**Software Requirement Specification**

**FOR**

**Car-Pool Management**

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1. **INTRODUCTION:**

Carpooling (also known as car-sharing, ride-sharing, lift sharing), is the shared use of a car, especially for commuting to work, often by people who each have a car but travel together to save cost and to promote other social-environmental benefits. People who don't have a car can also contact people with car and commute together.

The basic idea of car-pooling is the sharing of car journeys so that more than one person can travel in a car. When people are more and they are using the same vehicle then it can reduces each person's travel costs like fuel costs and the stress of driving.

Carpooling is also seen as a more environmentally friendly and helpful way to travel as sharing journeys reduces air pollution, traffic congestion on the roads as well as the need for parking spaces also. It is recommended especially during high pollution periods and high fuel prices. Authorities are encouraging this type of activities.

**1.1 Purpose:**

This document is a Requirements Specification providing the details for the Carpool application. The document will be used to elaborate the functionality of the Carpool application. The document addresses a web based application that is accessible from an Internet browser.

The document also describes the nonfunctional requirements such as the user interfaces. When the system is designed it is also considers the design constraints and other factors which will be used for the software. This application allows the users to perform tasks like search the car on desired route, date and timing.

* 1. **Product Scope:**

Carpooling is environmental friendly, reduces cost of journey and it saves from traffic problems. Now a days, number of cars on road has increased tremendously this led to heavy traffic problems and some other environmental hazards like air pollution and noise pollution with the help of this we can share ride with people who are regularly coming from same place it could provide solution to these environmental problems.

With carpooling they can make their ride enjoyable while talking with fellow persons. It is good way to save on fuel consumption. One of the most important benefits of carpooling is saving of money not only in terms of fueling but also wear and tear ride will be reduced to great extent.

* 1. **Reading Suggestions:**

This document is written keeping in mind that it should be easily understandable by the developers, users and document writers. This document contains information on the overall description of the application product, functions, the system features, the external interface requirements, other non- functional requirements, glossary and any other requirements needed.

1. **Overall Description:**

**2.1** **Product Perspective:**

Our system is being implemented is a self-contained product and will be the first of its kind. It will be exclusively designed for the faculty, staff & students of our college.

Every day many persons including faculty, non-teaching staff, students etc., go to city by taking their own cars & faces traffic in road as well as in petrol pumps, also they have to bear whole maintenance of the ride therefore, we are creating a software that helps to reduce these problems through ride sharing & also gives a good company to the car owner.

* 1. **Product Functions:**

The carpool functions will support the following functionality:

* Login – logging onto the web server
* Register - Register in the carpooling
* Carpool search – search other members participating in the carpool
* Create Carpool – create carpooling for special events
* Join Carpool – join others carpool.
* View Carpool detail – view detail of the one-time event schedules.
* Delete Carpool detail - delete own created carpool.
  1. **Operating Environment:**
* The computer must be linked up to a server loaded with the Database. The users will require for peripherals a mouse and a keyboard.
* It should be compatible with all the well-known and widely used web browsers like Internet Explorer, Mozilla Firefox, Google Chrome, and Opera.
  1. **Assumption and Dependencies:**
* It is assumed that the user should familiar with computer &having internet connection in the system.
* It is assumed that all information given by the user is correct regarding personal & scheduling information.
* Our system mainly depends on the users & highly affected when the information given for pooling is not followed.

1. **External Interface Requirements:**

**3.1 User Interfaces:**

On the main page, the guest can check the carpool schedule and will be given an option to login or register as a new user.

The registered user will be a given the option to edit their profile, perform a carpool search, create a car pool, view others carpools, join car pool, and delete his own carpool.

While creating carpools, users can establish their own preferred origin and end destinations places along with his own choice of partners he wants in his ride sharing journey.

When joining the car-pool we can join according to the description given by the car owner i.e. after matching source-destination places, timings & other preferences.

* 1. **Hardware Interfaces:**
* The user should have end systems (computers or laptops).
* The hardware interfaces (such as network connectivity) will be managed by Internet Service Provider.
  1. **Software Interface:**
* The system is not specific for any particular operating system.
* We will be using HTML, Java script and PHP to build the front end of our Database. It will
* Mainly consist of usernames, passwords, emails, address, and schedule of car-pooling.
* We will use MYSQL to manage the database on our server.
* PHP will be used to connect to MYSQL.

1. **System Features:**

**4.1 Search:**

Search option is displayed in the home page on the browse. Any guest (Not- registered) can also access the search option. It’s directly connected with the database.

User can search the site by giving his required origin and destination places. User can give only those places which are given drop down menu in the search option. After selection of places the user has to click on the search button. After this options of carpooling will be displayed on the screen.

**4.2** **Login:**

This option will on the home page of the website. It allows the user who have been registered before to get access to his own profile. User can also request for the new password in case he forgot the password.

The user has to provide the user name given to him at the time he registered and the last updated password to login to access his profile after clicking on the login button. To get a new password user has to provide the username/email id.

Error can occur if the user name and password didn’t match, and the user will be redirected to login home page.

1. **Other Non-Functional Requirements:**

**5.1 Performance Requirements:**

A proper internet connection is needed for the users using this website and the user should be user friendly with computer and the user interface of the website should be easy*.*

* 1. **Safety Requirements:**

If some unauthorized person get access to the site he can damage the site, therefore, the system shouldn’t allow the user to access, until he provides correct username and password.

**Glossary:**

|  |  |
| --- | --- |
| **SRS** | Software requirement specification |
| **PHP** | Hypertext preprocessor |
| **HTML** | Hypertext markup language |
| **HTTP** | Hypertext transfer protocol |
| **SMTP** | Simple mail transfer protocol |