Software Requirements Specification

For

Market Price Monitoring

Version 1.0

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Revision History

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| **Name** | **Date** | **Reason For Changes** | **Version** |
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# Introduction

This section gives a scope description and overview of everything included in this SRS document. Also, the purpose for this document is described and a list of abbreviations and definitions is provided.

**1.1 Purpose**

The purpose of this document is to give a detailed description of the requirements for the “Market Price Monitoring”. It will illustrate the purpose and complete declaration for the development of system. It will also explain system constraints, interface and interactions with other external applications.

**1.2 Document Conventions**

The following conventions are used throughout the documentation:

GPS – Global Positioning System.

HTML- Hyper Text Markup Language.

CSS- Cascading Style Sheets.

**1.3 Intended Audience and Reading Suggestions**

The document is intended for the different types of reader such as developers, project manager, marketing staff, users, testers and documentation writers. The documentation contains overall description of the software such as product perspective, product functions, user classes and characteristics, operating environment, design and implementation constraints and user documentation, external interface and requirements and system features. The readers are suggested to read the documentation sequentially.

**1.4 Product Scope**

There are several markets in Khulna city. There is no system available to monitor the market price. But this is very important. Suppose, a customer wants to buy a product. He visits a market but does not find the product. It is a kind of harassment for the customer. It is also time consuming. Let us assume another case, an outsider comes to Khulna city and he wants to buy some products. But he does not know location of the markets available in Khulna city and products available in the market. Our system will help the users for both of the cases. The price of the products varies from market to market. Our system will monitor the market price and update the price in regular interval. Our goal is to design a system that will minimize the efforts of the customer by giving the opportunities discussed above.

**1.5 References**

[1] IEEE Software Engineering Standards Committee, “IEEE Std 830-1998, IEEE Recommended  
Practice for Software Requirements Specifications”, October 20, 1998.

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[2] Geagea, S., S. Zhang, N. Sahlin, F. Hasibi, F. Hameed, E. Rafiyan, and M. Ekberg. "Software Requirement Specification-Amazing Lunch Indicator." (2010)**.**

[3] <https://krazytech.com/projects/software-requirements-specification-report> (accessed on 31 july,2018).

**2. Overall Description**

This section will give an overview of the whole system. The system will be explained in its context to  
show how the system interacts with other systems and introduce the basic functionality of it.

**2.1 Product Perspective**

This system will consist of two parts: one mobile application and one web portal. The mobile application  
will be used to find markets and view information about them while the web portal will be used for managing the information about the market and the system as a whole.

The mobile application will be used to see the location of the market. The mobile application will provide the location of both the customer and the market.

The web portal will provide the information of the markets such as the location, available products, the price of the product of particular market.

**2.2 Product Functions**

With the mobile application, the user can see the location of the market in a map view. With the web portal, the customer can search based on several categories such as market and product. If the customers search by market, the information of the market will be provided. If the customers search by the products, the market containing the product and price will be provided.

The smartphone will be used for the purpose of GPS application. The web portal will provide functionality to manage the system and the market information. It will also provide information about the system, for example show when there is a new update.

**2.3 User Classes and Characteristics**

There are two kinds of users that interact with the system: normal users and the administrators. Each of the two types of users has different use of the system.

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Normal users will use web portal for gathering the information of the markets. They will use the mobile application for finding the location of the markets.

The administrators will manage the web portal. They will manage the information of the markets such as the available products, updating price etc.

The users(customers) will be able to get the following facilities:

* Can see the location in the map view using GPS application.
* Can see the list of markets in web portal.
* Can see the available products in a particular market.
* Can see updated price list.
* Can search by market name and product name.

The administrators will be able to perform the following functions:

* Can update the product list.
* Can update the price list.

**2.4 Operating Environment**

The system will operate in android platform as well as window platform. The GPS based application will be designed in android platform. The web portal will be designed in the window platform.

The operating environment of Market Price Monitoring is given below:

* client/server system.
* Operating system: Windows.
* database: sql+ database.
* Mobile GPS
* Android Studio

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## Design and Implementation Constraints

The mobile application is constrained by the system interface to the GPS navigation system within the  
mobile phone. Since there are multiple system and multiple GPS manufacturers, the interface will most  
likely not be the same for every one of them. Also, there may be a difference between what navigation  
features each of them provides.  
The Internet connection is also a constraint for the application. The web portal will be constrained by the capacity of the database.

* 1. **Assumptions and dependencies**

One assumption about the product is that it will perform well in the mobile platform as well as the window platform. If the phone does not have required hardware component such as GPS, the system will design in another way. The GPS components in all phones work in the same way. If the phones have different interfaces to the GPS, the application need to be specifically adjusted to each interface.

1. **External Interface Requirements**

**3.1 User Interfaces**

At first, we will design the web portal. In web portal there is a homepage showing the Registration and Log In button. The new users can register by clicking this button. The existing users can Log In using the Log In button by providing required information. After Log In, a page will appear. In this there are some activities such as market list, updating price list etc. By clicking the market list, the list of markets will appear.

In android application, the list of markets will appear. By clicking the selected market, the location of the market will appear in map view.

**3.2 Hardware Interfaces**

We will use GPS module which is a build in feature in most of the smartphones. The module will interact with the android application.

**3.3 Software Interfaces**

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The following software will be used for designing the system:

* Visual Studio
* Android Studio
* HTML
* CSS
* Web Browser
* ASP.NET

**3.4 Communications Interfaces**

The communication between the different parts of the system is important since they depend on each  
other. However, in what way the communication is achieved is not important for the system and is  
therefore handled by the underlying operating systems for both the mobile application and the web portal.

**4. System Features**

**4.1 Description and Priority**

The short description of the system features is given below:

* The user can see the location of the markets in map view by using the android application which is very important for the new comer of Khulna city.
* The users can see the market list available in the Khulna city. There are several markets in the city. But the new comers don’t know the name of the market. By the list, they will know the name of markets of the city.
* The information of the markets will be provided such as available products, opening and closing time, location etc.
* The price of the products will be updated in regular interval so that the customers can go the market by comparing the price.
* The users can search by market and product wise. This will reduce the efforts of the customers.

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**4.2 Functional Requirements**

This section includes the requirements that specify all the fundamental actions of the software system.

**Use cases:**

**Use Case: Registration as Customer**

Actor: User

Scenarios:

1. Users have to click the “Register” option on navigation bar for registration.
2. Users have to fill the required fields.
3. Users have to click the “Register” button.

Users will be notified if registration is successful.

**Use Case: Registration as Administrators**

Actor: Admin

Scenarios:

1. Administrators have to click the “Register” option on navigation bar for registration.
2. Administrators have to fill the required fields.
3. Administrators have to click the “Register” button.

Admin will be notified if registration is successful.

**Use Case: Login as customers**

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Actor: Customer

Scenario:

1. Customer will go to “Login” option from the navigation bar.
2. Customers need to fill the username field.
3. Customers need to fill the password field.
4. Users need to click the “Login” button to get access to the website.

**Use Case: Login as Administrators.**

Actor: Admin

Scenario:

1. Admins will go to “Login” option from the navigation bar.
2. Admins need to fill the username field.
3. Admins need to fill the password field.
4. Admins need to click the ‘’Login’’ button to get access to the website.

**Use Case: Add New Markets**

Actor: Admin

Scenario:

1. Admins have to click “Add New Markets” button.
2. Admins have to enter the required information.
3. Admins have to click “Add” button to add market.

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**Use Case: Search for Markets**

Actor: users

Scenario:

* 1. Users have to click the search box.
  2. Type the name of market.
  3. Click search button.

**Use Case: Show Market details**

Actor: User

Scenarios:

1. Users have to click the market he wants to see the details.
2. All available details of the market will be shown to the user.

**Use Case: Edit Market details**

Actor: Admin

Scenarios:

1. Admins have to go to the “Market list” option.
2. Admins have to click the market of which he/she wants to change the details.
3. Admins have to click the ‘’Change Info’’ button to change information.
4. Admins have to enter the updated information of the market.
5. Admins have to click the “Update Info” button to update information of the market.

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# 5. Other Nonfunctional Requirements

**5.1 Performance Requirements**

The performance of the system will depend on the specifications of the used devices. Performance varies from device to device.

**5.2 Safety Requirements**

If there is extensive damage to a wide portion of the database due to catastrophic failure, such as a disk crash, the recovery method restores a past copy of the database that was backed up to archival storage (typically tape) and reconstructs a more current state by reapplying or redoing the operations of committed transactions from the backed-up log, up to the time of failure.

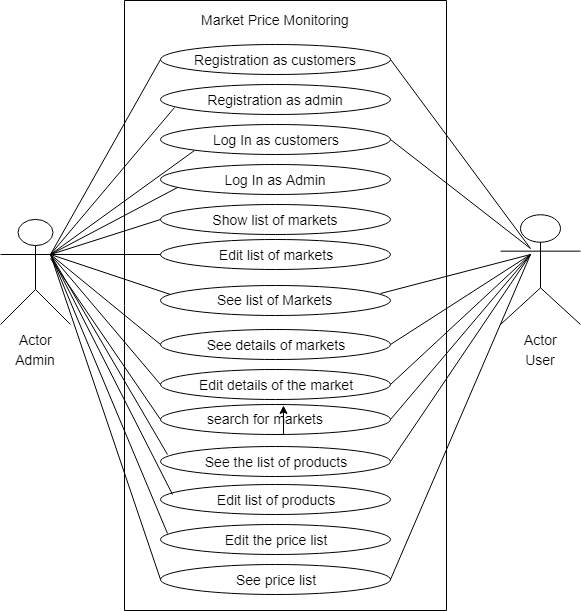
## Security Requirements

The proper security should be confirmed for the customers as well as the users. The passwords should not be shown. They should be hidden.

## Software Quality Attributes

The following attributes are prerequisites for a good software:

* **AVAILABILITY:**Since we are hosting our project on the server it will be available all the time.
* **CORRECTNESS:**The system should generate an appropriate report about different activities of the lab and should keep track of all records.
* **MAINTAINABILITY:**The system should maintain correct schedules of labs and the documentation of all the lab equipment.
* **USABILITY:**The system should satisfy a maximum number of user’s needs.



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| --- | --- |
| **Use Case Name:** | **Registration as Customer** |
| **Brief Description:** | The user must have to register to access the full system. |
| **Priority** | Essential |
| **Trigger** | Alumni select the Alumni link on the ACC home page. |
| **Precondition** | Alumni is connected to the Internet and on the ACC home page |
| **Basic Path** | 1. University Web Server sends the Alumnus to the Departmental Server. 2. The Departmental Server presents the Alumnus with the Alumni Home Page. |
| **Alternate Path** | N/A |
| **Post condition** | Alumni is on the Alumni Home Page |
| **Exception Path** | If there is a connection failure, the Departmental Server returns to the wait state |