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Software Requirements Specification

for

City Corporation Branch

Work Coordination

Version 1.0 approved

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1.8.18

# 1.1Introduction

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.

## Purpose

The purpose of this document is to give a detailed description of the requirements for the “City Corporation Branch Work Coordination” (CCBWC) software. 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.

## Document Conventions

We shall follow SRS template introduced by IEEE. We will follow use ‘Times New Roman’ front. For a section the front size will be 18 and the front will be also bolded. The front size of the body will be 12.The statement of the great significance will be highlighted.

## Intended Audience and Reading Suggestions

The document is intended for different types of reader such as project manager, users, testers and documentation writers. The document will be included overall description of the system and their functionalities, user classes, product functions, operating environment, design, external interface and requirements, implementation, system features. The readers should read the documents step by step. The document also included the user interaction of that system.

## Product Scope

There are different types of Branches in Khulna City Corporation. Like water billing, roads department, street light department, monitoring department etc. All departments are independent in their works. Sometimes their needs work coordination. Our project will help them to manage their works in one place so that they can manage their works efficiently.

## References

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

[2]https://www.tutorialspoint.com/software\_testing\_dictionary/software\_requirement\_specification.htm

## 2.1 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. It will also describe what type of stakeholders that will use the system and what functionality is available for each type. At last, the constraints and assumptions for the system will be presented.

## 2.2 Product Perspective

“City Corporation Branch Work Coordination” (CCBWC) software will help us to maintain the communication and co-ordination among the different Branches of Khulna City Corporation. Like water billing, roads department, street light department, monitoring department etc. These branches work independently, if these branches can communicate with each other the work efficiency increases.

## 2.3 Product Features

“City Corporation Branch Work Coordination” (CCBWC) software provides users the following functions/features:

* List of branches under a city corporation.
* Users can communicate with different branches.
* User can see the ongoing works of branches.
* User of one branch can communicate with other branch.

## 2.4 User Class and Characteristics

## 2.5 Operating Environment

Operating environment for the Branch coordination system is as listed below.

* distributed database
* client/server system
* Operating system: Windows.
* database: MySQL
* platform: HTML , CSS, Bootstrap

## 2.6 Design and Implementation Constraints

1. The global schema, fragmentation schema, and allocation schema.
2. SQL commands for above queries/applications
3. How the response for application 1 and 2 will be generated. Assuming these are global queries. Explain how various fragments will be combined to do so.
4. Implement the database at least using a centralized database management system.

## 2.7 Assumptions and Dependencies

Let us assume that this is a “City Corporation Branch Work Coordination” (CCBWC) software and it is used in the following application:

* Overview of all the branches in Khulna City Corporation.
* Co-ordination of branches of Khulna City Corporation.
* Increasing the effectiveness of different branches.

# External Interface Requirements

**3.1 User Interfaces**

* Front-end software: HTML, CSS , Bootstrap
* Back-end software: MySQL, XAMP Server

**3.2 Hardware Interfaces**

* Windows.
* A browser which supports PHP, HTML & Javascript.
* Dedicate Server

**3.3 Software Interfaces**

Following are the software used for Branch coordination system.

|  |  |
| --- | --- |
| **Software used** | **Description** |
| Operating system | We have chosen Windows operating system for its best support and user-friendliness. |
| Database | To save message, works list, important dates, etc we have chosen  MySQL database. |
| PHP,HTML, CSS, Bootstrap | To implement the project we have chosen PHP for backend logic work and HTML, CSS and Bootstrap for designing interfaces. |

**3.4 Communications Interfaces**

This project supports all types of web browsers. We are using simple electronic forms for the reservation forms, booking list etc.

# 4.System Features

### 4.1.1 Description and Priority

### “City Corporation Branch Work Coordination” (CCBWC) software maintains information of different branches of city corporation and maintains communication among them. Of course, this project has a high priority because it is very important to maintain co-ordination of branches for maximum efficiency.

**4.1.2 Stimulus**

* Search for a branch and it’s on going works.
* Displays a detailed list of ongoing works of different branches in City Corporation.
* Communication among different branches.

**4.1.3 Functional Requirements**

Use case determination

* Use case: Registration(User)

Actor: Branch manager.

Functionalities:

1. Entered into the system.
2. Click on registration button.
3. Fill up the text boxes named name, username, password , address, email, contact number .
4. Enter submit button.

* Use case: Login(User)

Actor: User

Functionalities:

1. Entered into the system.
2. Click on the login button.
3. Fill up the text boxes named username, password.
4. Click on login button.

# 5. Other Nonfunctional Requirements

## 5.1 Performance Requirements

The basic objective of normalization is to reduce redundancy which means that information is to be stored only once. Storing information several times leads to wastage of storage space and increase in the total size of the data stored.

If a database is not properly designed it can give rise to modification anomalies. Modification anomalies arise when data is added to, changed or deleted from a database table. Similarly, in traditional databases as well as improperly designed relational databases, data redundancy can be a problem. These can be eliminated by normalizing a database.

Normalization is the process of breaking down a table into smaller tables. So that each table deals with a single theme. There are three different kinds of modifications of anomalies and formulated the first, second and third normal forms (3NF) is considered sufficient for most practical purposes. It should be considered only after a thorough analysis and complete understanding of its implications.

**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.

**5.3 Security Requirements**

Security systems need database storage just like many other applications. However, the special requirements of the security market mean that vendors must choose their database partner carefully.

**5.4 Software Quality Attributes**

* **Availability:** The City Corporation should be available on the specified date and specified time as many users and branches are doing advance search and co-ordination.
* **Correctness:** The City Corporation should strict to their rules and regulation.
* **Maintainability:** The administrators and users should maintain correct schedules of time.
* **Usability:** The facilities should satisfy a maximum number of branch co-ordination.