**MINISTRY OF EDUCATION AND TRAINING**

**FPT UNIVERSITY**

Capstone Project Document

**Freight Truck Services**

|  |  |
| --- | --- |
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| **Capstone Project code** | FTS |

-Ho Chi Minh City, ***January 6, 2015***

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# Definitions, Acronyms, and Abbreviations

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| --- | --- | --- |
| **No.** | **Abbreviation & Acronym** | **Definition** |
|  |  |  |

# Introduction

## Project Information

* Project name: Freight Truck Services
* Project Code: FTS
* Product Type: Website & Android Application
* Start Date: Jan 6th, 2015
* End Date: May 2nd, 2015

## Introduction

Nowadays, trucks are used to carry goods across the country. However, after they deliver the goods, the trucks usually come back empty. Our project looks to solve this problem by propose a solution: when drivers come back after a delivery, they will also pick up and deliver additional goods from other owners on their way. We provide mobile application for driver to search for goods when they return and for goods owner to send their request for delivery. We also build website for necessary management for admins, staff and goods owners.

## Current Situation

First of all, truck driver only deliver goods for one owner at a time. Therefore, when they finish deliver goods for the owner, they usually return home without anything.

Secondly, sometimes good owners and truck drivers make verbal agreement without delivery contract. Therefore, there is no guarantee that items will be delivered safely.

## Problem Definition

When driver returns without goods, they waste fuel money only on travelling.

When owner contacts driver by themselves, this may not work all the time because driver’s road and owner’s road do not match. Besides, there is no third party to enforce the arrangement between them, thus when driver decides to disappear with the goods, goods owner will lose their goods and money.

Drivers may get stuck in traffic jam in the city or crowed area.

Goods owners cannot find trustworthy truck drivers to deliver their items.

## Proposed Solution

We propose a new solution for goods owner and truck driver to solve these problem. Our system includes mobile application for truck drivers and website application for admins, staff and goods owners.

### **Feature functions**

Admins can

* Manage accounts.
* Manage configuration.

Staff can

* Tracking orders and transactions.

Truck drivers can

* Post their road, container size, contact info…
* Make arrangement with goods owners and delivery items on their way back.

Goods owners can

* Search for driver.
* Request for delivery and make deal with truck drivers.
* System will allow goods owners to track their order’s status.

### Advantages and disadvantages

Advantages:

- Guarantee the goods is delivered with care.

- Increase income for truck drivers.

- Goods owners can find appropriate drivers quickly.

Disadvantages:

- Truck driver must have smartphone with GPS.

- Internet must be available so users can utilize all features.

- Drivers must have knowledge in using smartphone.

## Functional Requirement

Function requirements of the system are listed as below:

Truck drivers:

- Publish the destination with specified date, container size, contract information…

- Define the proposed road and/or adjust depending on the goods owners.

- Suggest goods owners for truck driver.

- Optimize road for truck drivers.

Goods owners:

- Search and get suggestion about truck drivers.

- Make deals with truck drivers and make orders to transfer their items.

- Allow goods owners to track their order’s status.

## Role and Responsibility

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Full Name | Role | Position | Contact |
| 1 | Kiều Trọng Khánh | Project Manager | Instructor | KhanhKT@fpt.edu.vn |
| 2 | Bùi Đức Huy | Developer | Leader | HuyBDSE61006@fpt.edu.vn |
| 3 | Nguyễn Quang Thiện | Developer | Member | ThienNQSE61000@fpt.edu.vn |
| 4 | Đặng Phú Thịnh | Developer | Member | ThinhDPSE60879@fpt.edu.vn |
| 5 | Nguyễn Duy Khương | Developer | Member | KhuongND60493@fpt.edu.vn |

Table 1: Roles and Responsibility

# Software Project Management Plan

## Problem Definition

### Name of this Capstone Project

### Problem Abstract

### Project Overview

#### Current Situation and Disadvantages

#### The Proposed System

#### Boundaries of the System

#### Development Environment

##### Hardware requirements

**For Server**

|  |  |  |
| --- | --- | --- |
| Windows | Minimum Requirements | Recommended |
| Internet Connection | Cable, Wifi (4 Mbps) | Cable, Wifi (8 Mbps) |
| Operating System | XP, Vista, 7, 8 | XP, Vista, 7, 8 |
| Computer Processor | Intel® Core 2 Duo | Intel® Core(TM) i5 CPU , M 460 @ 2.53GHz |
| Computer Memory | 1GB RAM | 3GB or more |

Table 2: Hardware Requirement for Server

**For Mobile Application**

|  |  |  |
| --- | --- | --- |
| Windows | Minimum Requirements | Recommended |
| Internet Connection | Cable, Wifi (4 Mbps) | Cable, Wifi (8 Mbps) |
| Operating System | XP, Vista, 7, 8 | XP, Vista, 7, 8 |
| Computer Processor | Intel® Core 2 Duo | Intel® Core(TM) i5 CPU , M 460 @ 2.53GHz |
| Computer Memory | 1GB RAM | 3GB or more |

**Table 3: Hardware Requirement for Mobile**

##### Software requirements

## Project organization

### Software Process Model

### Roles and responsibilities

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Full name** | **Role in Group** | **Responsibilities** |
| **1** | Kieu Trong Khanh | Project manager | * Specify user requirement * Control the development process * Give out technique and business analysis support |

Table 3: Roles and Responsibility Details

### Tools and Techniques

## Project Management Plan

### Software Development Life Cycle

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Phase** | **Description** | **Deliverables** | **Resource needed** | **Dependencies and Constraints** | **Risks** |
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Table 4: Software Development Life Cycle Detail

### All Meeting Minutes

Refer to Meeting Minutes folder.

## Coding Convention

# Software Requirement Specification

## User Requirement Specification

### Guest Requirement

### Member Requirement

### Partner Requirement

### Staff Requirement

### Admin Requirement

## System Requirement Specification

### External Interface Requirement

#### User Interface

#### Hardware Interface

#### Software Interface

#### Communication Protocol

### System Overview Use Case

Figure 2: System Overview Use Case

### List of Use Case

#### <Guest>Overview Use Case

Figure 3: <Guest> Overview Use Case

##### <Guest> Register

Use Case Diagram

Figure 4: <Guest> Register

Use Case Specification

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – CPS001** | | | |
| **Use Case No.** |  | **Use Case Version** |  |
| **Use Case Name** |  | | |
| **Author** |  | | |
| **Date** |  | **Priority** |  |
| **Actor:**  **Summary:**  **Goal:**  **Triggers:**  **Preconditions:**  **Post Conditions:**   * **Success:** * **Fail:**   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Respone | |  |  |  | |  |  |  | |  |  |  |   **Alternative Scenario:**   |  |  |  | | --- | --- | --- | | No | ctor Action | System Response | |  |  |  |   **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  |   **Relationships:** N/A  **Business Rules:** | | | |

Table 10: <Guest> Register

## Software System Attribute

### Usability

#### Graphic User Interface

#### Usability

#### Installation

### Reliability

### Availability

### Security

### Maintainability

### Portability

### Performance

## Conceptual Diagram

### Data Dictionary

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# Software Design Description

## Design Overview

## System Architectural Design

### Web Application architecture description

### Mobile Application architecture description

## Component Diagram

## Detailed Description

### Class Diagram

### Class Diagram Explanation

#### Role

|  |  |  |  |
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### Interaction Diagram

#### <Member> View Friend List

## User Interface Design

### Guest Interface Design

#### Login

Figure 12: Login

**Fields**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field Name** | **Description** | **Read only** | **Mandatory** | **Control Type** | **Data Type** | **Length** |
|  |  |  |  |  |  |  |  |

**Buttons/ Hyperlinks**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Function** | **Description** | **Validation** | **Outcome** |
|  |  |  |  |  |

## Database Design

### Logical Diagram

### Data Dictionary

## Algorithms

### Document Breakdown

#### Definition

#### Define Problem

#### Solution

#### Complexity

#### Flow Chart

### String Comparison

#### Define Problem

#### Requirement

#### Solution

#### Example

# System Implementation & Test

## Introduction

### Overview

### Test Approach

## Database Relationship Diagram

### Physical Diagram

### Data Dictionary

|  |  |
| --- | --- |
| **Entity Data dictionary: describe content of all entities** | |
| Entity Name | Description |
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Table 14: Data Dictionary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Entity name** | **Attributes** | **Description** | **Domain** | **Null** |
|  |  |  |  |  |
|  |  |  |  |
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|  |  |  |  |
|  |  |  |  |

Table 15: Attribute Data Dictionary

## Performance Measures

### Clustering Performance

## Test Plan

### Features to be tested

### Features not to be tested

* qweqwe
* qweqw

## System Testing Test Case

### Guest Test Case

#### Search Event

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **ID** | **Test Case Description** | **Test Case Procedure** | **Expected output** | **Inter-test Case Dependence** | **Result** | **Test Date** | **Note** |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

# Software User’s Manual

## Installation Guide

### Setting up environment at server side

#### Hardware requirements

#### Software requirements

### Deployment at server side

#### Prepare deployment package

#### Configure Server before deploy

#### Deploy web application on server

### Setting up the environment at client side

#### Setting up for computer

## User Guide

# Appendix