# Software Requirements Specification

## For

**ONLINE CRIME INVESTIGATION SYSTEM**

**Version 1.0 approved**

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# Revision History

| Name | Date | Reason For Changes | Version |
|---|---|---|---|
| Rachit | 9/21/2016 | Initial Draft | 1.0 |
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| | | | |

# 1. Introduction

## 1.1 Purpose

Our project "**Online crime investigation system**" main idea is to make an online portal for maintaining the complaints of citizens of different police departments. It is the best way to make the crime reporting easier. In this way the citizens who hesitate to go the police station for justice can acquire the justice by just visiting and filing a FIR in our online portal. In this any number of clients can connect to the server. Each user should first make their unique username and a password for their account, And then to use our online portal they should login into their respective account to show their availability. The user can easily make FIR against the person from whom he/she is being suffered and can also see the updated report of his FIR. While on the staff side, police can update the status of the FIR and delete it once the case has been resolved. It saves time and is very **responsive** as it allows the people to give their complaint online and know about the status of the FIR frequently. And finally small errors can also lead to big problems. So our main purpose is to build error free product.

## 1.2 Document Conventions

This document provides the software requirements and expected behaviour of the online portal. The document provides certain statements and requirements in a bold or highlighted format to represent the significance of the same. Detailed notes along with reference to the other documents are provided wherever applicable with an asterisk. All the assumptions that are made will be mentioned beforehand and no external assumptions are required.

## 1.3 Intended Audience and Reading Suggestions

This document is intended for the crime investigation department (CID). The expected outcome of this project is going to support the crime investigation operation team which includes police of various departments, and all the authorities in Crime investigation department.

The stake holders during the project execution are going to be developers, testing, and team and project mentor/project manager

## 1.4 Product Scope

Coming to the present system where there is lot of manual work, that is people need to visit the police station for reporting the crime, is very time taking and managing all the things manually is not an easy task. In this developing and fast moving world only thing that we lack of is time. All are busy in the world. It will be welcomed by the citizens if services are provided to their convience. Our online portal solves the problem of the present system by managing the things quite easier and makes the system report faster. The user can login their account anytime and from any place to register their complaint and can also see the feedback form the staff. The system also provides security. It reduces the work load of both the citizens and the staff who have to maintain lakhs and lakhs of paper files at their work place. It also reduces the man power. Less consumption as everything is done online.

They are two main advantages of this proposed system:

1) Reducing the crime and disorder

2) Confidentiality and anonymity issues.

Truly Unlimited! - No restriction on no. of users. You completely own whole system.

## 1.5 References

This website has been prepared on the basis of discussion with Team members and our course in charge.

We have also taken information from following website–

https://en.wikipedia.org

www. solutions24h.com

www.logicsystems.org.in

csetekquest.blogspot.com

www.microsoft.com/sql

Weblinks:https://en.wikipedia.org/wiki/Software_requirements_specification

Books: Software Engineering by Roger S Pressman 5th edition, Software Engineering by Pankaj Jalote 4th edition.

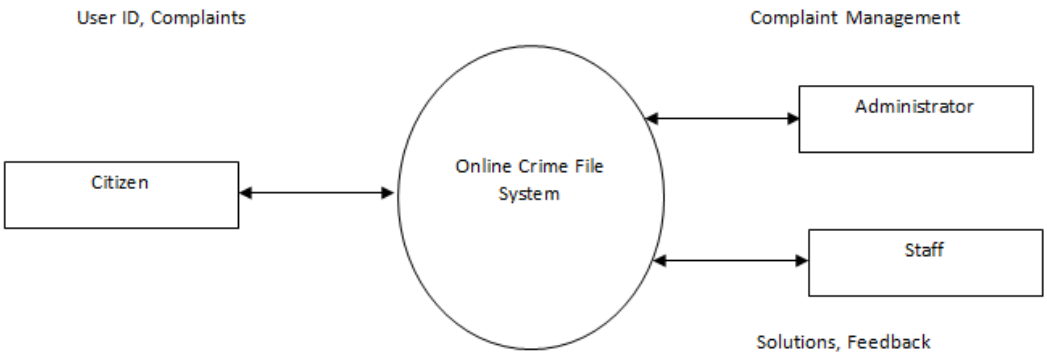
# 2. Overall Description

## 2.1 Product Perspective

The main aim of the project is to develop an application for the police department to handle the crime investigation process in an easy and efficient way. Complaint is registered in this system by the user. It can be updated, deleted.

The drawbacks of the existing system:

- ⇨ More man power.
- ⇨ Time consuming.
- ⇨ Consumes large volume of pare work.
- ⇨ Needs manual calculations.



The proposed system can overcome all the limitations of the existing system. The system provides proper security. In this the user can register in our site and can file the FIR from whom he/she has been suffered. It minimizes the manual data entry work especially from the staff side. The proposed system helps the user to work user friendly and he can easily do his jobs without time lagging. This will also help the staff to manage their record easily and ensure data accuracy's.

## 2.2 Product Functions

- ⇨ Login for User, Admin and Main-Admin
- ⇨ Complaint/FIR registration
- ⇨ Feedback registration
- ⇨ Staff members and users registration and management
- ⇨ Staff registration and management
- ⇨ Criminal registration and management

## 2.3 User Classes and Characteristics

There are mainly three main modules:

- ⇨ Staff
- ⇨ Registered Users
- ⇨ Administrator

User Module:

In this module, first of all user will register the account with proper data(where username and password must be unique for everyone). Once she/he login in this system they can register their complaint/FIR

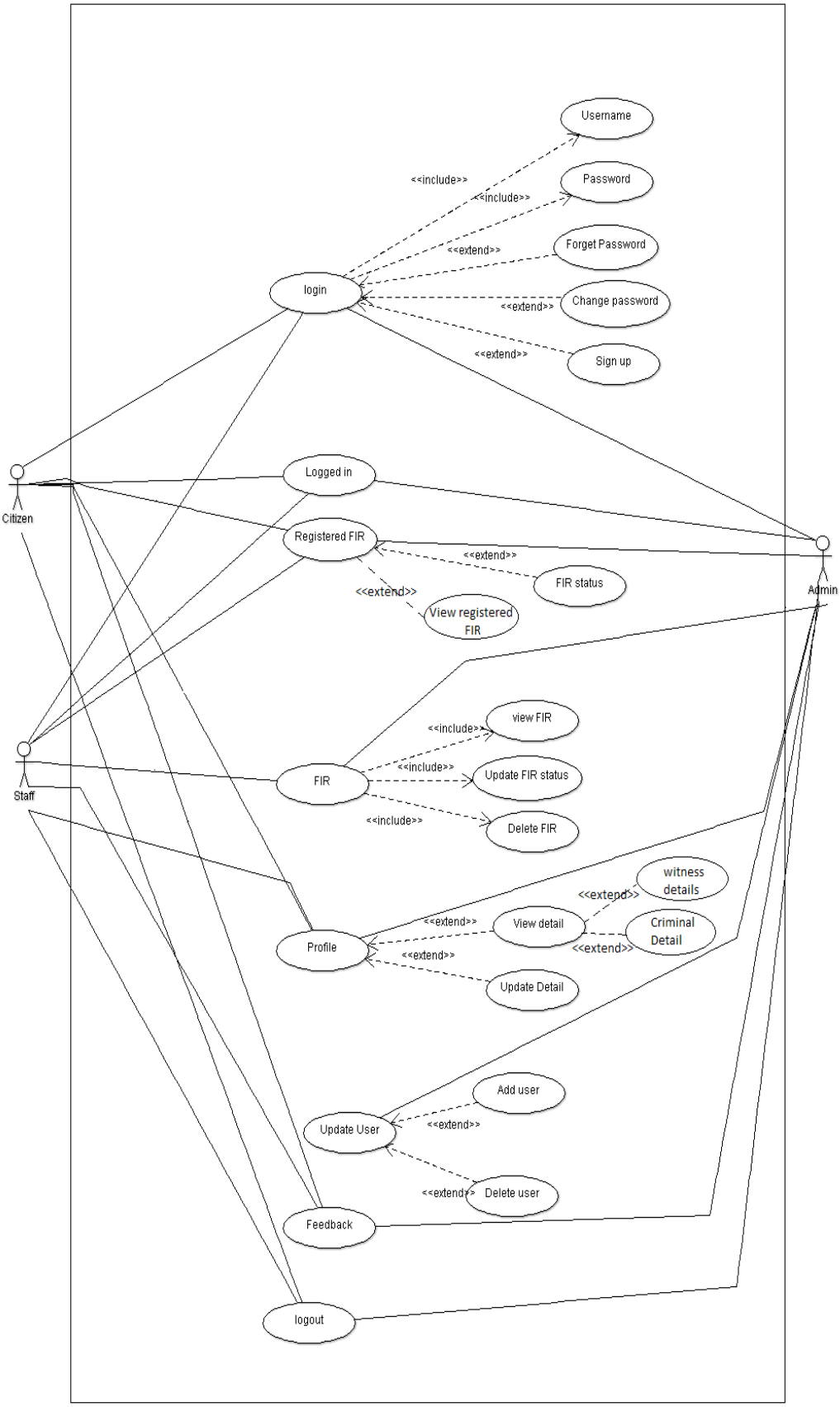
Staff Module

In this module, first of staff will login with proper email-id and password (which will be unique). Once the staff person will login, he/she can see and update all the FIR which is registered by users. Also any staff member can search for particular FIR. The registered staff can add the status of the FIR and can also give and see the feedback to the user. The staff member can update his profile. The staffs members can see also see the details of the criminal and victim.

Administrator Module

In this module, first of the administrator have to login with proper email-id and password (which will be unique). Once the administrator logins, he/she has the right to add or delete any of the users or the staff members. He has the right to registered new FIR, view the registered FIR, update and delete the FIR. And can also see the details of the registered members.

## Use case


Username
Password
Forget Password
Change password
Sign up
login
<<include>>
<<include>>
<<extend>>
<<extend>>
<<extend>>
Citizen
Logged in
Registered FIR
FIR status
View registered FIR
<<extend>>
<<extend>>
Admin
Staff
view FIR
Update FIR status
Delete FIR
FIR
<<include>>
<<include>>
<<include>>
witness details
Criminal Detail
View detail
Update Detail
Profile
<<extend>>
<<extend>>
<<extend>>
<<extend>>
Add user
Delete user
Update User
<<extend>>
<<extend>>
Feedback
logout

## 2.4 Operating Environment

This app is internet based so it will run in any operating system with internet access through web store.

The software is supposed to be platform independent and will use a browser, better works with Google chrome or Mozilla fire fox , so the either of two must be kept updated. It being connected to a web portal, the user must insure good quality internet for faster operability and smooth running of the software. Minimum Internet Speed: 256Kbps

## 2.5 User Documentation

The product will include a user manual. The user manual will include product overview, complete configuration of the required software and hardware, technical details and contact information which will include email address.

As part of the project, the following various documents are developed:

- ⇨ Software requirements specification document (SRS). The current document.
- ⇨ Functional specification and Design documents
- ⇨ Test case documents
- ⇨ Source code structure document
- ⇨ User & trouble shooting document

## 2.6 Design and Implementation Constraints

The applications functionality depends mainly on the availability of network connectivity and the strength of the network (signals). The limitation of network coverage in certain locations may impair the actual functionality or desired performance.

The systems devices may come with different hardware and software configurations (or versions). Depending on the hardware components like graphical cards, internal memory & display screen resolutions, some of the application functionality may be limited. The speed and storage capacity of the data may be constrained. The User interface in terms of component layout, color patterns may differ from device to device or make to make.

The functionality may slightly vary depending on the known limitations of the operating systems. For efficient function of the system; minimum 8 GB (DDR3) of RAM is required at Server Side

For full working Online Crime reporting requires Internet and Intranet Connection

## 2.7 Assumptions and Dependencies

Proper working of this app is dependent on the internet connectivity of the user's computer.

Assumptions and dependencies:

It is assumed that the user has basic knowledge of the system (i.e. he/she is not a first time user) as any action by the user is considered valid.

It is assumed that the user must register the right FIR, it should not be fake.

# 3. External Interface Requirements

## 3.1 User Interfaces

**Login**: This window has three types of logging that are:-

1. Administrator login

2. Staff login

3. User login

**ADMIN**

The administrator login will take the user to the administrator profile.

**System Overview**: The window can only be assessed by the administrator where the administrator can perform:-

- Login – 1) Username

  2) Password

- FIR – 1) Register new FIR

  2) View registered FIR

3) Update FIR

4) Delete FIR

- View User and staff members details -1) Citizens

  2) Staff

- Add user – 1) Citizen

  2) Staff

- Update user details -1) Citizen

  2) Staff

- Delete user - 1) Citizen

  2) Staff

- Logout

- Feedback – Here admin can see all the feedback and can send the feedback

## CITIZEN

The user login will take the user to the citizen profile.

The user can do the following things:

- Login – 1) Username (if user is already a member)

  2) Password

- Signup (this is for the new user) – 1) Name

  2) Age

3) Gender

4) Address

5) Phone

6) User Name

7) Password

- User Details – 1) View user details

- Update user details – 1) Name

  2) Age

  3) New address

  4) Phone number

- FIR – Register new FIR

- FIR status – the user can see the status of his/her registered FIR

- Change password – allow the user to change his account password

- Feedback – Here the user can send the feedback

- Logout

**Staff:**

The staff login will take the user to the particular staffs member profile (from whom account we are doing log in)

The staff can do the following things:

- Login – 1) Username

  2) Password

- Profile – 1) View user details

- Update Profile details – 1) Name

  2) Age

  3) New address

  4) Phone number

- FIR – 1) Register new FIR

  2) View registered FIR

  3) Update FIR

  4) Delete FIR

- View User and staff members details -1) Citizens

  2) Staff

  3) Criminal

- Change password

- Feedback – here staff member can send the feedback

- Logout

## 3.2 Hardware Interfaces

HARD DISK DRIVE-40GB

CD ROM DRIVE

KEYBOARD

MONITOR

MOUSE

CPU requirements: Core I3 or equivalent

## 3.3 SOFTWARE CONFIGURATION

FRONT END -ASP.NET, HTML,CSS,C#

BACK END -MS SQL

OPERATING SYSTEM -WINDOWS XP

BROWSER -MS INTERNET EXPLORER

2) Install my SQL database

The SQL database is required to store the data. The server component should interact with SQL database to read and write the data. The Server component needs to create proper SQL queries and extract the required data.

*http://dev.mysql.com/downloads/*

## 3.4 Communications Interfaces

Following communication interfaces are used in system and the data is actually transmitted through physical layer of OSI layer. IPv4 will be used for connection.

Citizen sends the request. That Request goes to the server from the public network (Wi-Fi…) to do a particular action (Login, Action on FIR ) then the server communicates with the database to update the things in the database and also to retrieve the data form the database and again the server sends the data to the citizen according to the citizen request. Basic communication channel that will be used is HTTP.

Web Browser**:** Any HTTP supported web browser like IE, Firefox, etc.

Protocol: HTTP and TCP/IP

# 4. Application Features

This section provides a brief description of the various features of the application. A detailed functional specification will be part of the design document.

## 4.1 Report Filing:

The inputs you need to give for filling the report are FIRNO, FIR date, FIR time, place where crime happened, Address of the victim, an authorized identity of the victim. After the data is inputted it is validated and then the report goes under the process. If the given information by the victim is valid then the report is stored in database.

## 4.2 Add or Remove User/Administrator:

This feature describes how we can add or update the data of an user or an administrator. Before processing this we need to first enter our username and password to validate. After checking that data is valid and then do the modifications in the table. The updated information is then reflected in the database

## 4.3 Viewing:

On clicking the desired button we can view the information we are allowed to. If specified entry is not present in the database then it displays “No such Record”

## 4.4 Update the status of the FIR:

Admin or the staff can update the FIR status. Depending upon how much extent the Case has come they update the FIR status. It is visible to the user. He can see the information whenever he want.

## 4.5 Feedback:

In addition to all these features, feedback is very important feature. It allows the user to upload his/her feedback on this system

# 5. Other Nonfunctional Requirements

### 5.1 Performance Requirements

The application is expected to meet certain performance criteria. However, there are other dependencies which could cause an impact on these performance criteria depending on the speed of the network, server response time, load etc.

Depending on the nature of the connectivity (broadband or Wi-Fi ), the response time is expected to be in the range of 15 – 25 seconds

The display loading may depend on the data volume and may take 10 – 15 seconds

The numbers of concurrent users are expected to be 50 in the each phase.

### 5.2 Safety Requirements

The application needs to take proper safety measures to handle the database and concerned data. The exception handling while handling the data updates needs to be handled carefully. The database locking and committing needs to be appropriate so that no data corruption happens through the functionality.

The user scenarios need to tested properly to ensure the application functionality is accurate.

### 5.3 Security Requirements

The application needs to implement the role based security and authentication mechanism. The various roles are administrator, staff official, citizens etc. Login credentials and roles should be implemented. Need to maintain these in DB with encryption. Appropriate error messages and warning messages need to be displayed.

### 5.4 Software Quality Attributes

The application needs to be completely tested to ensure the high availability, exception handling, platform independent, help tips wherever required and accurate reporting.

### 5.5 Business Rules

The application needs to follow the role based access and functionality to ensure the data security. The detailed role based matrix will be provided in the design phase based on the business rules defined by the application owners.

# 6. Other Requirements

The UI specification and color standards to be discussed and derived with application owners.

# Appendix A: Glossary

The following table provides the interpretations or full form of the acronyms and abbreviations used in this document. As the document gets updated, this section will go through changes based on the new additions.

| Acronyms/Abbreviations | Full form |
|---|---|
| SRS | Software Requirements Specification |
| FS | Functional Specification |
| DB | Database |
| OS | Operating system |
| UI | User Interface |
| SQL | Structured Query Language |
| SE | Software Engineering |
| FIR | First Information Report |
| Admin | The system administrator |

# Appendix B: To Be Determined List

The application exact configurations need to be finalized.

In this project, agile model is been used. The agile method anticipates change and allows for much more flexibility than traditional methods. The design and development mode of this project is ORGANIC. The project is developed in a familiar, stable environment.