

SIT725 Task 2.1P

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Locate a Socket: Software Requirements Specification (SRS)

I. Introduction

- Operating as a web application, *Locate a Socket* aims to optimise the journey of electric vehicle (EV) operators as they locate, gain access to, and pay for charging stations. This application is targeting a wide audience of electric vehicle drivers with varying technical knowledge.

II. Purpose

- The main goal of *Locate a Socket* is to provide EV drivers with a user-friendly platform for managing their charging needs. With the use of real-time sources on charging station availability, detailed data, and secure payment process, promises to alleviate the worries of EV drivers by streamlining the process of locating charging outlets and always having secure payment methods which will make the planning of each trip more efficient.

III. Audience

- *Locate a Socket's* target market are the wide range of EV drivers, including new and old electric vehicle drivers who are looking for a user-friendly platform to better manage their charging habits. *Locate a Socket* can also cater to businesses that manages electric vehicles and even those individuals who are still undecided about getting an electric vehicle and are weighing their pros and cons.

IV. Overall Description

- *Locate a Socket* provides a complete set of features to give EV drivers easy access to charging facilities. The application is operated by using a simple online interface that can be accessed through any web browser on different kinds of devices. Users may use the optimised location-based services to find charging stations, view comprehensive station information, get directions, and securely pay for charging sessions.

V. External Interfaces

- *Locate a Socket* will interact with different external APIs to showcase the app's functionalities like:
 - **Navigation Services:** Incorporate a mapping service API to show station locations, directions, and routes.

- **EV Charging Station Networks:** Connect to EV charging station network providers' APIs to obtain real-time availability statistics, charger types, and price information.
- **Secured Payment Gateways:** Incorporate a secure payment gateway to process the payments.

VI. System Features

- **Search Functionality:**
 - Users may search for charging stations by inputting a specific location or creating a route. Advanced search features will also allow users to filter and sort search results depending on their choices.
- **Station Details:**
 - Provide detailed information about each charging station, such as its address, distance, available charging points, suitable charger kinds, and current availability status.
- **Navigation:**
 - Incorporates a mapping service API to be able to give an optimised navigation guidance to the chosen charging station.
- **Secure Payment:**
 - Implement an encrypted payment platform that allows users to pay securely for charging sessions while also accepting multiple payment methods such as credit or debit cards and other e- wallets.
- **User Accounts:**
 - Provide an optional login system for organising payment methods, reviewing histories, or even establishing preferences.

VII. Non-Functional Requirements

- **Performance:**
 - The web application must maintain minimal loading times.
- **Usability:**
 - The UI should prioritise user-friendliness with minimalist, straight to the point and clear interface.
 - It should offer responsive design for optimal UX on different devices (desktop, mobile).

- **Reliability:**
 - The application must have minimal downtime or disruptions.
 - The mapping and payment methods must be reliable and secure.
- **Security:**
 - Make sure of the secure and seamless transmission and storage of user data, especially the payment information while complying with the in-charge security regulations.

VIII. Other Requirements

- The application could be required to comply with certain rules or standards in the industry that includes EV charging infrastructure or privacy of data.
- Accessibility aspects should be involved in order to accommodate people with impairments.
- Availability of different languages can also help reach a wider audience.