Worksheet 2: Functional Requirements

Q1: Actors

(a) Word Processor

Human Actors: Developers, Users (Editors, Viewers), people that receive printed versions of word documents

Non-Human Actors: Computer that Word Processor was developed on, Computer that the user uses (Both editor and viewer), Keyboard and Mouse Internactions with Word Processor, printer that prints word documents

(b) Online Retail Website

Human Actors: Developers, buyers, advertising companies, reviewers, suppliers, company that owns the website

Non-Human Actors: Website, Internet, stock database, commodoties, storage, database

(c) Class registeration system

Human Actors: Teacher, Student, IT Support, Administrators, supplying company

Non-Human Actors: Database which records the student attendees

(d) Online Mapping Application

Human Actors: Mapviewer, Developer, traffic information provider, pedistrians, cyclists, Bus drivers, drivers,

Non-Human Actors: Vehicles, roads, device used for naviagation and that supplies the user with feedback and interactibility

(e) A set of traffic lights

Human Actors: Pedistrians, Drivers, Cyclists

Non-Human Actors: Traffic Lights, Roads, Vehicles

Q2: User Stories

(b) Online Retail Website

As a **Buyer**, I want to receive notifications for when items are on sale so that I can buy the items at the lowest prices

As a **Buyer**, I want to be able to review their purchases so that the community knows which products are most loved

As an advertising company, I want to advertise my product on the website, so that the number of people viewing a product increases

As a **supplier**, I want to ship the bought product to the buyer within a maximum of 14 working days no matter their location in the world, so that the users are satisfied with their purchases

(c) Class registration system

As a **Teacher**, I want to be able to record daily class attendees, so that I can make sure all the students are present in class and so that I can review the studnet’s history of attending classes

As a **System Admin**, I would like to have access to all the teacher’s databases so that I can monitor and fix any problems that arise while using the class registeration system

As the **Developing Company**, we would like to offer our clients a reliable registeration system that has a short downtime, so that the system is available whenever its needed by our clients

(d) Online Mapping Application

As a **Mapviewer**, I want to see my location updated every few seconds so that I can get real-time feedback as to where I am and where I am headed.

As a **Traffic Information Provider**, I would like to provide information about the traffic of every road that is under administration every 30 minutes, so that the online mapping application can choose the quickest route to the chosen destiniation according to the current state of traffic.

As a **Mapviewer**, I want to see the current location of the bus I need to take to reach my chosen destiantion, so that I can arrive in time to catch the bus.

As a **Pedistrian,** I want to see appropriate pedistrian paths in the mapping application not just roads, so that I can go through the shortest path.

Q3: Use Cases

(b) Online Retail Website

**Goal:** To receive a notification when an item(s) are on sale

**Primary Actors:** Buyer

**Secondary Actors:** Database

**Precondition:** The Buyer to have an Email Subscription with the online retail website

**Trigger:** Item(s) is/are on sale

**Flow of Events:**

1. Database retrieves Buyer’s Wishlist
2. Database checks if the items on sale match any of the items on Buyer’s Wishlist
3. Database calculates selects the six items that have the best discounts on them
4. Database emails chosen items to the Buyer

**Extensions:**

2A. Buyer does not have a Wishlist

1. Select all the items that are on sale
2. The use case resumes at step 3

3A. There are no six items that are BOTH on the Buyer’s Wishlist and are on salw

1. Fill the remainder of the six items with items that are on sale but NOT on Buyer’s Wishlist
2. The use case resumes at step 4

(c) Class Registration System

**Goal:** To be able to record daily class attendees

**Primary Actors:** Teacher

**Secondary Actors:** Database

**Precondition:** The Teacher to be logged in

**Trigger:** Teacher selects “Record Attendees” option

**Flow of Events:**

1. Teacher choses current class (time and day)
2. Database shows current list of registered students for this class
3. Teacher selects the student’s current class attendance (Present, Absent, Late)
4. Teacher selects the “Save attendance” option
5. The database stores the entered attendance

**Extensions:**

3A. Teacher cannot find name of student

1. Teacher selects the “report problem” option
2. Teacher writes the details of the problem
3. Teacher sends message to system admin
4. The use case resumes at step 3

4A. Database fails to store entered attendance

1. Database erases corrupt attendance entry (if it exists)
2. Database informs the Teacher of an error
3. The use case resumes at step 2

