

EXPERIMENT 2

Aim :

To understand and prepare SRS for the Application Software – **Bill Management System**.

Theory :

Software Requirements Specification (SRS) is a document that describes the nature of project or application software.

In simple words, SRS document is a manual of the project provided it is prepared before you kick - start a project. This document is also known by the names SRS report or software document. A software document is primarily prepared for a project or any kind of application software.

There are a set of guidelines to be followed while preparing the SRS document. This includes the purpose, scope, functional and non-functional requirements, software and hardware requirements of the project. In addition to this, it also contains the information about environmental conditions required, safety and security requirements, software quality attributes of the project, etc.

SRS document describes the intended purpose, requirements and nature of a software to be developed. It also includes the yield and cost of the software.

In this experiment, the Application Software – **Bill Management System** is used as an example to explain few points about SRS.

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SRS Document for the Application Software – Bill Management System :

1. Introduction

1.1 Purpose

The purpose of this document is to build a database management system to manage bill payment related information about the customer. The software will help the service provider manage the customer details efficiently.

1.2 Document Conventions

The customer details are stored in a txt file in which we can add, search, update and delete the record of the customers.

1.3 Intended Audience and Reading Suggestions

This project is a prototype for the Bill Management System and it is restricted within the college premises. This has been implemented under the guidance of college teachers. This project is useful for the service provider.

1.4 Project Scope

The purpose of this Bill Management System is to create a convenient and easy to use application for maintaining records. The system is based on relational database concept. We will have a database server supporting major cities in the country. We hope to provide a comfortable user experience along with the best pricing available.

1.5 References

<https://belitsoft.com/blog/software-requirements-specification-document-example-international-standard>

Fundamentals of Database System by Ramez Elmasri

2. Overall Description

2.1 Product Perspective

The Bill Management System stores the following information – Customer's Name, Address, City, Phone No, Id No, Previous Meter Reading and Current Meter Reading. The amount payable is calculated on the basis of no of units consumed and the service charges per unit.

2.2 Product Features

The main feature of this Bill Management System is that it can be shown in the form of Entity Relationship Model (ER Model).

2.3 User Classes and Characteristics

We have created a class 'Airtel' in which we have data members and member functions. The software is based on the concepts of classes and objects in C++.

2.4 Operating Environment

- Distributed Database
- Client/Server System
- Operating System : Windows
- Database : SQL+
- Platform : C++

2.5 Design and Implementation Constraints

- The global schema, fragmentation schema and allocation schema.
- SQL commands for above queries/applications.
- Implement the database using a centralized database management system.

3. System Features

3.1 Functional Requirements

Distributed Database – it implies that a single application should be able to operate transparently on data that is separated across a variety of different databases.

4. External Interface Requirements

4.1 User Interfaces

Front-end software : C++

Back-end software : C++

4.2 Hardware Interfaces

Processor	-	Intel(R) Core(TM) i3 CPU @ 1.4GHz or above
RAM	-	2 GB or more
Hard Disk	-	70 GB or more
Screen Resolution	-	800 x 600 or above
Keyboard	-	Compatible Keyboard
Mouse	-	Compatible Mouse
Driver	-	CD – ROM

4.3 Software Interfaces

Operating System - Windows 7 or above

Software - Umbrello (2.29.0), Turbo C++

4.4 Communication Interfaces

The software doesn't have online support and can only be used for offline activities.

5. Non-Functional Requirements

5.1 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 partners carefully.

5.2 Software Quality Attributes

- Availability : the user can view the details of the existing customers.
- Correctness : the user will search for the details of customer and then the software will display the correct customer's details.
- Maintainability : the customer's details will be stored in the database in well organized manner.
- Usability : the service provider can use this software for maintaining the customer records.

Conclusion :

The SRS for the Application Software – **Bill Management System** was prepared successfully.