Group Project 2 - Vision Document

**CARPOOLING**

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Carpooling

Vision

Version 1.0

ReVision document History

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| <01/012/17> | 1.0 | Vision Document for Carpooling application for UHCL | Ridhima Joshi  Varshithanand Kotipalli  Hilary Mokolo  Mamatha Aluru |
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Table of Contents

[**Introduction**](#_q1jeylopawz4) **6**

[Purpose](#_fbriu342sq7e) 6

[Scope](#_mlqoc02k7mbv) 6

[Definitions, Acronyms and Abbreviations](#_9o5n9ghtjt87) 6

[References](#_qy1wi2z12k4y) 6

[Overview](#_hjlubf85n8su) 6

[**Positioning**](#_dptv4w4wcgjq) **7**

[Business Opportunity](#_5yddxq9h22mk) 7

[Problem Statement](#_l5sixdco6848) 7

[Product Position Statement](#_p49y81mnw8di) 8

[**Stakeholder and User Descriptions**](#_vh5w8a2njyei) **9**

[Market Demographics](#_sfu88xoufnm9) 9

[Stakeholder Summary](#_leswvcy73vj) 9

[User Summary](#_hhss61bek1km) 10

[User Environment](#_131f54e5pkca) 10

[Stakeholder Profiles](#_i41z2soquv6r) 10

[Requirements Engineer](#_xu3r5j6ymx3u) 10

[Project Manager](#_gknmqj6susos) 11

[Senior Software Developer](#_xpm3j6dmuplx) 12

[Testing Lead](#_nzx917cjtaau) 12

[User Profiles](#_fs6kkoxrm8c7) 13

[Rider/Driver](#_fqnbvc9fc06j) 13

[Key Stakeholder / User Needs](#_dea1j26wb3hw) 13

[Alternatives and Competition](#_suqefiknr76s) 14

[Uber](#_py480t6t45uk) 14

[Lyft](#_fv5ey4z7jvyp) 14

[**Product Overview**](#_plwc23ad7sdt) **15**

[Product Perspective](#_7y9kxjskx8vp) 15

[Summary of Capabilities](#_7rvf0xnjlw1y) 15

[Assumptions and Dependencies](#_h1t23yn1v7zi) 15

[Cost and Pricing](#_n556erwkysvv) 16

[Licensing and Installation](#_kanqjnj31ce8) 16

[**Product Features**](#_bkzfe6kfwy3w) **17**

[System Features](#_87ki5ct9fm1u) 17

[Communication Features](#_pywbo8qiq134) 17

[**Constraints**](#_95735qblz92z) **18**

[**Quality Ranges**](#_o3abxm42bk9v) **19**

[**Precedence and Priority**](#_sq0zal4sb5n1) **20**

[**Other Product Requirements**](#_xxr0fx9mlslu) **21**

[Applicable Standards](#_trs1lpdach05) 21

[System Requirements](#_1vi5vn4hwh6x) 21

[Performance Requirements](#_wcsvuopvyksp) 21

[Environmental Requirements](#_yemvjpqynj4i) 21

[**Documentation Requirements**](#_70vsfgxfjzia) **22**

[User Manual](#_5oux5wfmpdh) 22

[On-line Help](#_3mp0irarx3hp) 22

[Installation Guides, Configuration, Read Me File](#_81k9q1sd0uky) 22

[Labeling and Packaging](#_3afqjdmayd7a) 22

[**Appendix 1 - Feature Attributes**](#_3qqutzgf5ynj) **23**

[Status](#_8wana3th7v44) 23

[Benefit](#_5moblfst52st) 23

[Risk](#_v5hop3v1jyge) 23

[Target Release](#_pyzvbmxmytag) 23

Vision

# Introduction

## Purpose

The purpose of the Vision document is to collect, analyze, and define high-level needs and features of the Carpooling Application. It focuses on the needs of the stakeholders and the users.

## Scope

The Carpooling application is a mobile based platform application for Android, Windows and IPhone users. It is also a web based application. The application helps the students of the UHCL to select the rides to reach the university for classes or oncampus jobs as per their time. The students offering the rides will register and notify the users as per their timing. The users can select the rides as per their convenience

.

## Definitions, Acronyms and Abbreviations

UHCL: University of Houston Clear Lake

## References

1. Leffingwell Dean, Widrig Don; Managing Software Requirements: A Use Case Approach, 2ed

## Overview

This document describes the requirements of the stakeholders and the users. it contains the features which will be provided in the application.

# Positioning

## Business Opportunity

The public transportation in the Clear Lake area is not good. All students do not own a car or any mode of the transportation. They have to be depended on others or the UHCL shuttle.

The drivers in the application will be the students. They can offer their services and can earn a bit. The fares provided will be low and authorized by the UHCL. The riders will not have to worry about the fares and will be safe to communicate with the university associates.

In this way there will an application for the university as well as the students of the UHCL.

## Problem Statement

|  |  |
| --- | --- |
| The problem of | Transportation |
| affects | The students of UHCL without any mode of transportation |
| the impact of which is | Difficulty in reaching the campus (to and fro) |
| a successful solution would be | Creating an application where students with transportation can provide services to students who have a transportation problem |

## 

## Product Position Statement

|  |  |
| --- | --- |
| For | UHCL Students |
| Who | Need of transportation |
| The Carpooling | is a software application which is a transportation service under the social/travel category |
| That | allows UHCL students to find rides with other fellow students of the UHCL for to and fro from the UHCL campus |
| Unlike | currently available services which does not have an option for safety |
| Our product | provides an platform for students who are in need of transportation |

# Stakeholder and User Descriptions

## Market Demographics

All Universities can use this product for their campuses. Individuals 18+ is our target demographic. We want students who have access to transportation, students who are preferably in a University, and students who need some way of making some money. Today we have Uber and Lyft, being the most popular, but nothing that is as cost effective for students. Our product will also create a convince for students because its social gathering will be centered around students and individuals you are surrounded by. You can not only travel within your city but you can plan trips city to city with multiple passengers at cost effective rates. The aim is to connivence students looking to make trips or groups looking to make trips but not having the resources to pay for a ride or even find a ride. We give it to them at their fingertips, we move just as culture is moving towards more technological savvy solutions.

## Stakeholder Summary

|  |  |  |
| --- | --- | --- |
| **Name** | **Represents** | **Role** |
| Requirements Engineer | Works with the clients to help them identify their needs for the project | Specifies functional and nonfunctional requirements required for the project |
| Software Architect/ Business Analyst | Designs the project with all the architecture and designs from the gathered requirements | Designs architecture, designs of the UML diagrams |
| Project Manager | Leads the development of the full project | Plans and manages all the activities and resources required for the project. |
| Senior Software Developer | Leads the development part of the project | Develops code |
| Testing Lead | Leads the testing part of the project | Designs test plan, test cases, execute test cases, report defects and creates defect report |

## User Summary

|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Stakeholder** |
| UHCL Students | The users are riders as well as the drivers. the students owning a car can provide a facility for carpooling. | Self |

## User Environment

The Carpooling application will be used by the UHCL students. The students who own a car will provide a service for carpooling to go to the campus and to come back. The application provides a set of fares approved by the UHCL. The application provides security by providing an option of sharing their ride details with their close bys, police emergency numbers, relative and friends emergency number. The payments will be securely done via a third party payment mode. The students will also have an option that with whom they can share the ride (that is male or female).

An full application can be completed by minimum of two students: a driver and a rider and maximum of as many seats are available in the car. The application environment will be web based as well as mobile platform based. The mobile platforms used are Windows, Android and IPhone. This application will be made compatible to future versions of the mobile platforms. The only integrated part of the application will be the third party payment providers for the payment of the rides.

## Stakeholder Profiles

### Requirements Engineer

|  |  |
| --- | --- |
| **Representative** | Joesph |
| **Description** | Interact with the clients and identify their needs for the project. |
| **Type** | Experience: 2 Years |
| **Responsibilities** | 1. Interact with the clients 2. Identify Their needs 3. Convert the needs into documentation which help for designing the project |
| **Success Criteria** | Achieving all the requirements from the client. |
| **Involvement** | Requirements reviewer  Requirements gathering |
| **Deliverables** | Requirements Document, Vision Document |
| **Comments / Issues** | None |

* + 1. Software Architect/ Business Analyst

|  |  |
| --- | --- |
| **Representative** | Johnny |
| **Description** | Convert the requirements into designs |
| **Type** | Experience: 5 Years |
| **Responsibilities** | Designs: 1) System Architecture  2) UML Diagrams  3) Use Cases  4) Data Flow Diagrams |
| **Success Criteria** | Converting the needs that is the requirements of the clients into designs |
| **Involvement** | System designer, developing use cases |
| **Deliverables** | System Designs  UML Designs  DFDs |
| **Comments / Issues** | None |

### Project Manager

|  |  |
| --- | --- |
| **Representative** | John White |
| **Description** | Planning and management of the project |
| **Type** | Experience: 10 Years |
| **Responsibilities** | 1. Planning of the project 2. Managing the time 3. Managing the resources 4. Managing the budget |
| **Success Criteria** | Delivering the project in time and budget |
| **Involvement** | Involved in all the phases of the project |
| **Deliverables** | Project Requirements, Final Project |
| **Comments / Issues** | None |

### Senior Software Developer

|  |  |
| --- | --- |
| **Representative** | Anne |
| **Description** | Developing the code |
| **Type** | Experience: 15 Years |
| **Responsibilities** | 1. Planning the coding according to the designs 2. Development of code |
| **Success Criteria** | Error free code and as per the designs required by the clients |
| **Involvement** | Coder |
| **Deliverables** | Running project |
| **Comments / Issues** | None |

### Testing Lead

|  |  |
| --- | --- |
| **Representative** | Jill |
| **Description** | Testing the code |
| **Type** | Experience: 7 Years |
| **Responsibilities** | 1. Check for errors 2. Report the defects 3. Check whether the project is as per client standards and designs 4. Set criteria for the testing |
| **Success Criteria** | Reporting and correcting the defects, if any |
| **Involvement** | From the start of the project |
| **Deliverables** | Test Plan  Test Criteria  Test Cases  Defect report |
| **Comments / Issues** | None |

## User Profiles

### Rider/Driver

|  |  |
| --- | --- |
| **Representative** | UHCL Student |
| **Description** | The student will either be a rider or a driver |
| **Type** | Driving experience required |
| **Responsibilities** | 1. Provide a ride for students 2. Rider can select the ride 3. Payment 4. Registration for rider as well as driver |
| **Success Criteria** | None |
| **Involvement** | Testing the application at the user end |
| **Deliverables** | None |
| **Comments / Issues** | None |

## Key Stakeholder / User Needs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Need** | **Priority** | **Concerns** | **Current Solution** | **Proposed Solutions** | |
| Security | High | Security for the riders | Refer proposed Column | | Provided with security options |
| Payment Mode | High | Payment mode via the third party site | Refer proposed Column | | Provided third part support for the secured payment mode |
| Easy to use | High | No previous knowledge or experience needed | Refer proposed Column | | Provided help option |
| Compatibility | Medium | Compatibility with all the versions | Refer proposed Column | | Supports all the versions |

## Alternatives and Competition

### Uber

### Lyft

* + 1. Bank Payment Mode

# Product Overview

## Product Perspective



Figure 1: Overview of the application

## Summary of Capabilities

**Customer Support System**

|  |  |
| --- | --- |
| **Customer Benefit** | **Supporting Features** |
| Pocket Friendly | The fares will be approved by the UHCL |
| Customer security | Help options are provided to the riders |

## 

## Assumptions and Dependencies

1. Language is English.
2. Internet connectivity is on continuous for the ride.

## Cost and Pricing

None Specified

## Licensing and Installation

The licensing will be done by the university.

# Product Features

## System Features

1. Start the application
2. End the application
3. Accept inputs from touchscreen
4. Accept inputs from keyboard

## Communication Features

1. Modify destination
2. Search for riders
3. Search for rides
4. View the rides
5. View details of the driver
6. View history of the rides, drivers and payments
7. Select ride type
8. Rate the driver
   1. **Safety Features**
9. SOS Button
10. Emergency Contacts
11. Police Contacts
12. Tracking of the ride
    1. **Payment Mode Features**
13. Cash
14. Credit Card
15. Debit Card
16. Banking

# Constraints

The main dependency of the application is that the device should be connected to the internet.

Constraint will be the time allocated for the development and testing of each feature as each feature has to be developed for different platforms: Android, IPhone, Windows, Web based.

Usability constraint will be the help system and user interface.

For performance constraints the emergency calls should be accurately placed and the time response will be minimum between the touch clicks and the responsive screen.

# Quality Ranges

**Performance:**

Minimum time between the click and the responsive screen.

**Robustness:**

The application will be able to handle the errors if occurred and the bugs will be fixed immediately.

**Fault Tolerance:**

The application will be able to handle the crashes.

**Usability:**

The application will be user friendly.

**Maintainability:**

The application will be maintained throughout its life-cycle.

**Portability:**

The application is compatible to all the platforms and its versions.

**Integratability:**

Easy to integrate with other applications and easy to integrate other applications in the carpool application

# Precedence and Priority

|  |  |
| --- | --- |
| **Priority** | **Feature** |
| High | Security  Payment |
| Medium | Change Destination |
| Low | View History of the Rides |

# 

# Other Product Requirements

## Applicable Standards

The Carpooling application will follow all the communication standards of TCP/IP , ISDN.

The application will follow the XYZ Corporation and the University of Houston Clear Lake legal and regulatory standards of FDA and UCC.

The application will follow the platform compliance standards of Windows, Browsers, Android, IPhone.

## System Requirements

Operating Systems: Windows, Android, IPhone

## Performance Requirements

None Specified.

## Environmental Requirements

None Specified.

# Documentation Requirements

## User Manual

A user Manual will be provided with all the necessary information to UHCL.

## On-line Help

On-line help will be provided by the company. The necessary information will be available online as well as there will be a live chat options to chat with the employees regarding any customer service.

## Installation Guides, Configuration, Read Me File

A separate guide for installing and configuration the application will be provided. With every new release or a bug fixed, a Read Me file will also be provided containing the information about new releases and the defects fixed.

## Labeling and Packaging

The application will contain copyright and patent notices. The application will have the UHCL logo as well as XYZ corporation logo. All the documentation will have the XYZ Corporation logo.

# Appendix 1 - Feature Attributes

## Status

|  |  |
| --- | --- |
| Proposed | Viewing the information about the riders by the drivers after the ride. |
| Approved | Viewing the information about the drivers. |
| Incorporated | Selection of drivers by the riders. |

## 

## Benefit

|  |  |
| --- | --- |
| Critical | Payment  Search rides |
| Important | Security |
| Useful | Rating the riders and the drivers |

## 

## Risk

Risk while developing the application is the resources and time allocated.

## Target Release

Selection of riders and drivers with the payment option will be the first release. In the later release the security option will be implemented.