SoftwareRequirementsSpecification

For

ONLINECRIMEINVESTIGATION SYSTEM

Version1.0 approved

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RevisionHistory

Name	Date	ReasonForChanges	Version
Group Members	9/21/2016	InitialDraft	1.0
Group Members	9/21/2016	Release document	1.1

1. Introduction

1.1Purpose

Police and other lawenforcement agenciesare dependent on highlyprofessional and reliable crime scenetechnicians and investigators to uncoverevidence that will provejustice and rightfulinformationin a court oflaw.This systemisa stepto makingtask ofcitizens easier byregistering theirissues online through a fast working portal/server and bridging a gap b/wmanypeopleand police.This system alsofacilitates thepolice and investigators as it isa faster wayfor them toreceive the detailsofvarious crimes takingplace andsaves time and speeds up the process as compared tothe oldregister entrysystem.The system is completelyonline based platform.Theideabehindhavingan online Crime Managementsystemisthatit'll helpreportingcrimes easyandhelp the citizenof the countryas well as thepolice department to easilyhandle andmanageit.This applicationwillsupportcitizento file a complaint throughwebsitewhich will be time saving, fast, efficient and problem solving.Allaroundcountry, The Crime record management application will be implementedand maintained whichwill again concentrateon managing complaint, prevention of crime byinterconnectionpoliceinformationsystemtodifferentpolice station in the country.

With theusage of thisinformation, handling of varietyof criminalcaseswillbe easy, time savingand solving cases willbemuchfaster as eachand everyrecordwillbe purelyaccessible tothedesignatedAnti-Crime Board.Thissystemcan handle numberofusers connected to theserver without anyglitch and errorifconfigured correctly.Each user is authenticated andthenisgiven anoption tolodgea complaint/ firstinformation report. Criminals;AnyCitizen can report anFIR online, missing citizen search, secure registrationand profile management facilities for detectivesandsecurityagencies

1.2 DocumentConventions

This document providesthe softwarerequirementsand expectedbehaviour of the online portal.The documentprovides certain statements andrequirementsin a bold or highlighted format to represent thesignificance of thesame. Detailednotesalong withreference tothe other documents are provided whereverapplicablewithan asterisk.All theassumptionsthatare madewillbe mentioned beforehand andno externalassumptionsarerequired.

1.3 IntendedAudience andReading Suggestions

This document isintendedfor the crime investigation department (CID).The expectedoutcome of this projectis going tosupport thecrime investigation operation team whichincludes police of various departments, and allthe authorities inCrime investigationdepartment.
The stakeholdersduringtheprojectexecution are going tobedevelopers, testing, and team andprojectmentor/project manager

1.4 ProductScope

The systemwillbea Reportingapplicationthat will be usedfor automating the manual process ofregisterdifferent casein police Department.This systemwill manage thedetailsofallthecrimewhoregisterthemselvesinpolicedepartment. The systemprovides aninterface tostore the crime details or allowsthe user to search and viewrecords.Thesystemshould havea login.
The objectives of this system can broadlybe listedasfollows:

1. MakethePolice functioningcitizen friendlyand more transparentbyautomating the functioning of Police Departments.

2. Improvedeliveryofcitizen-centric services through effectiveusage of thissystem.

3. Provide the Investigating Officers of the Civil Policewith tools, technologyand Information to facilitate investigationofcrimeand detectionofcriminals.

4. ImprovePolicefunctioningin variousotherareas such as Law and Order,Traffic Management etc.

5. Facilitate Interaction andsharingof Informationamong Police Departments, Districts,
     State/UTheadquarters andother PoliceAgencies.

6.AssistSeniorPolice Officers in properadministration ofPoliceForce

7. Keep trackof the progressofCases, including inCourts

8. Reducemanualand redundantRecords keeping
Theyare two main advantagesof this proposed system:
1) Reducingthe crimeand disorder
2) confidentialityand anonymity issues.

TrulyUnlimited! - No restrictionon no. ofusers.Youcompletelyown whole system. **Completefreedom**to livehassle freeofthequeuesanddodgingthecrowds that we frequentlyfaceatthesetypeof Govt.Offices.

1.5 References

This websitehas beenpreparedon thebasis of discussion withTeammembers and our coursein charge.

Wehavealsotaken informationfrom following website–
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 byRogerSPressman5[th]edition, Software
Engineering byPankajJalote4[th]edition.
Asp.netwithC#Edition:FirstEditionAuthor:ShyamN.Chawada

CompleteReferenceC# 2.0Edition:SecondEditionAuthor:HerbertSchildt

2. Overall Description

2.1 ProductPerspective

The main aimof the project is to develop an application for thepolicedepartment to handle the crime investigation process in aneasyand efficient way.Complaint is registered in this systembythe user.Itcan be updated, deleted.
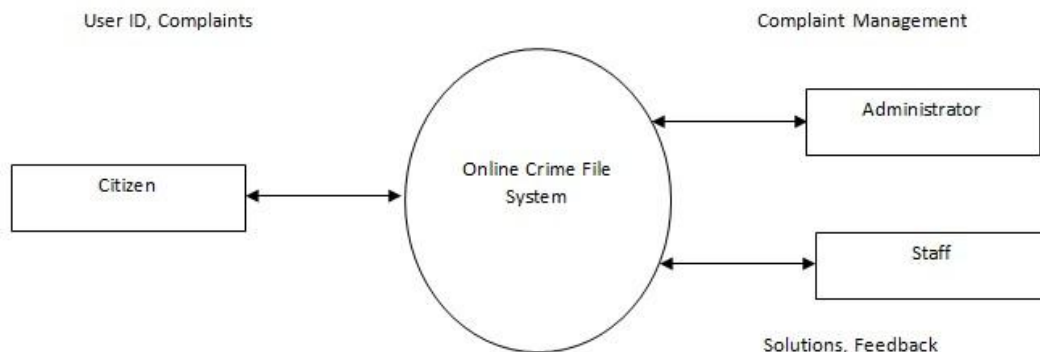
The drawbacks of the existing system:
Moremanpower.
Timeconsuming.
Consumeslargevolumeofparework.
Needsmanualcalculations.

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 ProductFunctions

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 MostWantedPerson/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.

StaffOfficial:

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.

2.3 User Classes and Characteristics

There are mainly three main modules:
   Staff
   Registered Users
   Administrator

User:

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

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

Inthismodule, first of the administrator haveto login withproper email-id and password (which will be unique). Oncetheadministratorlogins, he/shehastheright toadd or deleteanyof the users or the staff members. He hastheright to registered new FIR, viewthe registered FIR,updateand deletethe FIR.And can alsosee the detailsof the registered members.

2.4   OperatingEnvironment

This app is internet based so it will run in anyoperatingsystemwithinternetaccess throughwebstore

The software is supposed tobe platform independentand will use a browser, better workswithGoogle chromeorMozillafirefox , so the eitheroftwomust be kept updated. It beingconnected to a webportal, the user mustinsuregood quality internet for fasteroperabilityand smoothrunningof the software.Minimum Internet Speed: 256Kbps

2.5 User Documentation

The product will includea usermanual.The user manual willincludeproduct overview, complete configuration of the required software andhardware, technical detailsand contactinformation whichwillinclude email address.

Aspart of the project, the followingvarious documents are developed:

Software requirementsspecificationdocument(SRS).Thecurrentdocument.
Functional specification andDesigndocuments
Test casedocuments
Source code structuredocument
User & troubleshootingdocument

2.6 Design and Implementation Constraints

The applicationsfunctionalitydependsmainlyontheavailabilityofnetwork connectivity and the strength of the network(signals).Thelimitationofnetwork coverage in certainlocationsmayimpair the actualfunctionalityor desired performance.
The systemsdevices maycome withdifferent hardware and softwareconfigurations (or versions). Depending onthe hardwarecomponentslike graphicalcards, internal memory&displayscreen resolutions, some of the applicationfunctionalitymaybe limited.Thespeed andstorage capacityof thedata maybe constrained.TheUser interface interms of component layout, color patterns maydiffer fromdevice to deviceormake tomake.
The functionalitymayslightlyvarydepending onthe knownlimitations of the operating systems.Forefficient function of thesystem; minimum 8GB(DDR3) of RAMis required atServer Side
Forfull working OnlineCrime reportingrequires Internet and Intranet Connection
MySQLServer

2.7 Literacy/Competency Expected From Each User

Citizen:

Citizens are required to have basic knowledge of English and they must be an Adult as defined under the Constitution of India. The citizens must also possess basic knowledge about using Web Applications. They also must be familiar with usage of internet

Admin:-

Must be a competent Adult as defined under the Constitution of India.
Must have basic Programming Knowledge and must also possess administering capability of a web application.

Must be Proficient in English language.

It would be preferred to have someone from the department as the admin has absolute control over the Web Application

Staff:

Must be a competent Adult as defined under the Constitution of India. Must be Proficient in English language. He/she must be familiar with the usage of some Web Applications and Internet .It would be preferred to have someone from the department as the staff has certain critical control over the Web Application.

2.8 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 serviceplus database.

3. ExternalInterface Requirements

3.1 UserInterfaces

Login:This windowhasthree typesofloggingthatare:-

1.Administrator login
2. Staff login
3. User login
4. System

The administrator login will take the user to the administratorprofile.

TheStaff Officiallogin will take theStaffRegistration (S.H.O)directlyto the Staff Official Login Page.

TheCitizen login will take the user to Citizen RegistrationPortal where Pre-Registeruser will Login to gain access through web app and NewUserWillSign Upfor the same.

TheSystemneeds no login,itjust remains at the background and gets verified Login Information.

ADMIN

The administratorlogin will taketheuserto the administrator profile.

SystemOverview:The window can onlybeassessed bythe administrator where the administratorcan perform:-

Login – 1) Username
2) Password

FIR– 1) Register newFIR
2)Viewregistered FIR
3)Update FIR
4)Delete FIR

View User and staff members details-1)Citizens
2) Staff
Add user – 1) Citizen
2) Staff

Updateuser details-1)Citizen
2)Staff

Deleteuser -1)Citizen
2) Staff

Logout

Feedback– Here admincan see allthefeedback andcansend the feedback

CITIZEN

The user login will take theuser tothe citizen profile.
The user can do the following things:

Login – 1) Username (if userisalreadya member)
2)Password

Signup (this is forthe newuser) – 1) Name

2)Age
3)Gender
4)Address
5) Phone
6) UserName
7) Password

User Details – 1) View user details

Updateuser details– 1) Name
2)Age
3) New address
4) Phonenumber

FIR– Register new FIR

FIRstatus –theusercan see the statusofhis/her registered FIR

Change password– allowthe user to change his account password

Feedback– Here the user can sendthe feedback

Logout

Staff:

The stafflogin will take theuser tothe particular staffsmemberprofile(from whom account wearedoinglog in)
The staffcan do the followingthings:

Login –1) Username
2)Password
Profile– 1) Viewuser details

UpdateProfile details – 1)Name
2)Age
3)Newaddress
4)Phone number

FIR–1) RegisternewFIR
2)Viewregistered 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 cansend the feedback

Logout

System:

Lodge anFIR-Register,View,UpdateandDelete
ViewFIR Status.
ViewUserDetails-Staff/Citizen
Add Users
UpdateUserdetails
Delete users
SeeFeedback

ViewStaff OfficialRecords–1)Add/ViewUser's details.
2) CanRegisternewFIR,viewRegisteredFIR, UpdateFIR and as well as DeleteFIR.

ViewCitizendetails–1)ViewtheirownFiled FIRand See feedback.
2)Selectoptions to viewCitizen'sdetails (individual orall).

Crime Investigation:

Home: Redirects backtoMasterPage.

Login: Registration ofnewUser:(Staff Official /Citizen)
-Type UserNameand Password.

Updationofexisting UserDetails: (Updationif userinputswrong information)

-Selectciditscorrespondingname, age,gender,address, phone,username and password.

-Deleteuserdetails (entire data) /Update selected details.

Updatebuttonisgiven tosave.User Detailswould bechangedsuccessfully.Tomakemore changes click the"back" buttontogobackandfollowupdate/delete userdetails., etc.

Intheupdatewindow,administratorcanviewthecurrent User Details.

ForFilinganFIR:
-Citizen Id:
-CrimeLocation:
-CrimeType:
-FIR Status:

If UpdatingFIR:FIRId:
-Citizen Id:
-CrimeLocation:
-CrimeType:
-FIR Status:

If Deleting FIR: FIRId:

-Citizen Id:

-CrimeLocation:

-CrimeType:

-FIR Status:

To give Feedback:

-select thefeedback,it redirects thepageto Feedback window.

-click'Submit'to submit the requisitefeedback.

Changes in Password:

-Enter current password

-Enter newpasswordand retypeit(toavoid makinganymistake).

About Us:Gives Descriptionofthemissionandthevisionthisonlineserviceserves.

DialogueBox(Affirmation): Thiswindow appearsafter successfullogin bytheuser. Dialogboxwillpop-upsignalling"Youareregistered/Your FIRhas beenregistered/Your feedbackhas beentaken".User Instructionmanualwillbeshownwhich contains instructions(how toputupanFIR,whatarerequireddataentriesuneedto submit, finally how toview updated/deletedEntries).As soon asthe"submit"button ispressed, candidatewillbetakentotheHomepageirrespective ofwhicheverwindow is opened. Eachpagewill contain"next"and"previous" buttontonavigatebetweenpages easily. Sidebarfor scrollingup/down.

Logout: Afteryou aredone byfulfilling the requisiteobjective at the website,you arefree to successfullylogout.

3.2   Hardware Interfaces

HARD DISKDRIVE-40GB
CDROM DRIVE
KEYBOARD
RAM:512Mb
MONITOR
MOUSE
  Screenresolution of atleast 1024x768-required forproper andcomplete viewing of
  screens.

  CPU requirements:Core I3 or equivalent

3.3   SOFTWARECONFIGURATION

FRONTEND   -ASP.NET,HTML, CSS,C#
BACKEND   -MSSQL
OPERATING SYSTEM-WINDOWSXP
BROWSER   -MSINTERNETEXPLORER

2) Install mySQLdatabase

The SQLdatabaseisrequired tostore the data.The server componentshould interact withSQLdatabase toread andwrite thedata.The Servercomponent needs tocreateproper SQLqueries andextract the required data.

3.4 Communications Interfaces

Followingcommunication interfacesareused in system and the data is actually transmitted throughphysicallayerof OSI layer. IPv4will be usedfor connection. *Citizen sends the request. That Request goesto the server fromthepublicnetwork (Wi-Fi…) todoa particularaction (Login,Action on FIR) then the server communicates with the database toupdate the things in the database andalso to retrieve the data form thedatabaseand again the server sends the data to the citizenaccordingto the citizenrequest. Basic communication channelthat will be used is HTTP.*

WebBrowser: AnyHTTPsupportedwebbrowserlikeIE,Firefox,etc.
Protocol:HTTPandTCP/IP

4. Application Features

This section provides a brief descriptionof the various features of the application.A detailedfunctional specification willbepart of the design document.

4.1 Sign-Up

4.1.1Description andPriority

ForAdministrator, it isto bedone within the databasemanuallyat the time database is designedinorder toincreasesecurity.Priority is9.
InitialSignupmandatoryforStaff Official orCitizen.Priorityis 9.

4.1.2Stimulus/ResponseSequences.
The Staff Official/Citizen tapson thesign up button andisdirected to his/her account.

4.1.3FunctionalRequirement
Administratorisauthorized toregister Users, update,deleteUsers registrations and upload valuable feedback.

4.2Report Filing:

The inputsyouneed togive forfilling thereportare FIRNO, FIR date, FIR time, placewherecrimehappened,Address of thevictim, an authorizedidentityof the victim.Afterthe datais inputted it isvalidated and then the report goesunder the process. If the giveninformationbythe victimis valid then the report is stored in database.

4.3 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.

4.4 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"

4.5 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.

4.6 Feedback:

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

4.7 Functional requirements:
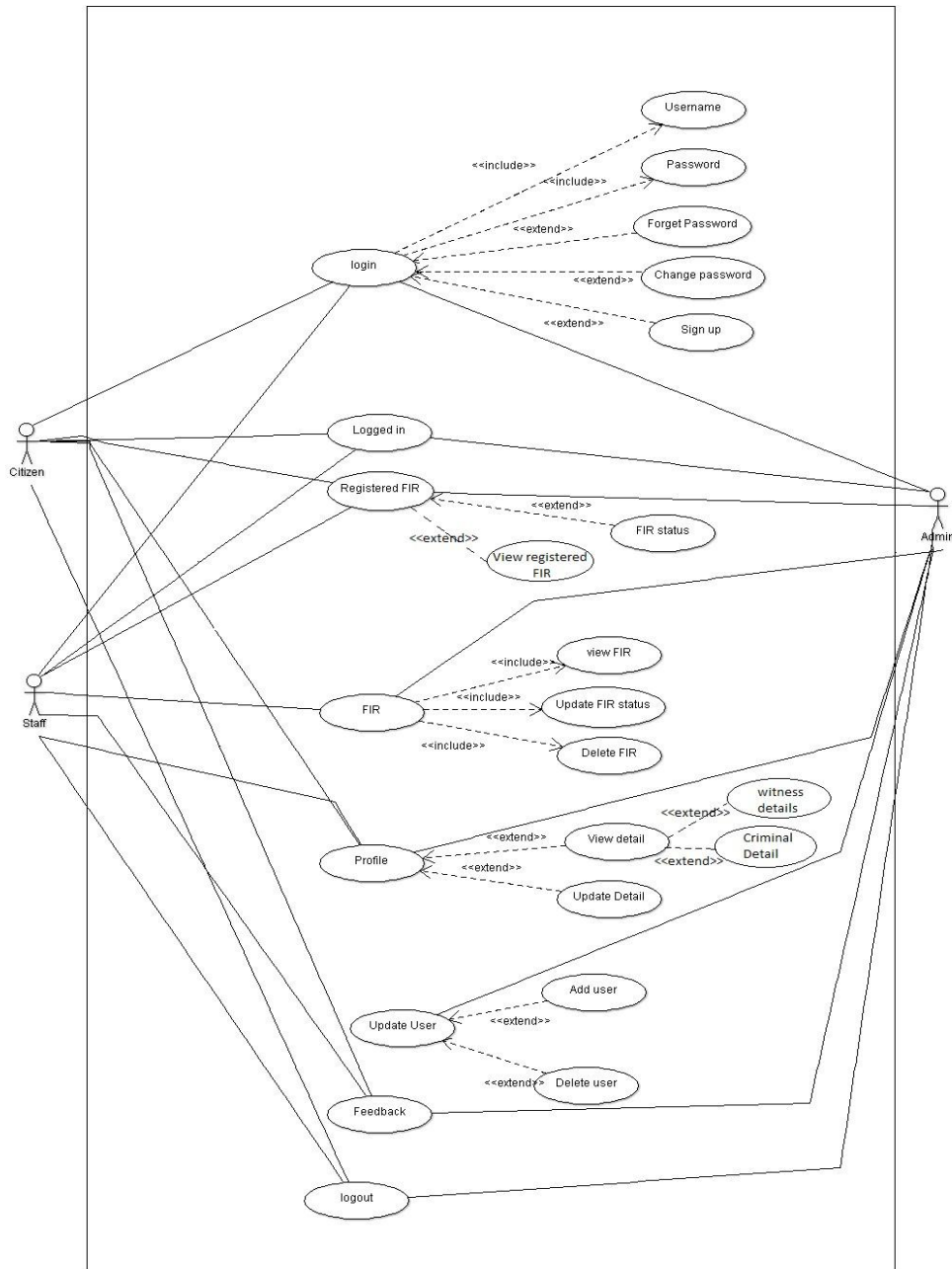
Requirement Identity	Name	Short Description
RQ_1	User login	User need to login into the website before he/she files a FIR
RQ_2	Customer ID	Customer ID is required before filing a FIR.
RQ_3	FIR_ID	FIR id uniquely identifies one complaint from another complaint.
RQ_4	Crime type	User chooses what type of crime it is.
RQ_5	Location	User fills the location where the crime has taken place.

RQ_6	Description	User describes the entire crime.
RQ_7	Feedback	There is a feedback option that is provided to the user to be filled.
RQ_8	Update FIR	Admin can update the FIR
RQ_9	Delete FIR	Admin can delete the FIR
RQ_10	Add user	Admin can add the user
RQ_11	Delete user	Admin can delete the user

5. OtherNonfunctional Requirements

5.1 PerformanceRequirements

The applicationisexpected to meet certain performance criteria.However, thereare other dependencies which could cause animpact on these performancecriteria depending on the speedof the network, serverresponse time,loadetc.
Depending on the nature of the connectivity(broadband or Wi-Fi), the response time is expectedto be inthe range of 15 –25 seconds
The displayloadingmaydependonthedatavolume and maytake10– 15 seconds
The numbersofconcurrent users are expectedto be 50intheeach phase.

5.2 Safety Requirements

The applicationneeds to takeproper safetymeasuresto handle the database and concerned data.The exception handlingwhile handlingthedataupdates needs to be handledcarefully.The database locking and committingneeds to be appropriate so that nodatacorruptionhappensthrough the functionality.
The user scenarios needto tested properlytoensure the application functionalityis accurate.

5.3 Security Requirements

The applicationneeds to implement therole based securityandauthentication mechanism.Thevarious roles are administrator, staff official, citizens etc. Login credentials androles should be implemented. Need to maintain these in DB with encryption.Appropriate errormessages andwarning messagesneed to be displayed.

5.4 SoftwareQualityAttributes

The Qualityof the Systemis maintainedinsuch a wayso that itcan beveryuser friendlyto all theusers.
Accurate andhence reliable:Thesystemshould be robust enoughto handle fault tolerances.The systemshould notcrash and should beable to identify invalid inputs and produce a suitable error message.

Availability:The systemshould beavailable24/7. It should alwaysprovide realtime information.

Usability: Thesystemshould provide an easyto use Graphical interface similar so that usersdonot have tolearn a new styleofinteraction.Any notification or error messagesgeneratedshouldbe clear, succinct, polite and free of jargon.

Fast speed:Thesystemshould be fast enoughto displayerrormessages, notification, resultsetc.

Integrity: Onlysystemadministratorhastherightsto change system parameters, such as pricing policyetc. Usersneed to be authenticated before accessing personal data.

5.5 BusinessRules

The applicationneeds to follow therole basedaccess and functionalityto ensurethe data security.The detailed rolebased matrix will be providedin thedesignphase basedon thebusinessrules defined bythe applicationowners.

6. Other Requirements

The UI specificationand colorstandards to be discussed and derived with application owners.

AppendixA: Glossary

The followingtable provides theinterpretations orfull formof the acronymsand abbreviationsused in this document.As thedocument gets updated, thissection will go throughchangesbased onthe newadditions.

Acronyms/Abbreviations	Full form
SRS	Software RequirementsSpecification
FS	Functional Specification
DB	Database
OS	Operatingsystem
UI	User Interface
SQL	Structured QueryLanguage
SE	Software Engineering
FIR	First Information Report
Admin	The systemadministrator

Appendix B:ToBe DeterminedList

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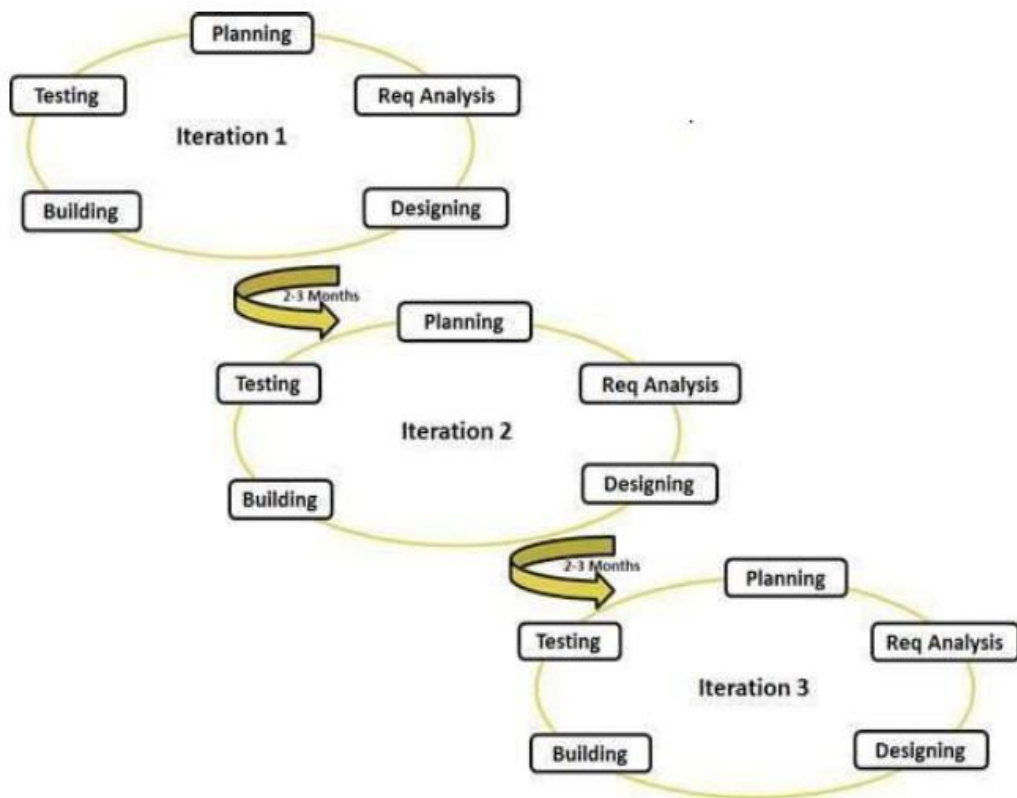
The agile method anticipates change and allows for much more flexibility than traditional methods. The design and development mode of this project is ORGANIC. The project is developed in a familiar, stable environment.