especially when the data is reflected on, the design must be modified. In backend development, the database setup and testing are involved in terms of the data collected during the data collection, which must be added to the collection of the database, which is needed in the backend development to reflect it in the front end and test accordingly.

In the 3rd week of July 2024, the researchers check all the parts or pages in terms of reflecting the data, updating the data, and deleting the data from the admin side to the user side. The data that has been checked includes the uploading of images, information, ratings, and reviews. Currently, in the testing phase, the researchers make sure it reflects dynamically and that no pages are left behind.

In the 4th week of July 2024, the researchers finish the review, rating, and report features and also check the flow of the pages to make it more user-friendly and also check if all the data is reflected on both the user, admin and inside the database.

Data Collection in Laguna

In the 5th week of July 2024, the researchers will collect data in Pila to Sta Cruz to see if there is an available paid restroom in that area.

Testing

In the 1st week of August 2024, the researchers will check all the features by applying user inputs such as reviews, rates, and reports.