Crime Record Management System

Software Requirements Specification

1. Introduction:

The introduction of the Software Requirements Specification (SRS) provides an overview of the entire SRS with purpose and scope. The aim of this document is to give an in-depth insight into the Crime record management system by defining the problem. We develop this software for easy management of crimes across police stations thereby users can access their stations they wish to give complaints.

1.1 Purpose:

The purpose of the document is to collect and analyze all assorted ideas that have come up to define the system, its requirements with respect to different users. Also, we shall predict and sort out how we hope this product will be used in order to gain a better understanding of the project, outline concepts that may be developed later, and document ideas that are being considered but may be discarded as the product develops.

In short, the purpose of this SRS document is to provide a detailed overview of our software product, its parameters, and goals. It defines how our client, team, and audience see the product and its functionality.

1.2 Scope:

Primarily, the scope pertains to the Crime record management system project live. It focuses on the Police- station, for crime management, which allows users easy access to the stations for registering crimes and getting updates via the same. This SRS is also aimed at specifying requirements of the software to be developed but it can also be applied to assist in the selection of in-house and commercial software products. The standard can be used to create software requirements specifications directly or can be used as a model for defining an organization or project-specific standard.

1.3 Overview:

The remaining sections of this document provide a general description, including characteristics of the users of this project, hardware, and the functional and data requirements of the product. It also gives the user viewpoint of the product.

2. Functionality:

2.1 Modules in the Project:

2.1.1 Admin Module:

- Control the entire system (Manage Police station credentials, station employee details).
- Admin is responsible for all the activities performed inside the system.

2.1.2 User Module:

- Managing different types of users (Create, Update and delete).
- All users are not supposed to access all the modules. Every user is given permission to access certain modules.
- Different users like Writer, officer, investigator

2.1.3 Complaints Module:

- It has been developed for managing complaints of end-users like us.
- Users can create and update complaints depending on the situation.
- Users can view complaint status in this module.
- The writer is responsible for operating on users' complaints.

2.1.4 FIR Module:

- All the operations related to First Investigation Report(FIR), is done by the officer, are managed by this module.
- Multiple FIR can be added to the same case.
- Officer assigns an investigator to handle the case.

2.1.5 Criminals Module:

- This module manages the details of criminals.
- The investigator is responsible for charging the sections against the criminals depending upon the evidence.

2.1.6 Charge Sheet Module:

- The charge Sheet Module has been developed for creating the final report. Thus, the charge sheet marks the beginning of the prosecution proceedings against the accused in the Indian judicial system.
- Through the charge sheet, the accuser also comes to know about the charges that are placed on him/her.

3. Requirements:

3.1 Hardware Requirements:

1. PROCESSOR: Pentium IV or greater
2. RAM: 512 MB HARD
3. DISK DRIVE: 80 GB
4. KEYBOARD: Standard Keyboard
5. MOUSE: Standard Scroll
6. Mouse CD-ROM: CD-RW or DVD-RW

3.2 Software Requirements:

1. OPERATING SYSTEM: Windows 8 and above
2. LANGUAGE: C#.NET
3. DATABASE: SQL Server and SQL Server Management Studio (SSMS)

3.3 Software Overview:

3.3.1 Operating System:

This project work is done on the Windows 10 professional operating system. An operating system is a set of software tools designed to make it easy for people or programmers to make optimum use of the computer. People who use computers have different levels of needs and interests. These people can be separated into two groups: users and programmers. The user wants a convenient set of commands to manage files if data or programs, copy or run application package. While a programmer uses a set of tools that can hold together and debug programs. No matter where you are working your computer will be easier to use and to manage because Windows 10 Professional is more compatible and more powerful than any workstation as before.

3.3.2 Software and tools used:

1. **Visual Studio .Net:**

Visual Studio .Net is the rapid application development tool for BASIC. Visual Studio .Net offers complete integration with ASP.NET and enables to drag and drop server controls and design Web Forms as they should appear when the user views them. The .NET Framework is a multi-language environment for building, deploying, and running XML Web services and applications. Despite its name, the runtime actually has a role in both a component's runtime and development time experiences. While the component is running, the runtime is responsible for managing memory allocation, starting up and stopping threads and processes, enforcing security policy, as well as satisfying any dependencies that the component might have on other components. By creating a common set of APIs across all programming languages the common language runtime enables cross-language inheritance, error handling, and debugging.

2. **C#.Net:**

In brief, C#.NET is the next generation of ASP (Active Server Pages) introduced by Microsoft. Similar to previous server-side scripting technologies, C#.NET allows you to build powerful, reliable, and scalable distributed applications. C#.NET is based on the Microsoft .NET framework and uses the .NET features and tools to develop Web applications and Web services. Even though C#.NET sounds like ASP and syntaxes are compatible with ASP but C#.NET is much

more than that. It provides many features and tools, which let you develop more reliable and scalable, Web applications and Web services in less time and resources.

Advantages of C#.NET:

- **Graphics and GDI+:** GDI+ is an improved version of GDI (Graphics Device Interface) to write Windows and Web graphics applications. The .NET base class library provides GDI classes to write graphics applications. Using these classes not only you can write Windows applications, but you can also write Web graphics applications.
- **Caching and State Management:** One of the most important factors in building high-performance, scalable Web applications is the ability to store items, whether data objects, pages, or parts of a page, in memory the initial time they are requested. You can store these objects on the server or on the client machine. Storing data on a server or a client is called caching.C#.NET provides two types of caching – page caching and request caching. You use request caching to improve code efficiency and to share common data across the pages and you use page caching to provide fast access to the Web applications from clients.
- **Enhanced Security:** C #.NET provides you to authenticate and authorize users for your applications. You can easily remove, add to, or replace these schemes, depending upon the needs of your application.
- **Messaging and Directory Services:** C#.NET uses the Messaging services class library, which is a high-level programming wrapper for MSMQ messaging services. The .NET base class library also contains class wrappers for Active Directory that enable you to access Active Directory, Services Interface (ADSI), Lightweight Directory Access Protocol (LDAP), and other directory services through C#.NET applications.
- **Migration from ASP to C#.NET:** Even though C#.NET syntaxes are similar to ASP, C#.NET is a newly designed model and more object-oriented. ASP pages won’t work without modifying them. The only advantage ASP developers will have is familiar code syntaxes.

3.3.3 Microsoft SQL Server Management Studio (SSMS)

Microsoft SQL Server Management is an advanced development environment that enables us to configure, manage and administrate SQL Server database engines. SQL Server Management Studio (SSMS) is an integrated environment for managing any SQL infrastructure. Use SSMS to access, configure, manage, administer, and develop all components of SQL Server, Azure SQL Database, Azure SQL Managed Instance, SQL Server on Azure VM, and Azure Synapse Analytics. SSMS is very popular and widely used by database developers and administrators because of the following advantages:

- Cost-free
- Advanced user experience
- Various add-in options
- Easy installation

3.3.4 SQL Server

Microsoft SQL Server is a relational database management system developed by Microsoft. As a database server, it is a software product with the primary function of storing and retrieving data as requested by other software applications which may run either on the same computer or on another computer across a network.

3.4 Developer Responsibilities Overview:

The developer is responsible for:

- Developing the system, which meets the SRS and solves all the requirements of the system.
- Demonstrating the system and installing the system at the client's location after the acceptance testing is successful.
- Submitting the required user manual describing the system interfaces to work on it and also the documents of the system.
- Conducting any user training that might be needed for using the system.