SOFTWARE REQUIREMENTS SPECIFICATION

FOR

ONLINE CRIME INVESTIGATION SYSTEM

-Prepared by

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1. Introduction

1.1 Purpose

This Project is aimed at to develop an online application for improving complaint system through Police Department. This application will support citizen to file a complaint through website which will be time saving, fast, efficient and problem solving. All around country, The Crime record management application will be implemented and maintained which will again concentrate on managing complaint, prevention of crime by interconnection police information system to different police station in the country.

With the usage of this information, handling of variety of criminal cases will be easy, time saving and solving cases will be much faster as each and every record will be purely accessible to the designated Anti-Crime Board. This portal can handle data of criminals who are under trial or are facing judicial surveillance. This portal will be most useful for defence services for easy access and efficient searching of details of the criminals; Any Citizen can report an FIR online, missing citizen search, secure registration and profile management facilities for detectives and security agencies, facilitate communication between all stakeholders - discussion forum/chat/mail/polls.

1.2 Document Conventions

This document was prepared using the IEEE recommended practice for Software Requirements Specification. This document has followed a Text Style: Arial with Text Size: 10.5. Note: Every requirement statement is to have its own priority

1.3 Intended Audience and Reading Suggestions

The different types of reader that this document is intended for are developers, project managers, marketing staff, users (Faculty/Staff/Students), testers, and documentation writers. The rest of this SRS contains Overall Description, External Interface Requirements, System Features, Non Functional Requirements and Other Requirements. Suggested sequence for reading the document -begin with the overview sections and proceed through the sections that are most pertinent to each reader type.

1.4 Product Scope

1. The system should have a login.

2. - The citizen can file a complaint.
   - Add a crime report and upload the detail of missing person.
   - View all further updates by other user, they can also edit complaint, get updates on crime report the complaint filed by them.

3. - The administrator can view and reply to user crimes, view and delete user feedback, add and delete Most Wanted Person, add and delete view missing person. it also felicitates email and chat facilities along with other log in control.

4. System should support for Data Entry module for Nominal Roll, Case register for each complaint being registered.

5. Staff (Police Officers) should have a read only access to the information of Citizens.

6. Administrator must be able to add or update/delete the data of prisoners.

7) For Staff Official/Citizen, it saves time of going far away Police Depts. to lodge an FIR or to grievance cell.

- **Truly Unlimited**! - No restriction on no. of FIRs / Complaints. You completely own whole system.
- **Complete freedom** to live hassle free of the queues and dodging the crowds that we frequently face at these type of Govt. Offices.

1.5 References

Books:

->Asp.net with C# Edition: First Edition

Author: Shyam N. Chawada

Published:2012

->Complete Reference C# 2.0 Edition: Second Edition

Author: Herbert Schildt

Published: DEC-05

->System Analysis & Design Addition: Second Edition

Author: James A Sem

Published:Grew Hill 1984

Websites:

www.ncrb.org

www.w3schol.com

http://msdn.microsoft.com
http://java.sun.com
http://www.asp.net

& The tutorials provided by infiniteskills.com, thenewboston.com and Lynda.com.

2. Overall Description

2.1 Product Perspective

Existing System:

In the existing system, we can check whether the details of particular information about the police stations in our state, the existing system has more workload for the authorized person which is Staff Official in general case, but in the case of Proposed System, the citizen can be registered in our site and send the crime report and complaint about a particular city or person.

Proposed System:

The aim of proposed system is to develop a system of improved hassle-free facilities. The proposed system can overcome all the limitations of the existing system. The system provides proper security and reduces the manual work. The existing system has several disadvantages and many more difficulties to work well. The proposed system tries to eliminate or reduce these difficulties up to some extent. The proposed system will help the user to reduce the workload and mental conflict. The proposed system helps the user to work user friendly and he can easily do his jobs without time lagging.

- ✓ Admin
- ✓ Staff Official
- ✓ Citizen
- ✓ Login

Admin: Admin will be Protected by a username and password. Ordinary user/Citizen/Staff will not be permitted to enter into the Application/Encrypted Database. Admin can manage all record related to application that manage the Crime Detail.

Staff Official: Staff can add crime detail of criminal.

Staff can manage crime details and Criminal/Witness Record.

Staff has a read only access over Citizen's details.

Citizen: Citizen can view all crime details, view FIRs, add feedback and give answer of queries.

Login: This window offers the user Three choices for logging into the system according to the preset privileges – Staff Official, Citizen and Administrator login.

The Citizen login will take the user to the Citizen Profile.

The Administrator Login will take the admin to the Administrator profile.

The Staff Official Login will take an individual to the Staff Official Profile.

2.2 Product Functions

The functions are divided according to the user types: -

Administrator*:* The function of the administrator is that they can view and reply to user crimes, view and delete user feedback, add and delete Most Wanted Person/Criminal, view add and delete missing person.

Edit Complaint: This module helps the user to edit his complaint details.

Edit Profile: This module helps the user to update his or her profile.

View complaint status: This module allows us to view the status of all complaint that you have posted earlier.

View Investigation Status: This module allows us to view the status of the all crimes that you have posted earlier.

Add a Feedback: will be treated as a notification bar.

Staff Official: **Add Complaint**: This module helps the user to report online complaints.

Add Crime report: This module helps the user to report online crimes.

Add Missing person: This module helps the user to report online missing person's details also we have to add photos of missing person using heterogeneous database.

View Missing persons: This module help the user to view all the missing person details.

View Most wanted persons: This module help the user to view all most wanted.

Add a Feedback.

Change Password

Citizen: **Add User Details:** Add, Update and Delete User Details.

File an FIR: File an FIR, view and check FIR Status.

Add a Feedback.

Change Password.

System: **Verify Login Information**

Authentication

Login

2.3 User Classes and Characteristics

The various users of this app are classified as :

- ✓ Administrator
- ✓ Staff Official
- ✓ Citizen
- ✓ System

This app requires the Citizen and Staff to have characteristics such as the user who should be able to communicate and write in English and should have previous experience of Registration (Login/Sign Up) and further be able to fulfill the necessary Details for filing a Complaint. If not, the candidate should be instructed about the basic usage of the app by authorized personnel.

2.4 Operating Environment

This app is internet based so it will run on any windows/ iOS operating system with internet access through web store.

2.5 Design and Implementation Constraints

The Admin has a stringent role to play to monitor and maintain each and every Records of Staff and Citizen. Moreover, He / She cannot View/Edit Criminal and Witness Records but can add and update Feedback. Admin must Sign up through database directly.

The Staff Officials is allowed to check the exam only once. While filing FIR, the citizen can Register new FIR, View Registered FIR as well as Update/Delete FIR. Staff Official Must Sign up for new Citizen Users.

Citizen can File a FIR can view FIR and check FIR status but can't see Criminal and Witness Records. Citizen must Sign up for new Citizen Users.

The Staff Official and Citizen must be pre-registered under the monitoring of Admin to be eligible to Add FIR/Complaints, give Feedback, View/Update user details of oneself.

2.6 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.

2.7 Assumptions and Dependencies

Proper working of this app is dependent on the internet connectivity of the users' 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 while submitting User Details as well as while Filing an FIR and review its status.
- It is assumed that the data entered by the Staff/Citizen while logging is true.
- It is assumed that the Admin work as and org of group of not more than 4-5 individual and maintains whole service plus database.

3. External Interface Requirements

3.1 User Interfaces

Login: This window has two types of logging that are:

1. Administrator Login

2. Staff Official Login

3. Citizen Login

4. System

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

The Staff Official login will take the Staff Registration (S.H.O) directly to the Staff Official Login Panel.

The Citizen login will take the user to Citizen Registration Portal where Pre-Register user will Login to gain access through web app and New User Will Sign Up for the same.

The System needs no login, it just remains at the background and gets verified Login Information.

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

- **Lodge an FIR**-Register, View, Update and Delete
- **View FIR Status**.
- **View User Details**-Staff/Citizen
- **Add Users**
- **Update User details**
- **Delete users**
- **See Feedback**

- **View Staff Official Records** – 1) Add/View User's details.
  2) Can Register new FIR, view Registered FIR, Update FIR and as well as Delete FIR.

- **View Citizen details** – 1) View their own Filed FIR and See feedback.
  2) Select options to view Citizen's details (individual or all).

Crime Investigation:

- **Home:** Redirects back to Master Page.

- **Login:** Registration of new User: (Staff Official /Citizen)
  -Type User Name and Password.

- **Updation of existing User Details:** (Updation if user inputs wrong information)

  -Select cid its corresponding name, age, gender, address, phone, username and password.

  -Delete user details (entire data) /Update selected details.

Update button is given to save. User Details would be changed successfully. To make more changes click the "back" button to go back and follow update/delete user details., etc.

In the update window, administrator can view the current User Details.

- **For Filing an FIR:** -Citizen Id:
  -Crime Location:

  -Crime Type:

  -FIR Status:

If Updating FIR: FIR Id: -Citizen Id:

-Crime Location:

-Crime Type:

-FIR Status:

If Deleting FIR: FIR Id: -Citizen Id:

-Crime Location:

-Crime Type:

-FIR Status:

- **To give Feedback:**

  -select the feedback, it redirects the page to Feedback

  window. -click ‘Submit’ to submit the requisite feedback.

- **Changes in Password:**

  -Enter current password

  -Enter new password and retype it (to avoid making any mistake).

- **About Us:** Gives Description of the mission and the vision this online service serves.

- **Dialogue Box(Affirmation):** This window appears after successful login by the user. Dialog box will pop-up signaling” You are Registered/Your FIR has been Registered/ Your feedback has been taken”. User Instruction manual will be shown which contains instructions (how to put up an FIR, what ae required data entries u need to submit, finally how to view updated/deleted Entries). As soon as the “submit” button is pressed, candidate will be taken to the Home page irrespective of whichever window is opened. Each page will contain “next” and “previous” button to navigate between pages easily. ‘Auto save’ is the feature we will be trying to incorporate in the Service later. Side bar for scrolling up/down.

- **Logout:** After you are done by fulfilling the requisite objective at the website, you are free to successfully logout.

3.2 Hardware Interfaces

SERVER SIDE REQUIREMENT:

Processor	Pentium 3.0 GHz or higher
RAM	1 GB
Hard Disk	20 GB free space

CLIENT SIDE REQUIREMENT:

Processor	Pentium III or 2.0 GHz or higher.
RAM	512MB
Hard Disk	1 GB free space

3.3 Software Interfaces

SERVER SIDE REQUIREMENT:

Front end	ASP.NET 2010 with C#4.0
Back end	Ms SQL server management 2008
Web server	IE (7,8), Mozilla Firefox, Safari Opera
Operating System	Any Microsoft Windows OS

CLIENT SIDE REQUIREMENT:

Operating System	Windows XP, other Compatible OS
Browser	Internet Explorer 6.0 or any other Compatible Browser

3.4 Communications Interfaces

The Customer must connect to the Internet to access the Website:

1. Dialup Modem of 512 kbps
2. Dialup or Broadband Connection with an Internet Provider.
3. Broadband Internet.

4. System Features

4.1 Sign-Up

4.1.1 Description and Priority

For Administrator, it is to be done within the database manually at the time database is designed in order to increase security. Priority is 9.

Initial Signup mandatory for Staff Official or Citizen. Priority is 9.

4.1.2 Stimulus/Response Sequences.

The Staff Official/Citizen taps on the sign up button and is directed to his/her account.

4.1.3 Functional Requirement

Administrator is authorized to register Users, update, delete Users registrations and upload valuable feedback.

4.2 Illegal Attempts

4.2.1 Description and Priority

Accessing any other browser or opening any other tab. Priority is

9. 4.2.2 Stimulus/Response Sequences

Warning message will be displayed in this case.

4.3.3 Functional Requirement

Administrator can exempt the Users from further attempts of inputting Username/ Password.

4.3 Auto -Save

4.3.1 Description and Priority

In case of reaching the inactive state of designated time window and User remain inactive, auto save operation will automatically get executed. Priority is 10.

4.3.2 Stimulus/Response Sequences

All updation-/deletion will be auto saved.

4.3.3 Functional Requirement

None

5. Other Non-functional Requirements

5.1 Performance Requirements

- The database shall be able to accommodate a minimum of 10,000 records of Users, Criminal Records, Witness Records individually.
- The software shall support use of multiple users at a time.
- There are no other specific performance requirements that will affect development.

5.2 Safety Requirements

- The system should be designed as a secured system applying safety measures.
- Special exception handling mechanism should be in place to avoid system errors.
- In case of scenarios where system integrity can be compromised, measures should be taken to ensure that all changes are made before the system shuts down.

5.3 Security Requirements

Some of the factors that are identified to protect the software from accidental or malicious access, use, modification, destruction, or disclosure are described below. Keep specific log or history data sets.

- Assign certain functions to different modules
- Restrict communications between some areas of the program
- Check data integrity for critical variables
- Communication needs to be restricted when the application is validating the user or license. (i.e., using https).

5.4 Software Quality Attributes

The Quality of the System is maintained in such a way so that it can be very user friendly to all the users.

- Accurate and hence reliable: The system should be robust enough to handle fault tolerances. The system should not crash and should be able to identify invalid inputs and produce a suitable error message.
- Availability: The system should be available 24/7. It should always provide real time information.
- Usability: The system should provide an easy to use Graphical interface similar so that users do not have to learn a new style of interaction. Any notification or error messages generated should be clear, succinct, polite and free of jargon.
- Fast speed: The system should be fast enough to display error messages, notification, results etc.
- Integrity: Only system administrator has the rights to change system parameters, such as pricing policy etc. Users need to be authenticated before accessing personal data.

5.5 Business Rules

The site administrator, who is the main head. He can any time register/un-register any User accounts. Thereby, all Investigation related activities of that particular Police Dept. will get exempted.

6. Other Requirements

The website cannot be illegally owned by any other organization. It is copyrighted. It can be reused as an alternative for pre-existing FIR/Criminal/Witness records that are currently used by the Police and Vigilance Depts., For example – Anti Corruption Board, Central Bureau of Investigation, INDIA or Police Depts.

Appendix A: Glossary

Definition of Online Crime Investigation System:

Introduction:

Online Crime Investigation System is a software application which allows application for improving complaint system through Police Department. This application will support citizen to file a complaint through website which will be time saving, fast, efficient and problem solving.

Purpose:

The purpose of this application is to smoothen the investigation tracking process which is at present is not the hassle free one instead seen as a workload on one or more Individual in a system. The proposed system is to provide the facility to the customer to lodge their complaint about a particular crime or criminal act irrespective of wherever the victim is our sole aim is to divide this workload in order to ensure data accuracy, Proper control of higher officials and Greater Efficiency.

Features:

- Any Victim or Witness can register their various types of complaints and grievances and expect the trial and investigation over the criminal.
- Just register by signup and file and FIR and the designated Police Dept. will Respond in order to start the Crime Investigation process.
- Provision of Editing User details, Editing FIR Report in a stipulated Time Frame.
- Provision of Tracking Real Time Crime Investigation Process.
- User can give valuable feedback to the organisation about its responsiveness, how the application responds at every point.

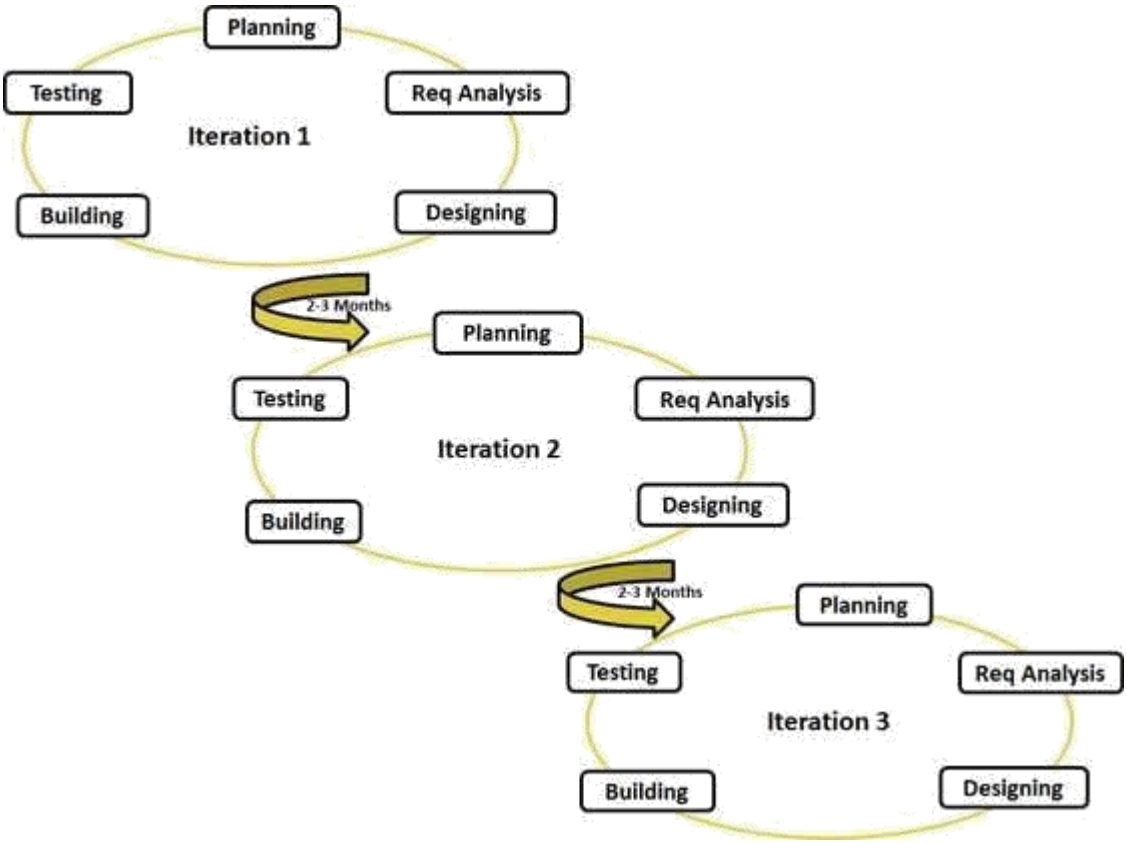
Advantages:

The system requires very low system resources and the system will work in almost all configurations.
The system is very simple in design and to implement. It has got following features:

- Ensure data accuracy's.
- Better service.
- Minimize manual data entry.
- Minimum time needed for the various processing.
- Greater efficiency.
- Proper control of the higher officials.
- User friendliness and interactive.
- Reduce the damages of the machines.
- Minimum time required.

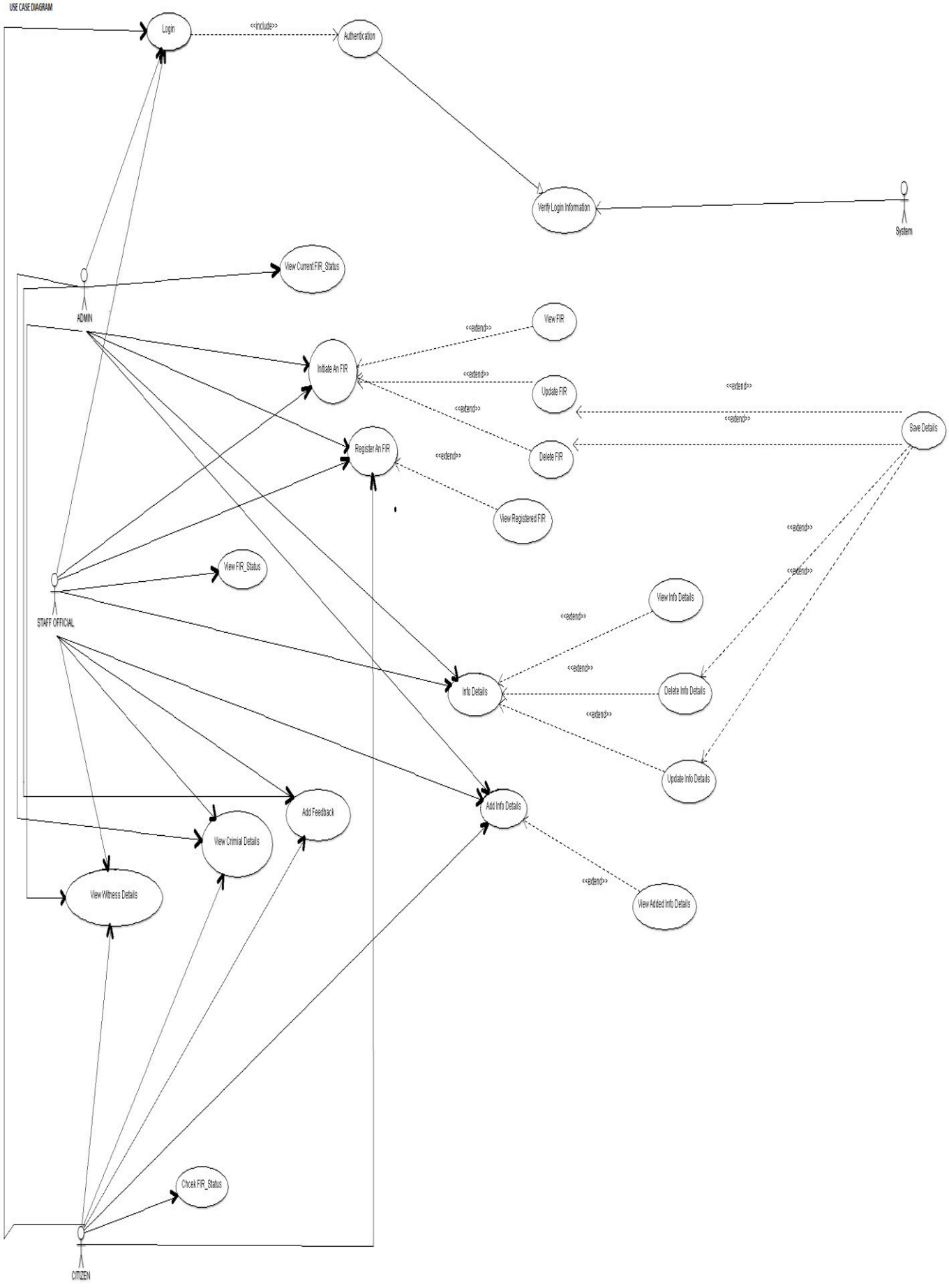
Appendix B: Analysis Models

In this project, AGILE model is used.

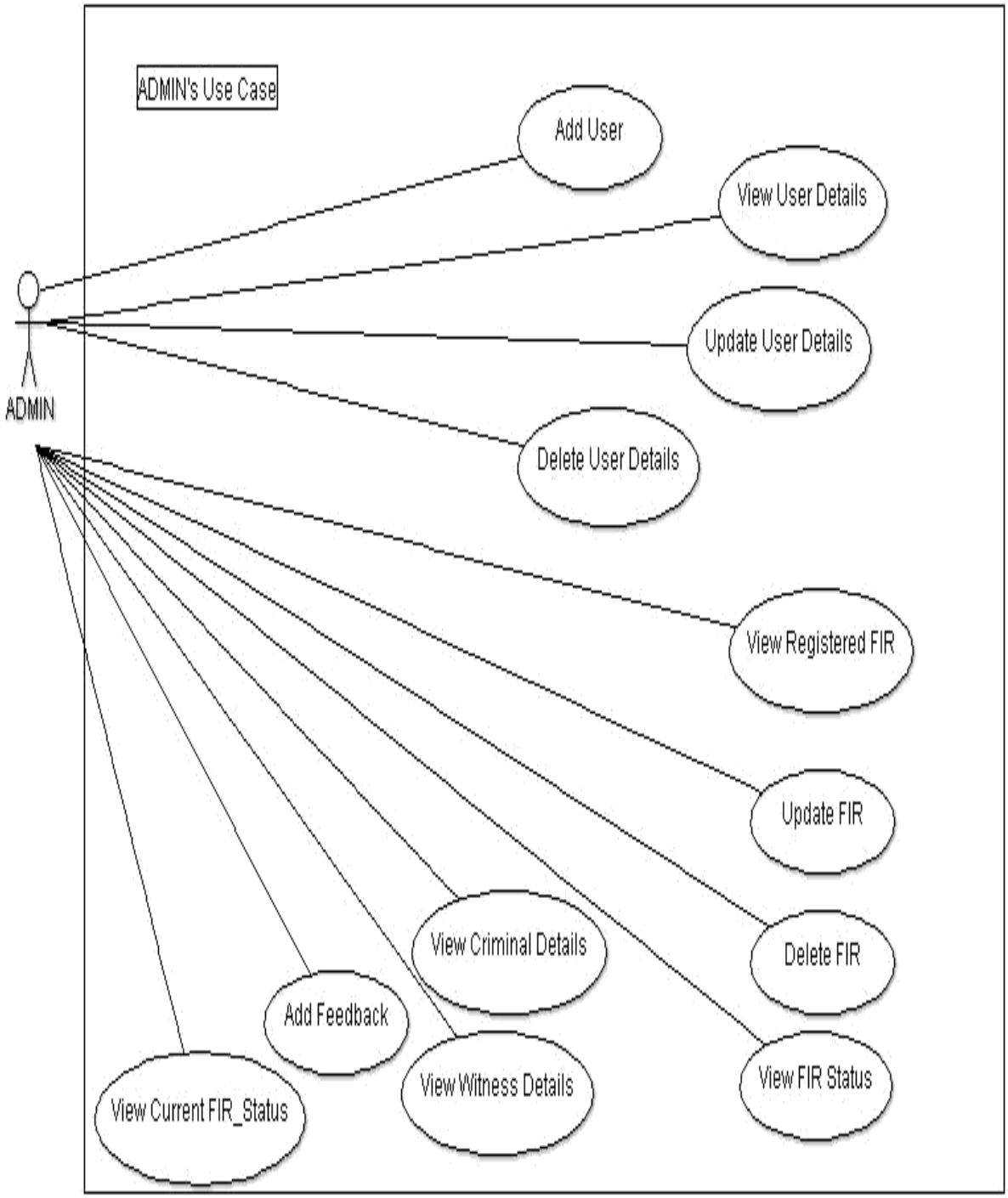


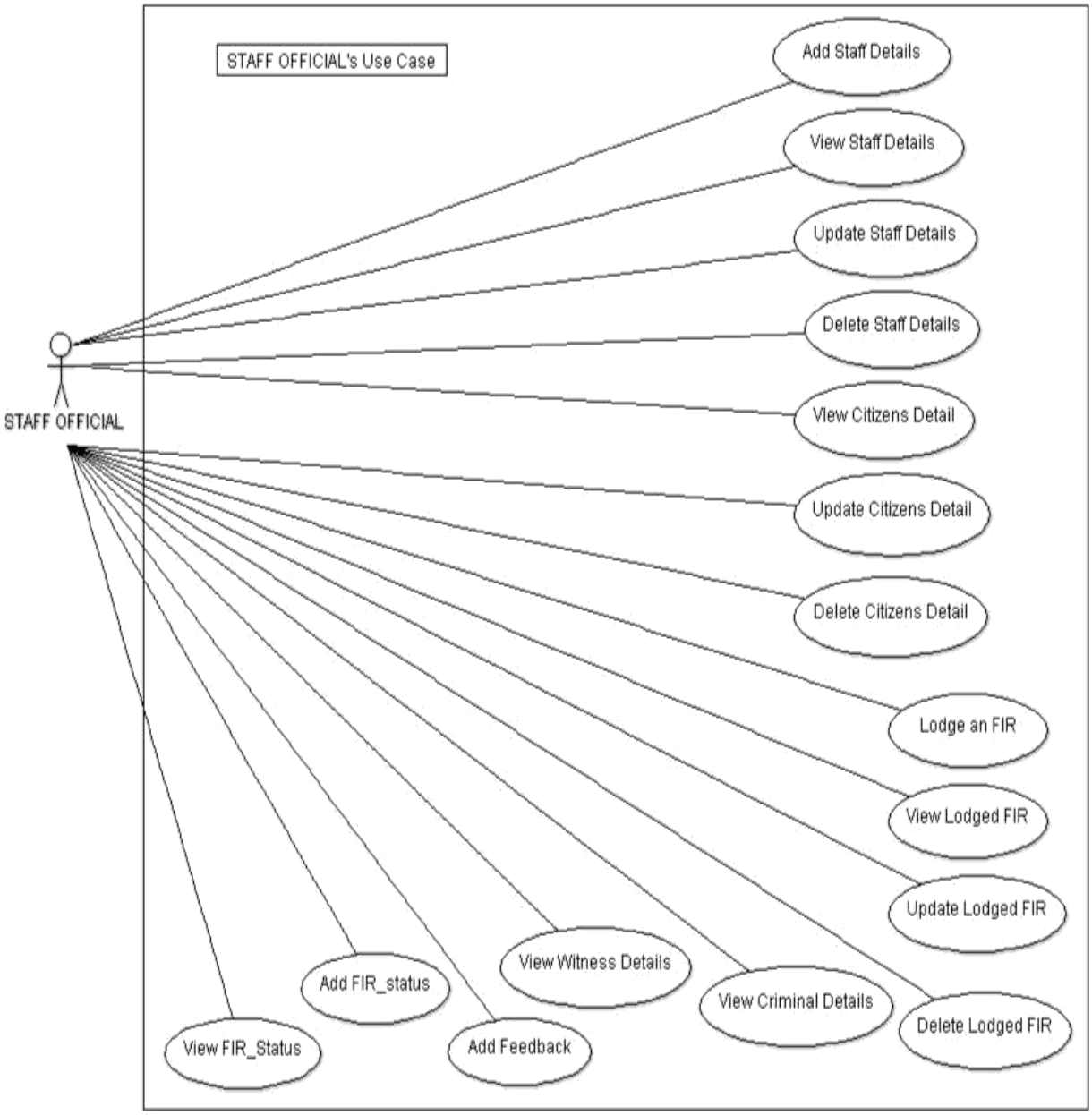
The agile method anticipates change and allows for much more flexibility than traditional methods.The design and development mode of this project is ORGANIC. The project is developed in a familiar, stable environment.

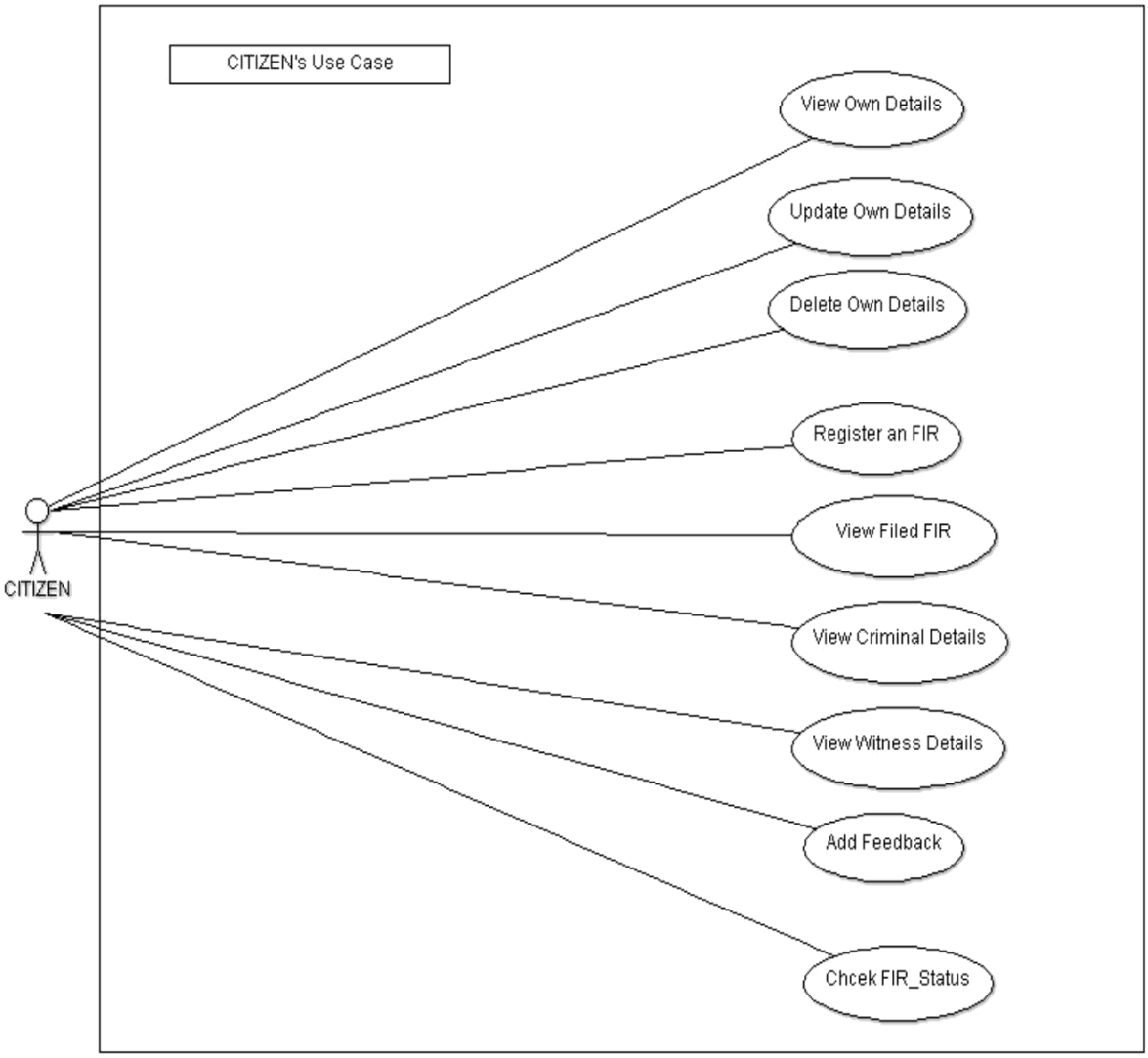
Use Case Diagram:



INDIVIDUAL ACTORs USE CASE:




STAFF OFFICIAL's Use Case
STAFF OFFICIAL
Add Staff Details
View Staff Details
Update Staff Details
Delete Staff Details
View Citizens Detail
Update Citizens Detail
Delete Citizens Detail
Lodge an FIR
View Lodged FIR
Update Lodged FIR
Delete Lodged FIR
View Criminal Details
View Witness Details
Add Feedback
Add FIR_status
View FIR_Status


CITIZEN's Use Case
View Own Details
Update Own Details
Delete Own Details
Register an FIR
View Filed FIR
View Criminal Details
View Witness Details
Add Feedback
Chcek FIR_Status
CITIZEN