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MyTaxiService

RASD Document

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1 Introduction

1.1 Recipients

This document is applied to professors who teach software engineering 2 in the years 2015/2016, but other users interested in this documents could be the developers of a system that manage requests of taxi rides.

1.2 Purpose

The purpose of this document is the description of a system that offer a taxi service.
The software developed will be a web application that allow user to book a taxi ride, immediately or starting from two hours after, and offers a taxi sharing service.

1.2.1 Stakeholders

- **Passengers**: they can book a taxi ride by inserting a departure and a destinastion, with the chance to share the ride with other passenger to save money.

- **Drivers**: they make available their taxi on-line and they can accept or decline ride requests from passengers.

1.2.2 System Functionality

- **Ride's customization**

  Passengers can personalize a ride by filling out a form with two required fields (departure and destination) and an optional one (time) that, if filled, allow to book a taxi after a couple of hour or more.

  Once completed the form, the button "Taxi Sharing" makes the reservation provided for sharing and show the other passengers who are interested in the same ride.

- **Booking management**

  The system creates a priority queue of available taxi in each zone, and the current request is sent to the taxi on top of the queue.

  If he accepts, the system enqueues the driver in back of the queue and saves the ride's data.

  If he declines, the system enqueues the driver in back of the queue and iteratively sends the request to the first taxi in the queue.

- **Response to reservation**

  Drivers on top of the queue receive a notification about the ride, with complete details.

  If he accept the passenger receive a confirm notification.

1.2.3 Goals

- ✓ The system allows an easy and fast taxi's reservation.

  The research is optimized by geographic zone.

- ✓ The system allows passengers to take advantage from the sharing service:

  they can save money.

- ✓ The system has a special consideration for the environment:
  taxi sharing reduce the number of automobiles on the road and the traffic.

1.3 Definitions and acronyms

1.3.1 Definitions

- System: The software that will be developed.
- Service: Everything That will be make available to the users by the system.
- Ride: The main service, that concerns passenger's mobility.

1.3.2 Acronyms

- DBMS: Database Management System
- J2EE: Java 2 Enterprise Edition
- JVM: Java Virtual Machine

1.4 References

- Assignments 1 and 2.pdf
- Assignments rules and group registration.pdf
- IEEE standard for requirement specification.pdf
- Alloy reference manual.pdf

1.5 Overview

The paper is organized as follows:

- **Chapter 1**: This section explains the target audience, the purpose and the references of the Project.

- **Chapter 2**: This section provides a general description of the system, its features and its requirements.

- **Chapter 3**: This section contains all the necessary software requirements to allows a proper implementation.

2 General Description

2.1 Product perspective

The application that will be released is a web application which is not integrated with other existing system. That application will not have any internal interface for administration but it will be only user based. The application will not provide any interface or API for integration with future project.

2.2 User characteristics

The user that we expect to use our application is a person who want an easy way to travel in their city. This user must be able to use a web browser and have access to internet.

2.3 Constraints

2.3.1 Regulatory policies

MyTaxiService doesn't have to meet any regulatory policies.

2.3.2 Hardware limitations

MyTaxiService doesn't have to meet any hardware limitations.

2.3.3 Interfaces to other applications

MyTaxiService doesn't have to meet any interfaces to other applications.

2.3.4 Parallel operation

MyTaxiService must support parallel operations from different users when working with database and with all operation done by the user after connection.

2.3.5 Documents related

- Requirements and Analysis Specification Document (RASD)

- Design Document (DD)
- Testing report
- User's Manual

2.4 Assumptions and Dependencies

2.4.1 Assumption

- There isn't an administrator or privileged user. Is not necessary a hierarchy of users to keep the system safe.