METHODOLOGY

This chapter includes the design and system process in developing CARGA: Smart Online Application System Using Recommendation Engine for Peer To-Peer Rental Vehicle.

Design of Software, Systems, Product, and/or Processes

Figure 2 shows the mind map conceptual design diagram of CARGA: Smart Online Application System using Recommendation Engine for Peer-to-Peer Rental Vehicle describing the main nodes user's role, functionality and portability of the system.

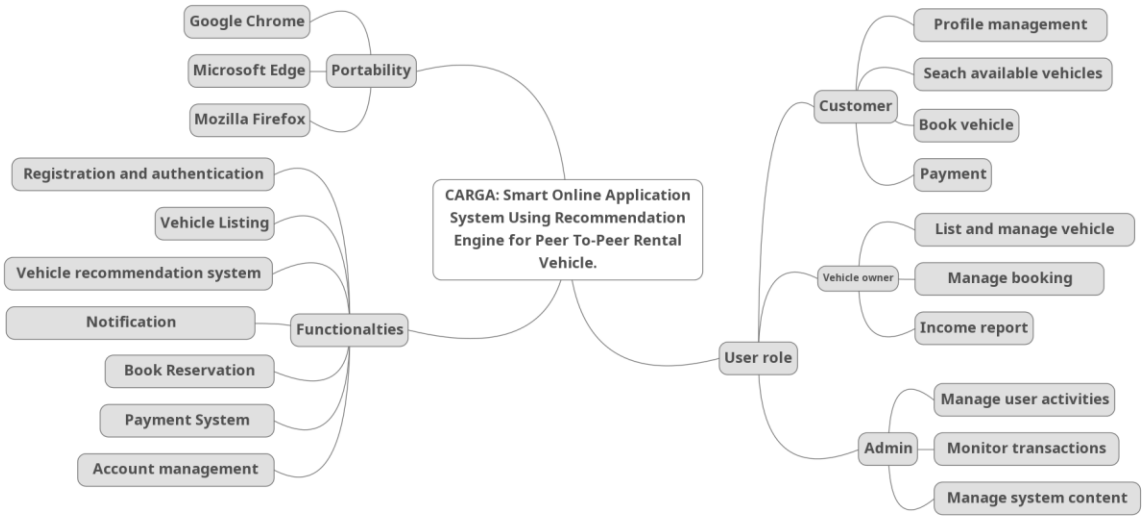

Figure 2. Mind Map Diagram of CARGA: Smart Online Application System using Recommendation Engine for Peer-to-Peer Rental Vehicle

The overall functionality offered by the system is registration and authentication to verify its users, vehicle listing for rental vehicle owners, vehicle recommendation system for rental vehicle customers, notification, booking reservation and management for both customers and vehicle owners, payment system and account management. The user role

consists of three members customer, vehicle owner and admin. The customer can be able to create an account, once account created, the customer has a dedicated interface to manage his/her profile, customer can browse through listed the available rental vehicle, can book desired rental vehicle, can proceed to payment system. The vehicle owner has a dedicated interface once created an account and login the vehicle owner can list vehicle, the owner can be able to manage his/her booking and can view rental vehicle generated income report. The admin can manage user activities, can monitor the user's transactions, apply agreement to both party's customer and vehicle owners and the admin can be able to modify system content. The system is expected to run on three different search engines Google Chrome, Microsoft Edge and Mozilla Firefox

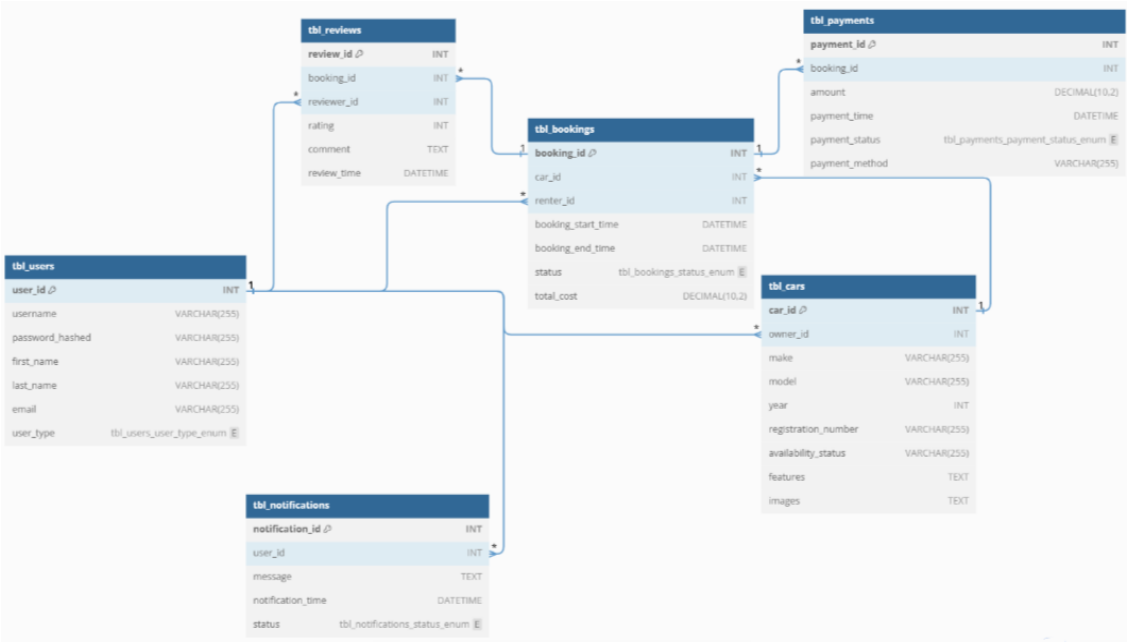

Figure 3. Entity Relationship Diagram of CARGA: Smart Online Application System using Recommendation Engine for Peer-to-Peer Rental Vehicle

Figure 3 shows the entity relationship diagram of the CARGA: Smart Online Application System Using Recommendation Engine for Peer To-Peer Rental Vehicle. It consists of five tables tbl_users contain users' credential that needs for verification and identification users, tbl_cars include the basic information of the vehicle that will be listed on the system, tbl_booking describes all the information needed for the booking logs, tbl_payments consist of booking transaction of the renter and vehicle operators, tbl_reviews will be store the users experience in the vehicle rented, tbl_notifications will be used for the communications of the users where they can see updates on the transactions in the system. The relationship of each table each table consists of