

Product Requirements Document

Introduction

Project Title: Traveling Repairman

Sponsor: AppFolio

Vision: The Traveling Repairman app assists property managers and service providers in automating the scheduling and routing of administrative and maintenance tasks with an interface that displays property locations and property details.

Purpose: The purpose is to develop an application that streamlines the processes of scheduling maintenance tasks and routing between properties for service workers to reduce time spent not doing work.

System Overview

- The application manages a collection of properties as well as administrative and maintenance issues for each one.
- Property managers can visualize their properties and view or schedule administrative and maintenance tasks on their properties.
- Property managers can input maintenance requests and get information about administrative or maintenance visits.
- Service and administrative workers are able to get an optimized route to perform their maintenance and administrative tasks respectively.

Scope:

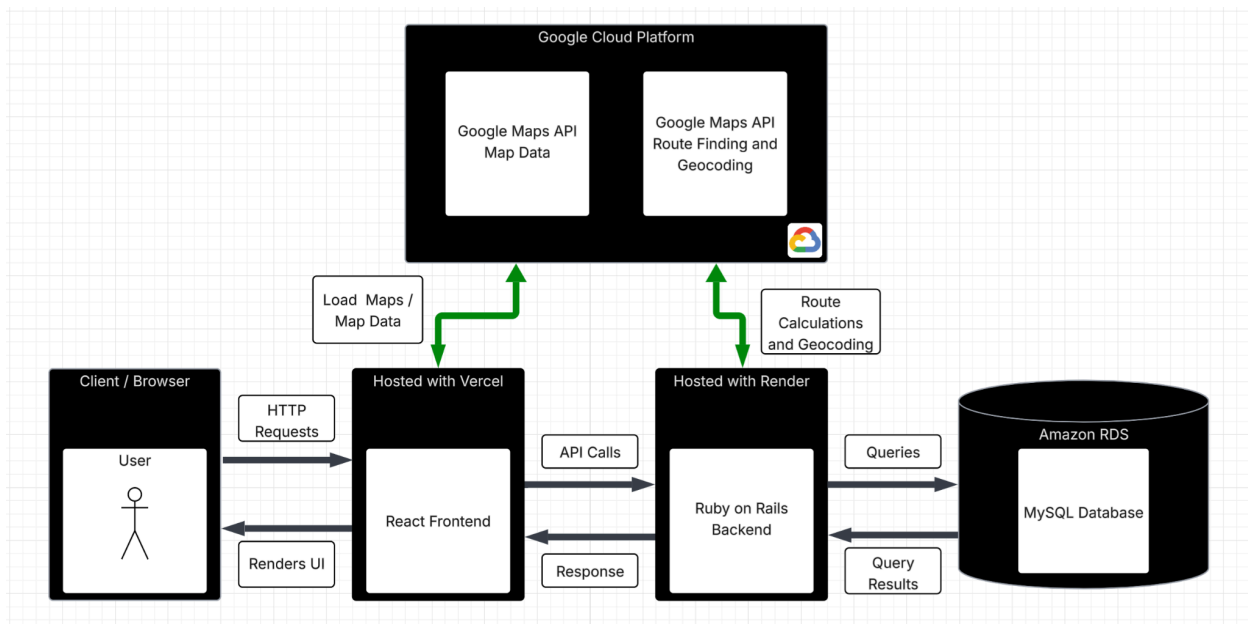
- Visual mapping of portfolio showing all properties under the management of a property manager using the application
- Interactive map allows for managing property information and inputting maintenance tasks
- Automated route optimization between properties based on availability and traffic
- Perform task scheduling for individual service workers
- Integration with a database to keep track of the property's state and the history of maintenance

Assumptions

- Property managers input correct addresses for their properties

- Maintenance workers use the routes planned by Traveling Repairman rather than a third-party app
- Repairmen are not scheduled to properties outside their local area or to more tasks than are feasible within work hours
- Assigned routes are static, and will not change once assigned (note: we intend to make this feature dynamic as service workers experience real-time changes in their schedule)

System Architecture



Requirements

Functional

1. Property managers can add/delete/edit their properties
2. Property managers can add/delete/edit tenants to their properties
3. Property managers can report issues with their properties
4. Property managers can view issues with properties
5. Property managers can add/delete/edit administrative tasks for properties
6. A worker gets an efficient route to the locations they must visit
7. The application has a login system that authenticates users (property managers)
8. Tenants should be able to get an estimate of when their issue will be taken care of

Non-Functional

1. Clear button layout and property view for property managers when modifying properties

2. Clear button layout and map visual for service workers servicing properties
3. Optimized routes are found in a reasonable time
4. Authorized users are able to log in and view information relevant to them
5. Internal API calls return in a reasonable time (< 20ms)
6. Minimal manual work needed on the side of the property manager

User Stories

As a property manager, I want to:

- view all of my properties on a map, so that I can keep my portfolio organized.
- receive automated schedules for repairs at my properties, so that I can save time from making them myself.
- edit the automated schedules, so that I can prioritize urgent repairs first and assign service workers to tasks with their specialities.
- add/remove/edit my properties, so that I can onboard new properties and remove ones I no longer manage.
- be able to add/edit/remove tasks, so that I can add new tasks to route and be able to make any needed updates/modifications for existing tasks

As a service worker, I want to:

- see an optimized route for jobs each day, so that I can complete my tasks more efficiently by reducing commute time.
- be alerted of road emergencies and traffic and be given an alternate route in these situations