Software Engineering 2016

FROM LEFT TO RIGHT ***:-***
HARSHIT JAIN (14UCS047) , ADITYA SHARMA (14UCS007) , VINOD KUMAR SHARMA (14UCC042) , CHHATRAPATI JAIN (14UCS033) , RAJAT RANJAN (14UCC030) ,ANSHUL GOYAL (14UCS020) .

Group ID: A13

<Crime Book>

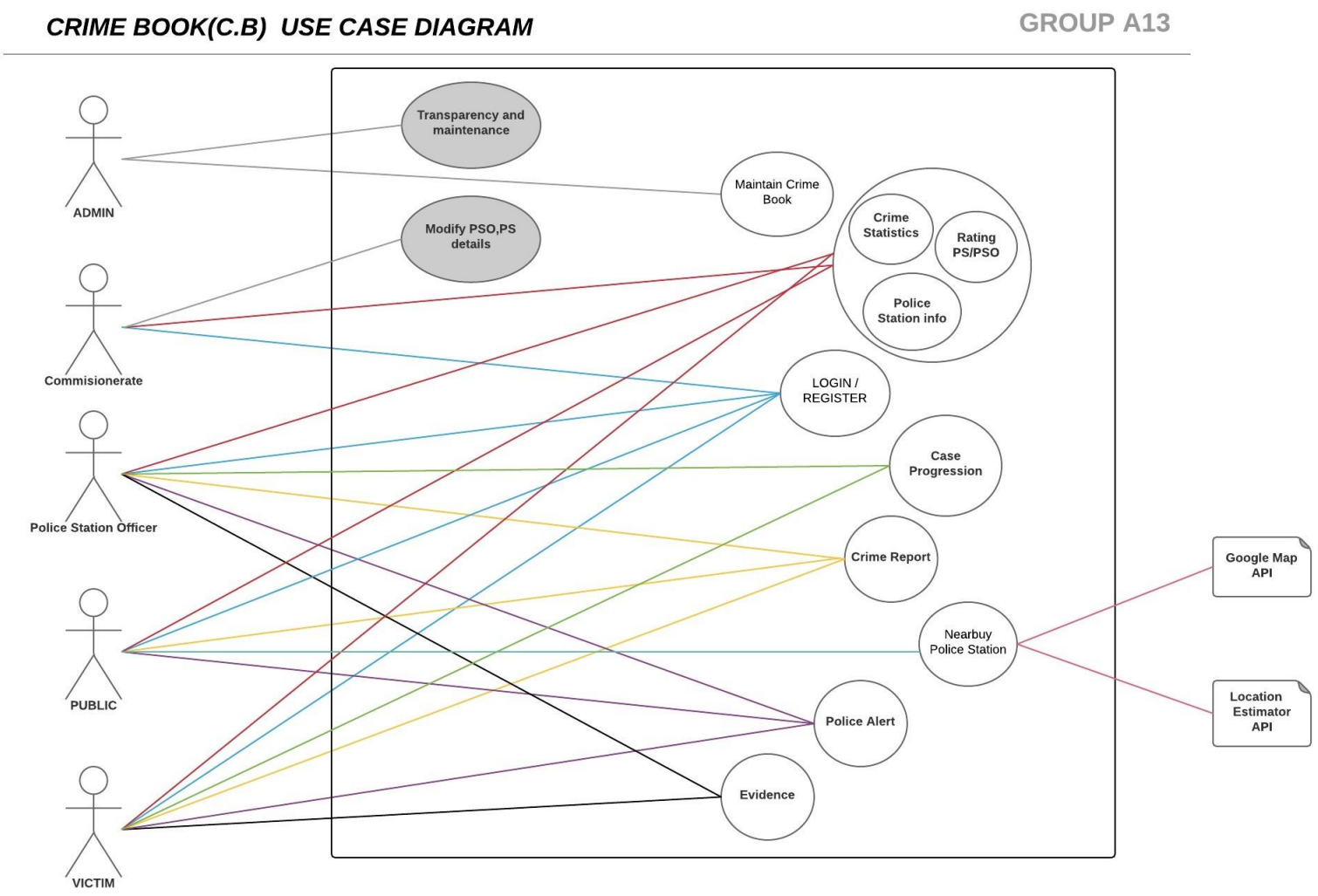
Screencast video link:
Demo link: hikecoupon.com/test/CrimeBook/index.php
User IDs/Passwords for Demo:
Police: Email id – ps@cb.com password-1234
Commissionerate: Email id- com@cb.com password-1234

Product Owner: ADITYA SHARMA and **Scrum Master**: CHHATRAPATI JAIN

Purpose

Our main objective is to ease public & police interaction by creating a online platform. We are also providing a stage for public to file online FIR report and navigation of crime density. People would also become more aware about prevailing crime in the city and thus would be more careful.

Use case diagram



Product Backlog - Revised

Story ID	As a/an	I Want to	So that...	Priority (H/M/L)
100	Victim	Report .	I get justice.	H
101	Victim	See the status of investigation of crime.	I become aware and pressurize police to do their work efficiently.	M
102	Victim	Have notification when my case has been solved.	Able to get justice.	M
103	Victim	Provide more evidence to police for further investigation.	I can provide evidence of crime to police.	H
104	Public	Report crime in my area.	It could be highlighted and brought to justice.	H
105	Public	Know the address of nearest police station.	I could go there immediately in case of any emergency.	L
106	Public	See the statistics of various crime prevailing in my city.	I could be more careful and conscious.	M
107	Public	Navigate crime rate of different cities/colonies.	So that I can plan to visit that area properly.	H
108	Public	To see trending crime in all locality.{last 30 days}	I can be aware about latest crime .	H
109	Police	Communicate with crime victim.	I can investigate crime efficiently.	H
110	Police	To give public alerts.	Public can aware about current crime.	H
111	Police	To see List of pending crimes.	I can take action accordingly.	M
112	Police	Update case progress.	Victim can be able to know his case status.	M
113	Commissionerate	I would be able to see the Performance of police officers.	So that it would be easy for me to make their transfers and keep a check on their work.	H
114	Commissionerate	I want to see stats of type of crime in city / Locality.	I can take further actions.	H
115	Commissionerate	Modify and Rate the police person details.	Their level of work and performance could be seen and appreciated by everyone	M
116	Commissionerate	To modify police station details.	Public can be aware about new station in locality.	M
117	Admin	Maintain crime book.	Everything remain updated and transparent.	H

Sprint 3 Plan - Backlog

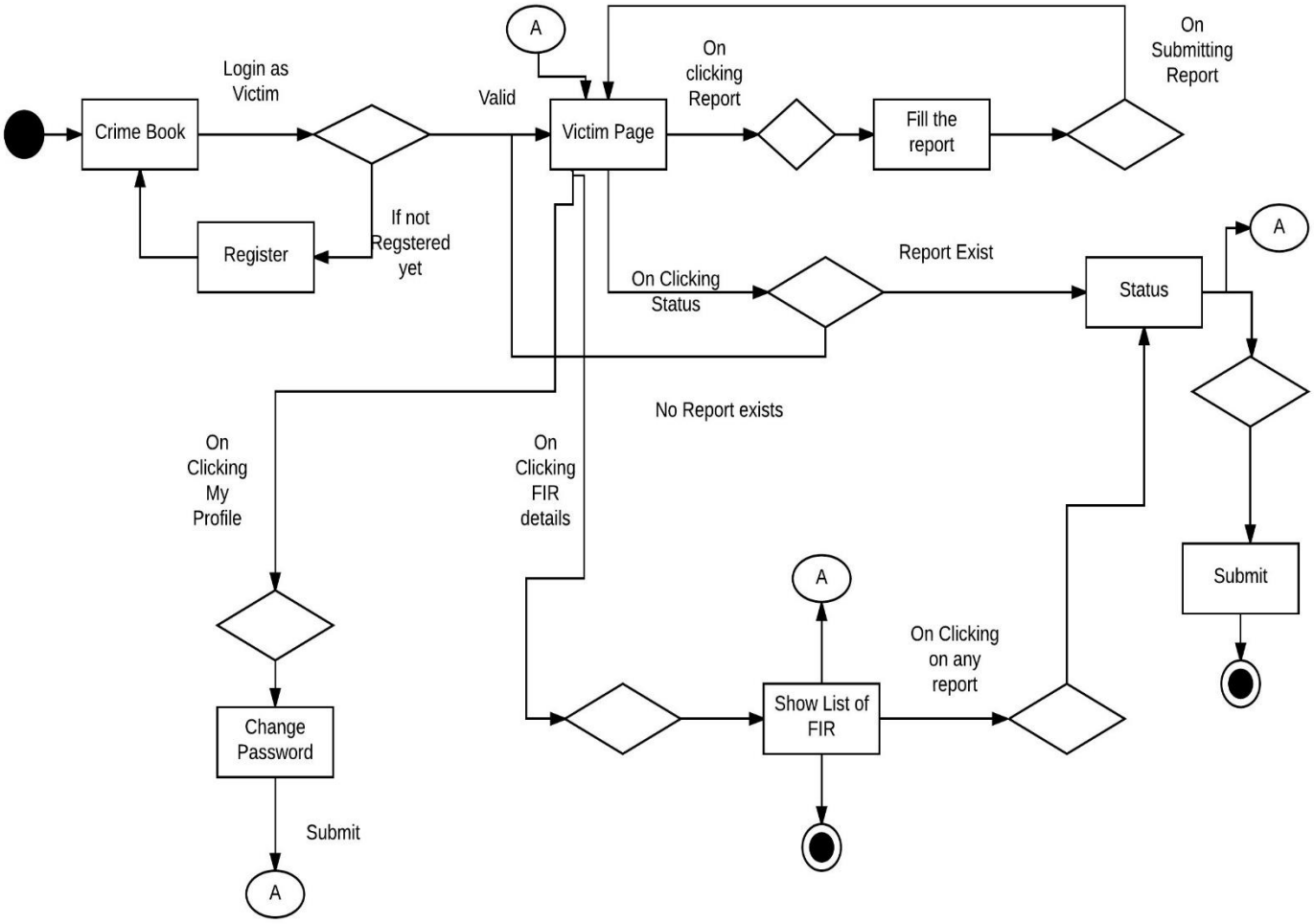
Story ID	As a/an	I Want to	So that...	Estimate	Actual
103	Victim	Provide more evidence to police for further investigation.	I can provide evidence of crime to police.	1	2
106	Public	See the statistics of various crime prevailing in my city.	I could be more careful and conscious.	2	3
107	Public	Navigate crime rate of different cities/colonies.	So that I can plan to visit that area properly.	3	3
108	Public	To see trending crime in all locality.{last 30 days}.	I can be aware about latest crime.	3	2
112	Police	Update case progress.	Victim can be able to know his case status.	2	2
114	Commissionerate	I want to see stats of type of crime in city / Locality.	I can take further actions.	3	2

Sprint 3 Plan - Acceptance criteria and test result

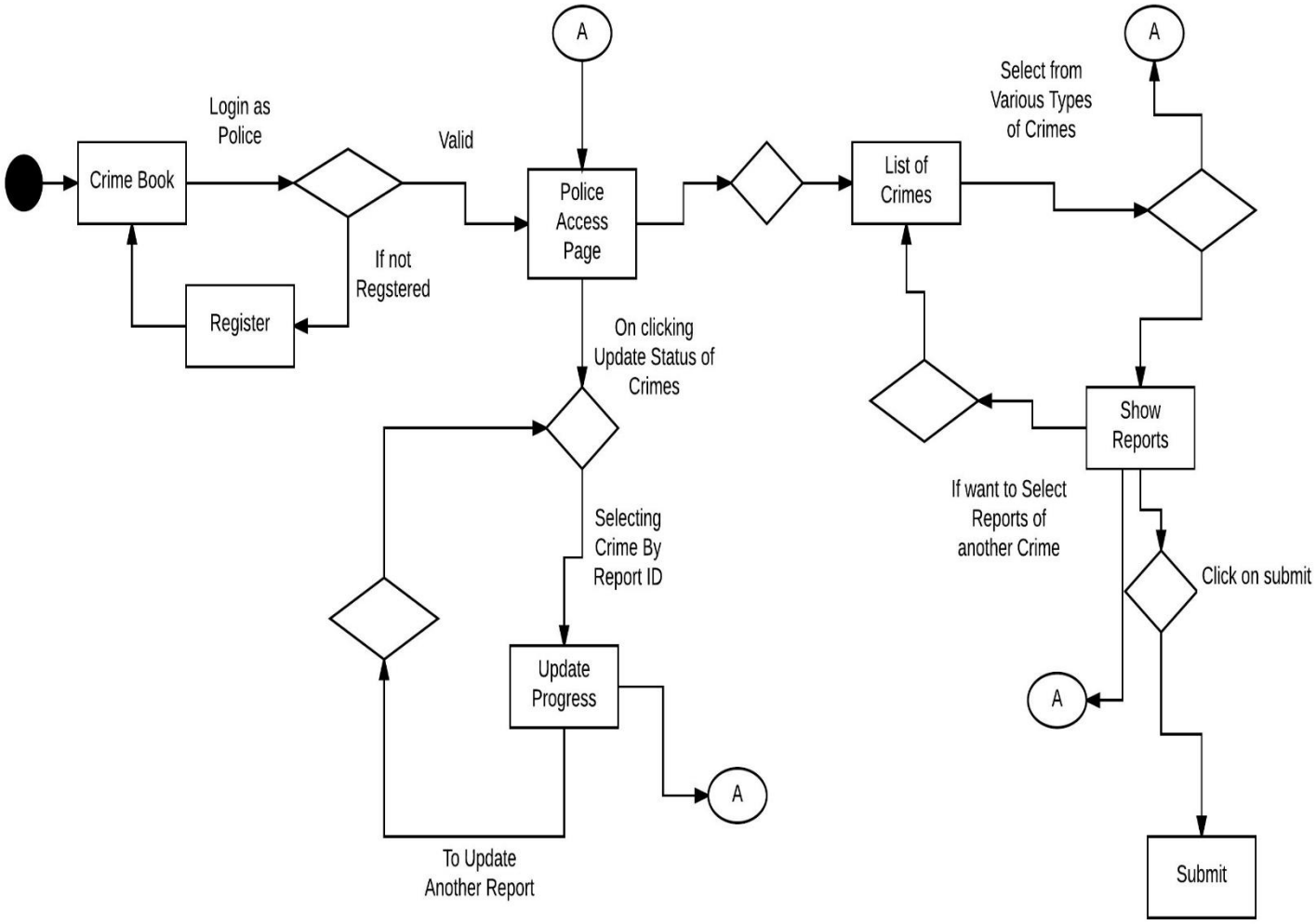
Story ID	Acceptance criteria	Test Result
103	A report must exist for that crime.	Accepted
106	No such criteria.	
107	Crime should exist in that city.	Accepted
108	1.) Entered crime should be valid. 2.) Locality entered should exist.	Accepted Accepted
112	1.) Police should have valid login credentials. 2.) For updating the report of that crime that report must exist.	Accepted Accepted
114	1.) Commissionerate should have valid login credentials. 2.) For seeing the statistic city should exist.	Accepted Accepted

Activity diagrams

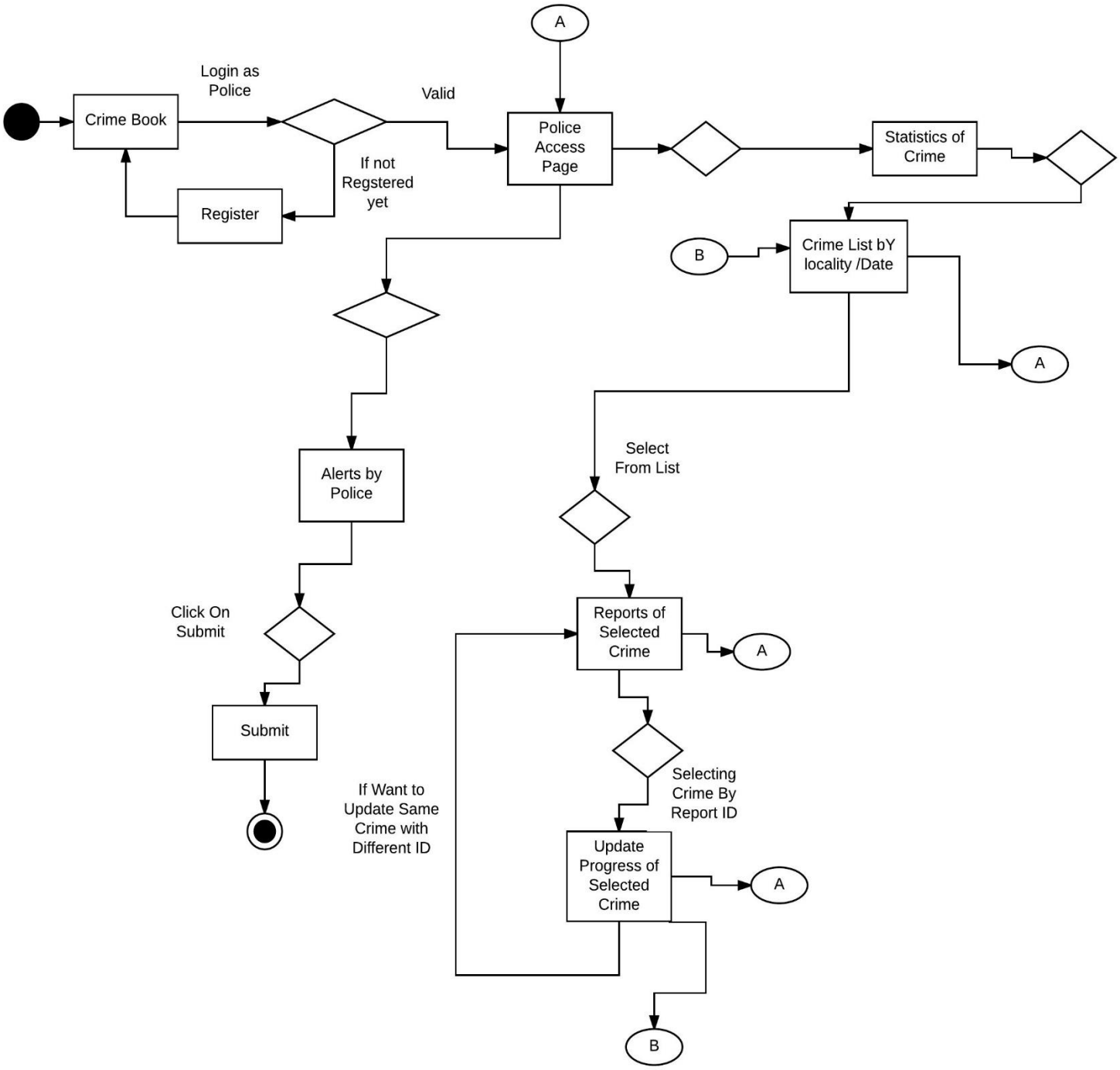
- Victim – Anshul Goyal(14ucs020)
  - To file report and see its status and list of all crimes.



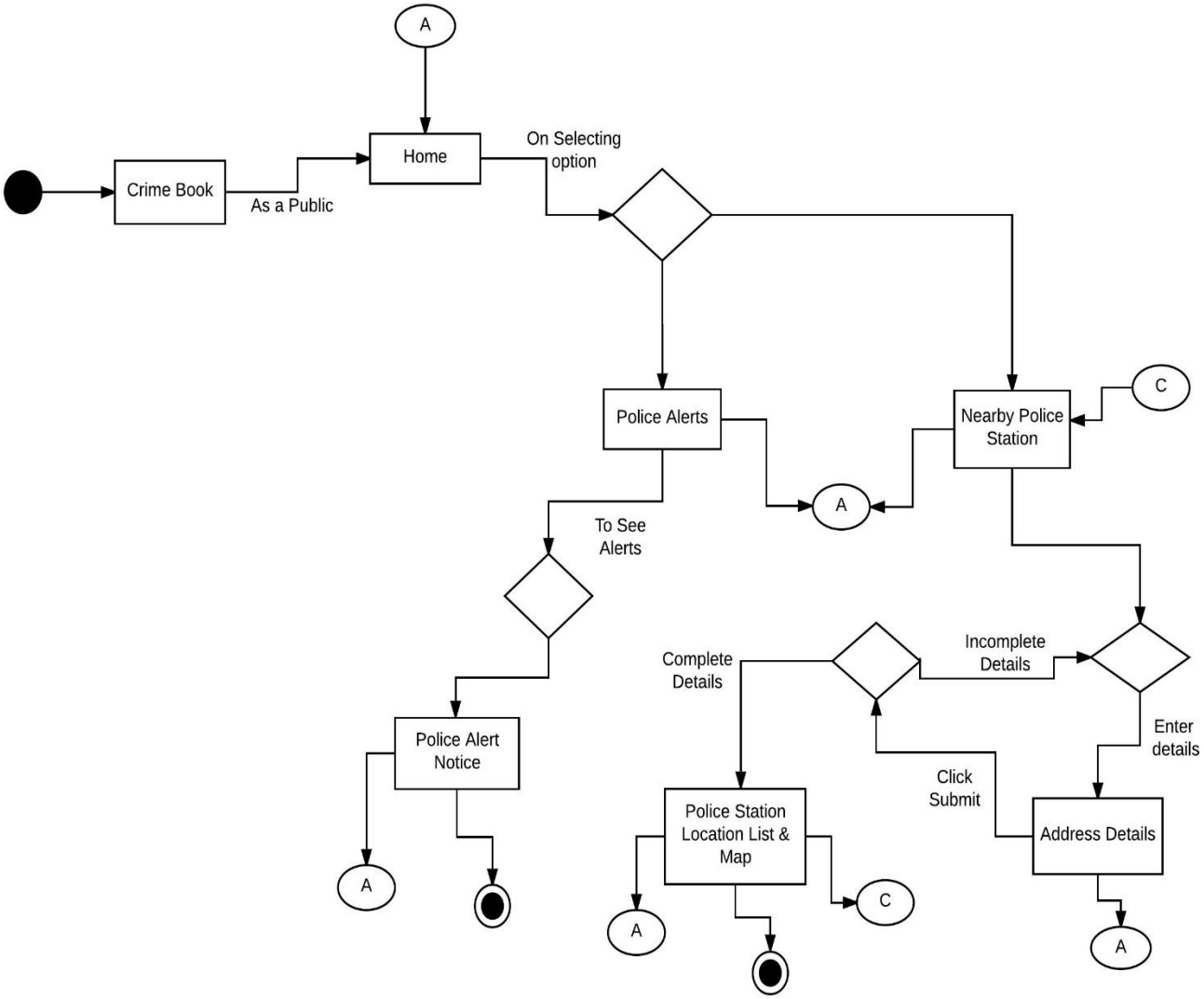
- Police – Aditya Sharma(14ucs007)
  - See list of crimes and update its progress.



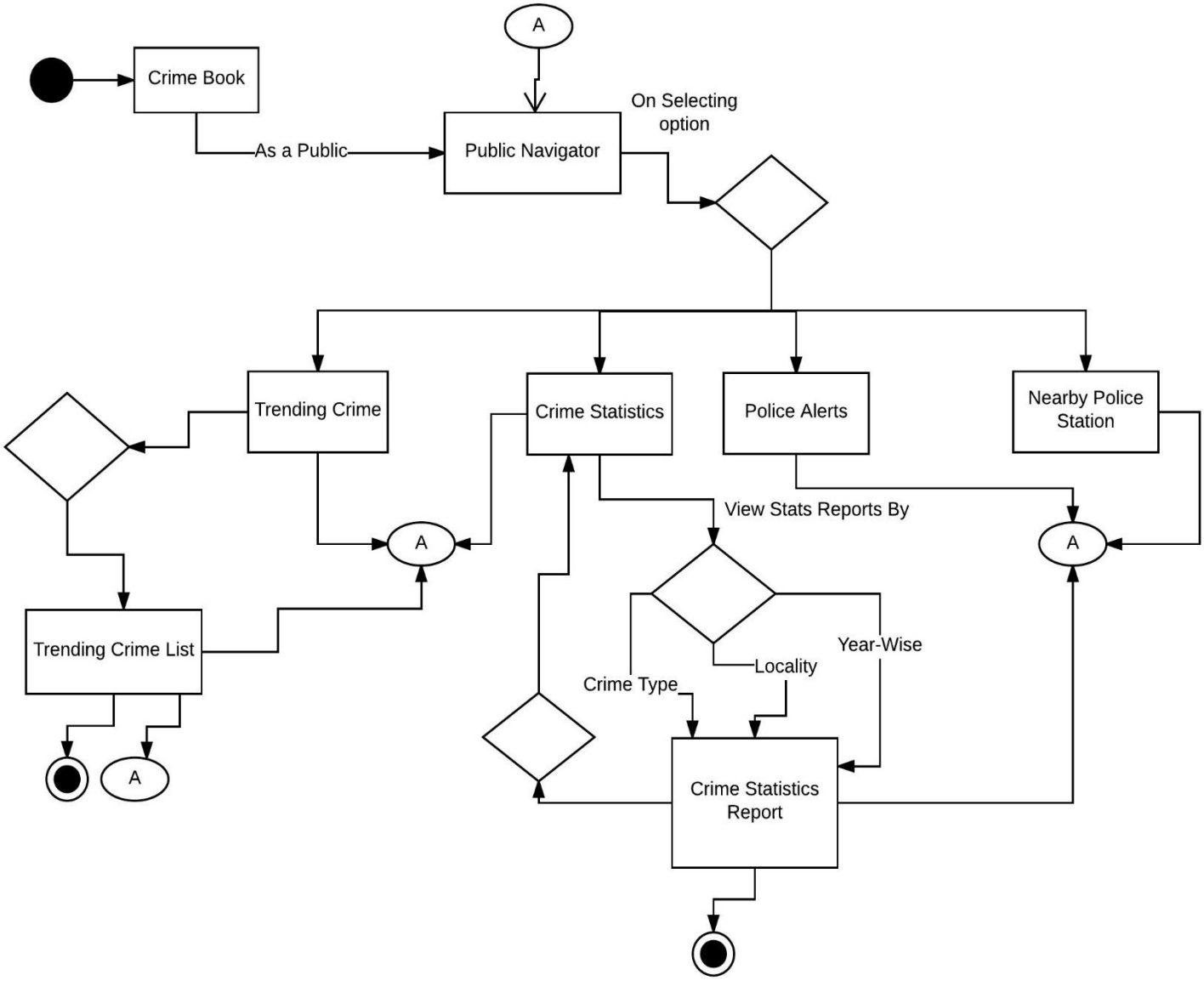
- Police – Vinod Sharma(14ucc042)
  - See list of crime by locality and give alerts to public.



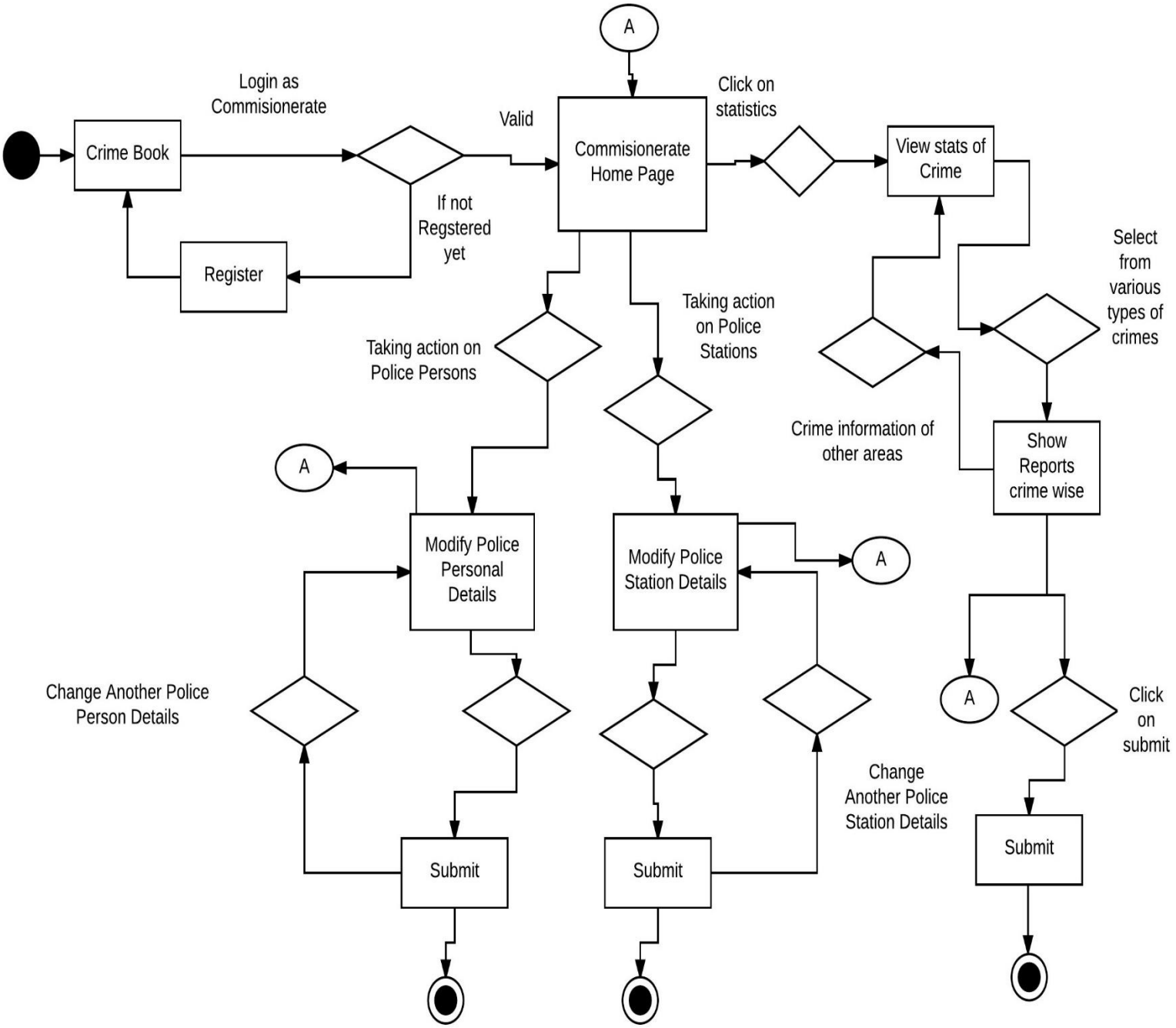
- Public – Harshit Jain (14ucs047)
  - See police alerts as public and view nearby police stations.



- Public – CHHATRAPATI JAIN(14UCS033)
  - See trending crimes and crime statistics by locality or year.

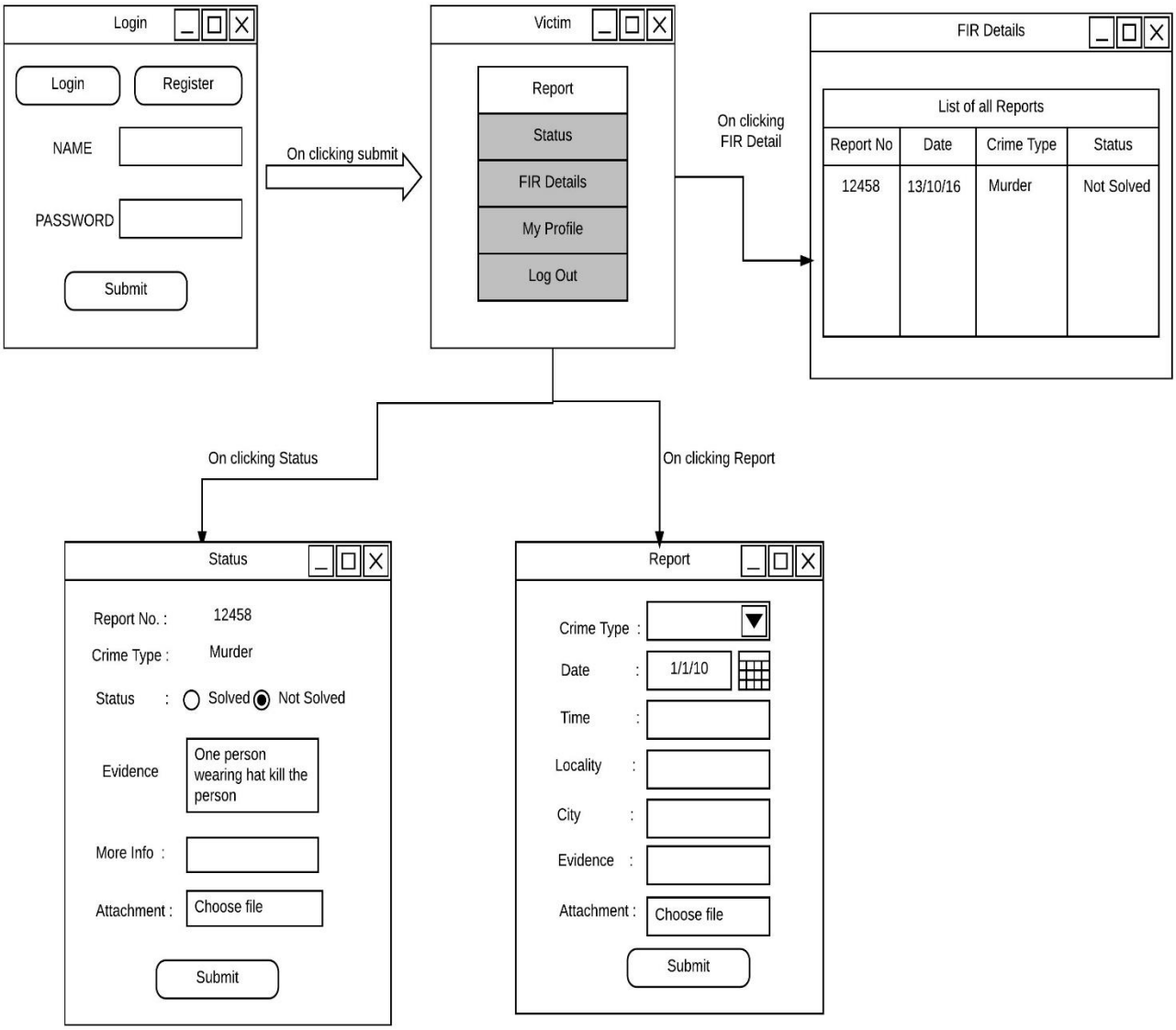


- Commissionerate – Rajat Ranjan(14ucc030)
  - See reports of crime area wise and accordingly modify police person and station details.

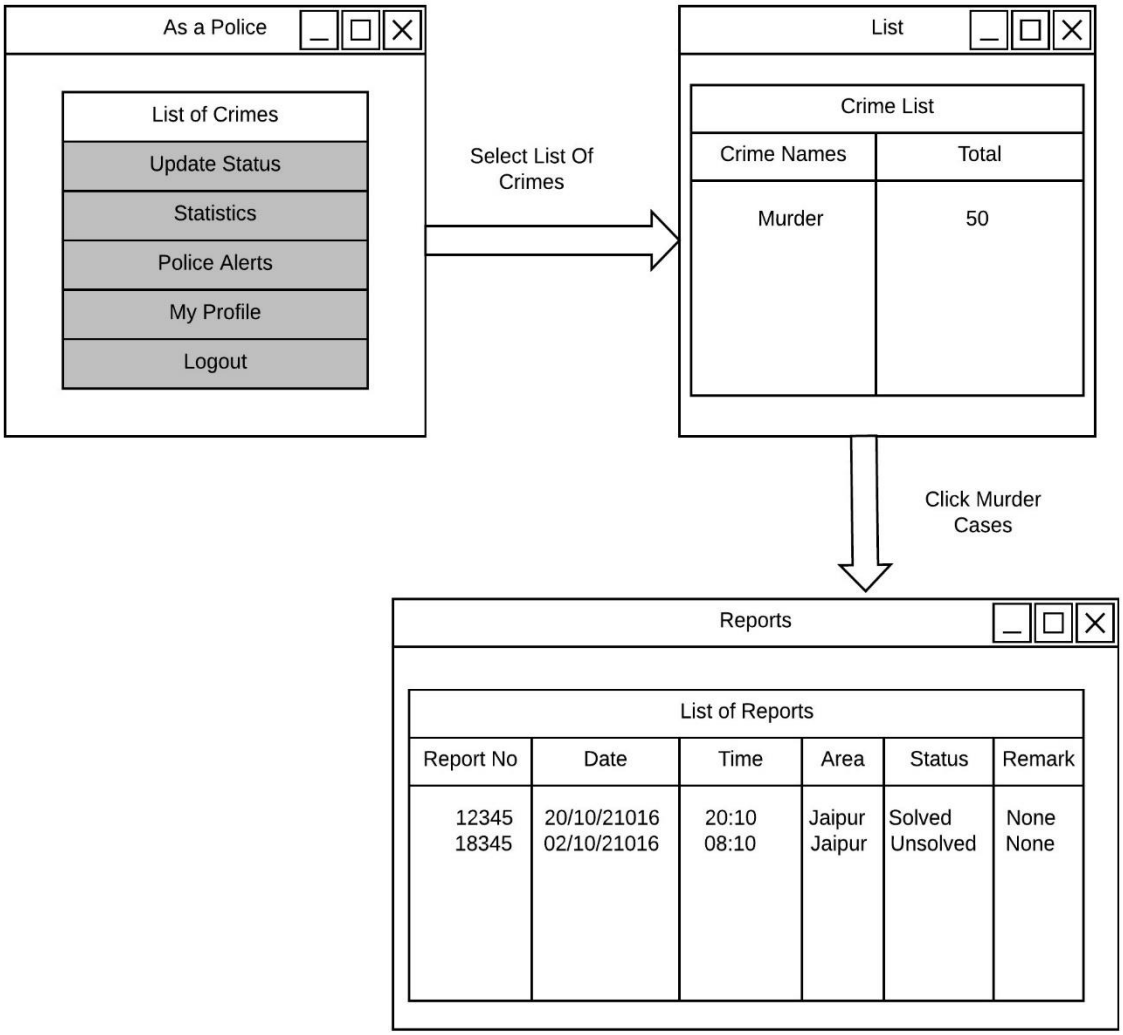


UI/UX Designs (Wireframes) – For the Sprint 3 functionality

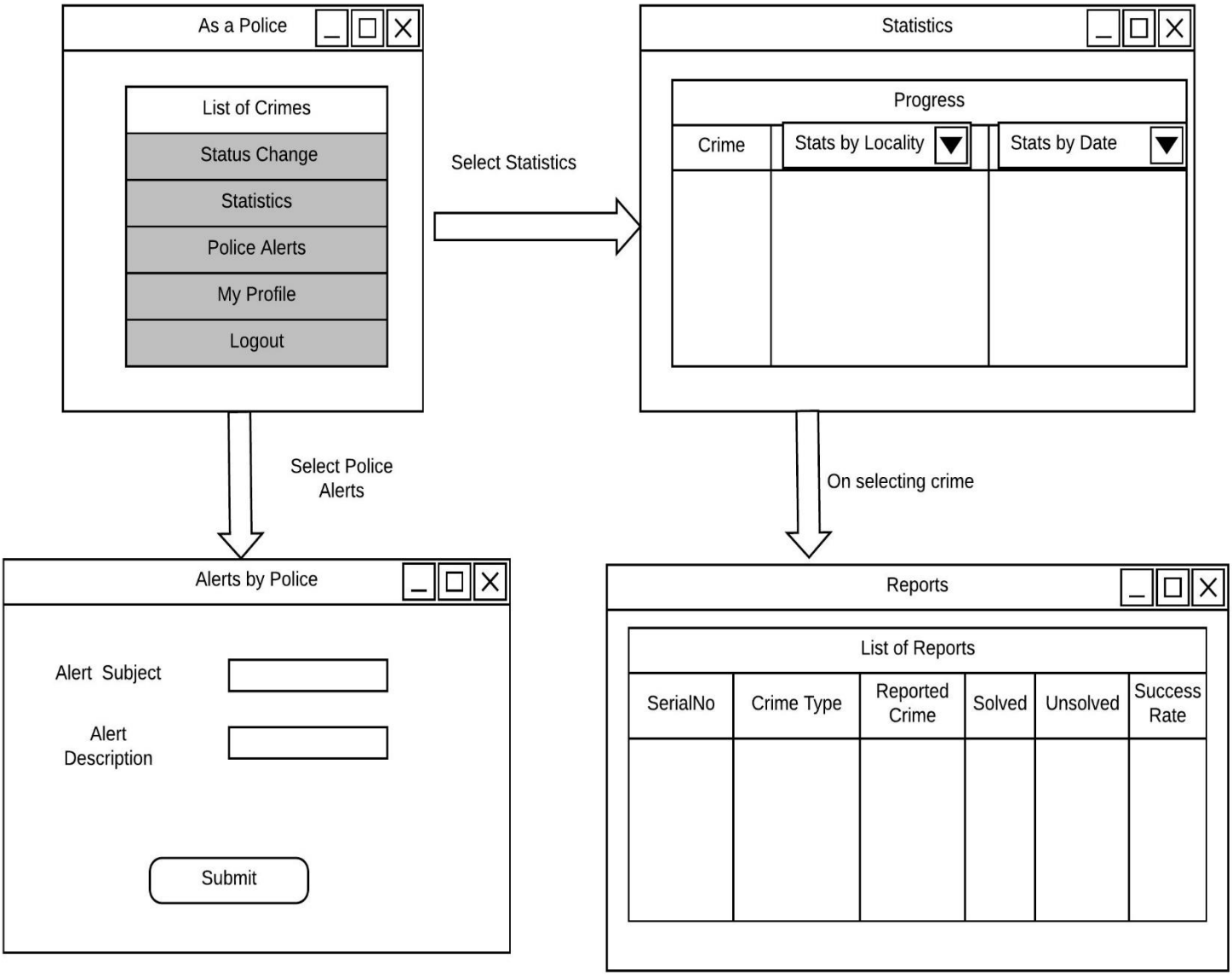
- Victim – Anshul Goyal(14ucs020)



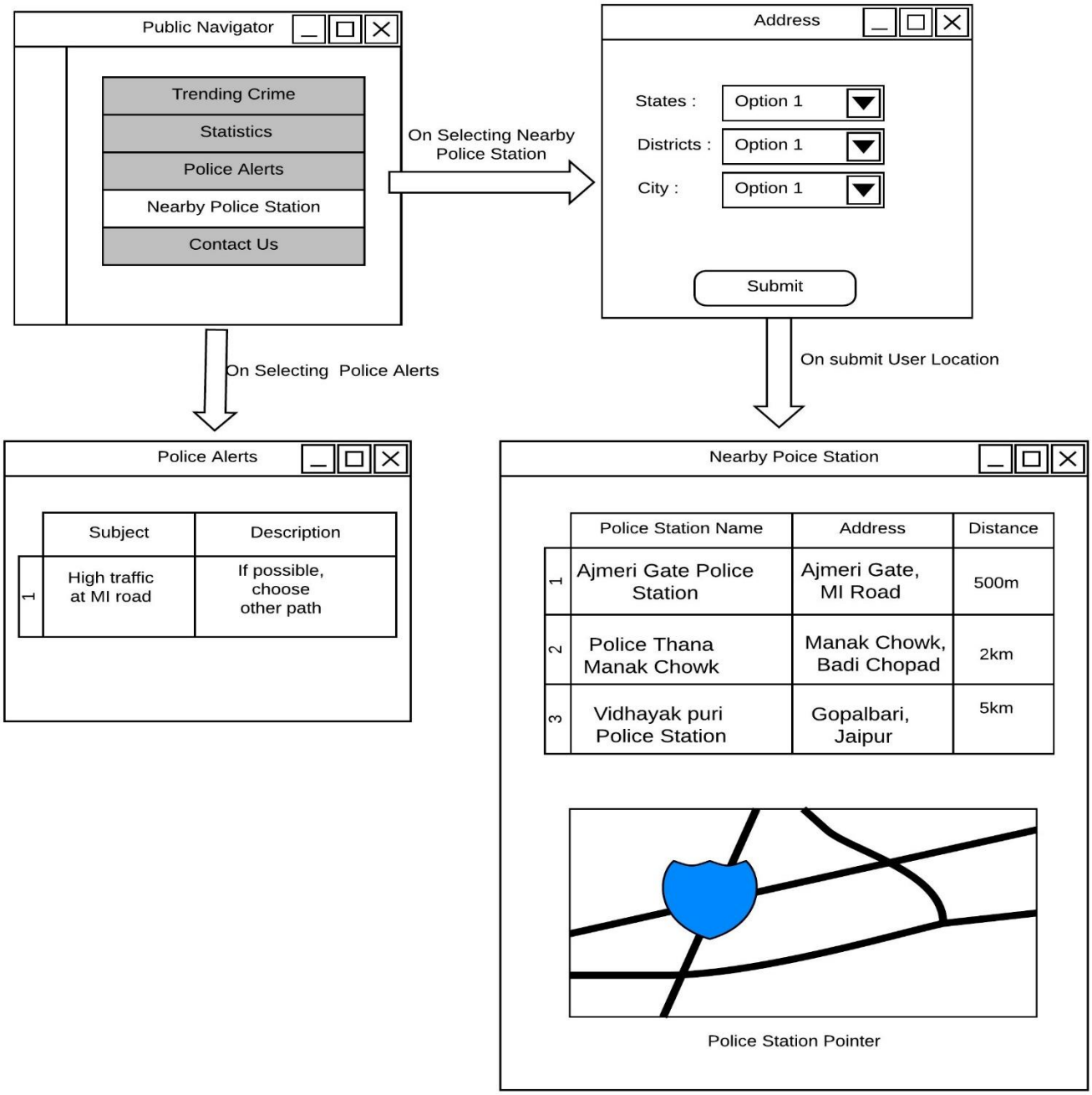
- Police – Aditya Sharma(14ucs007)



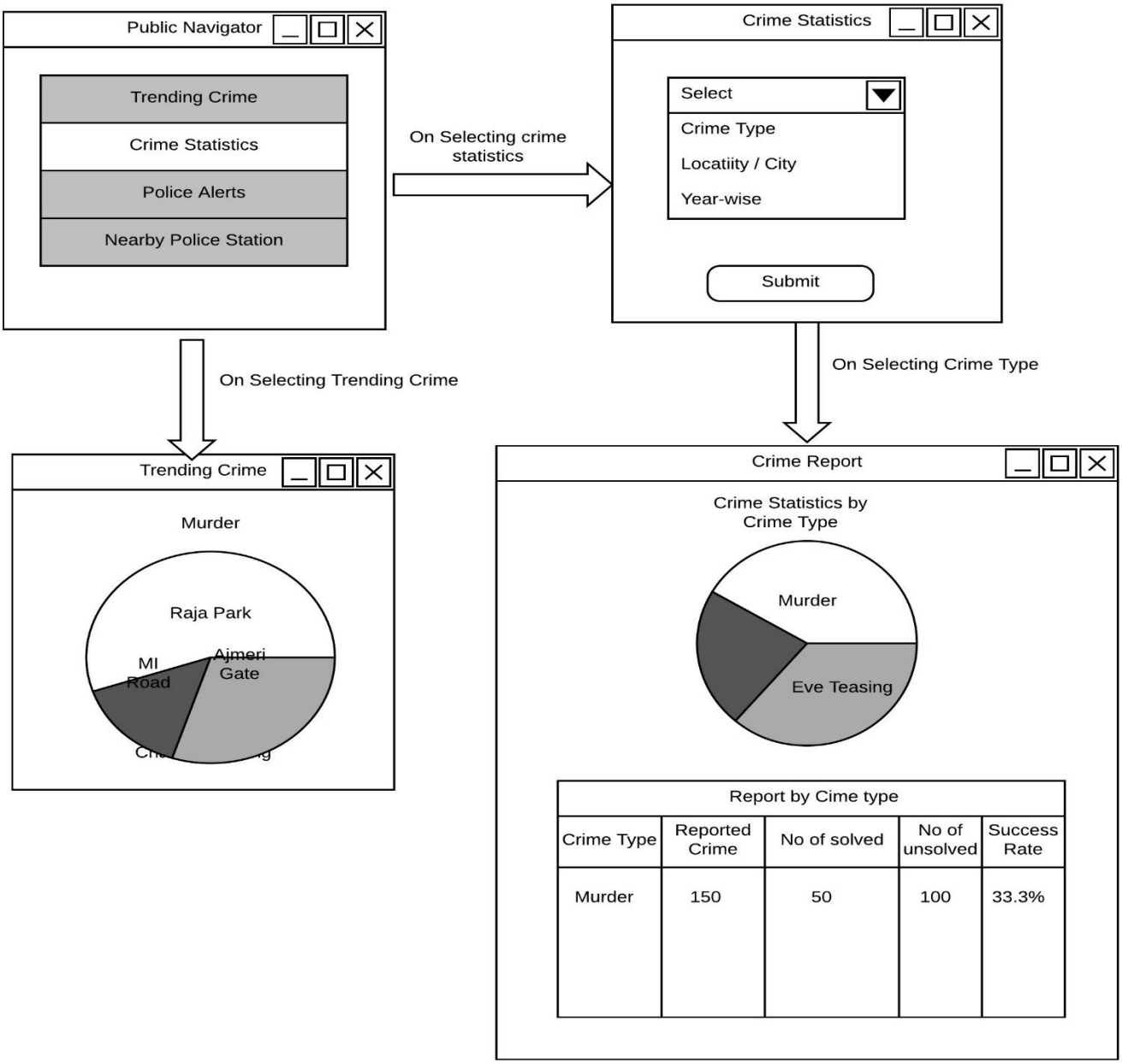
- Police – Vinod Sharma(14ucc042)



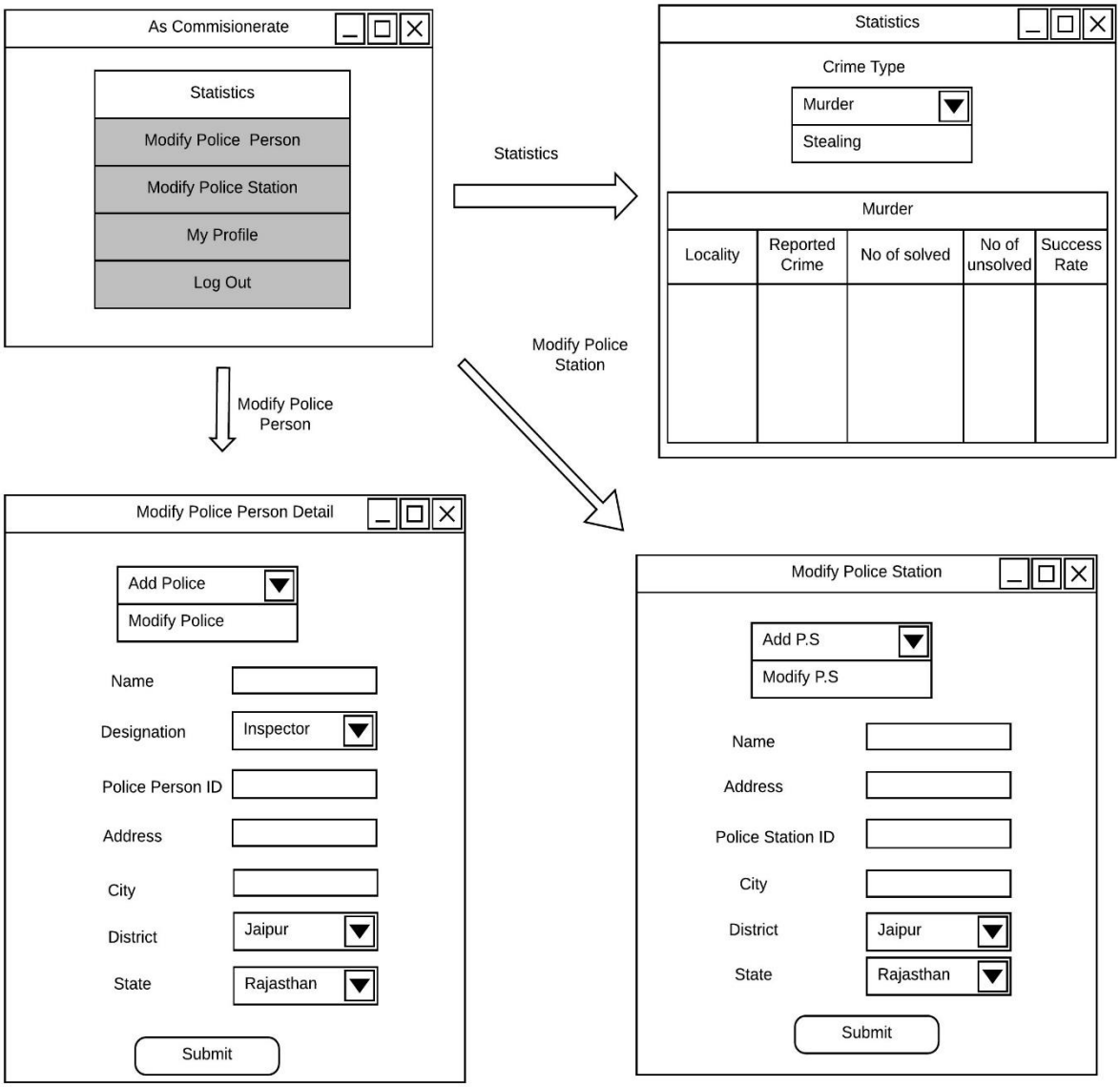
- Public – Harshit Jain (14ucs047)



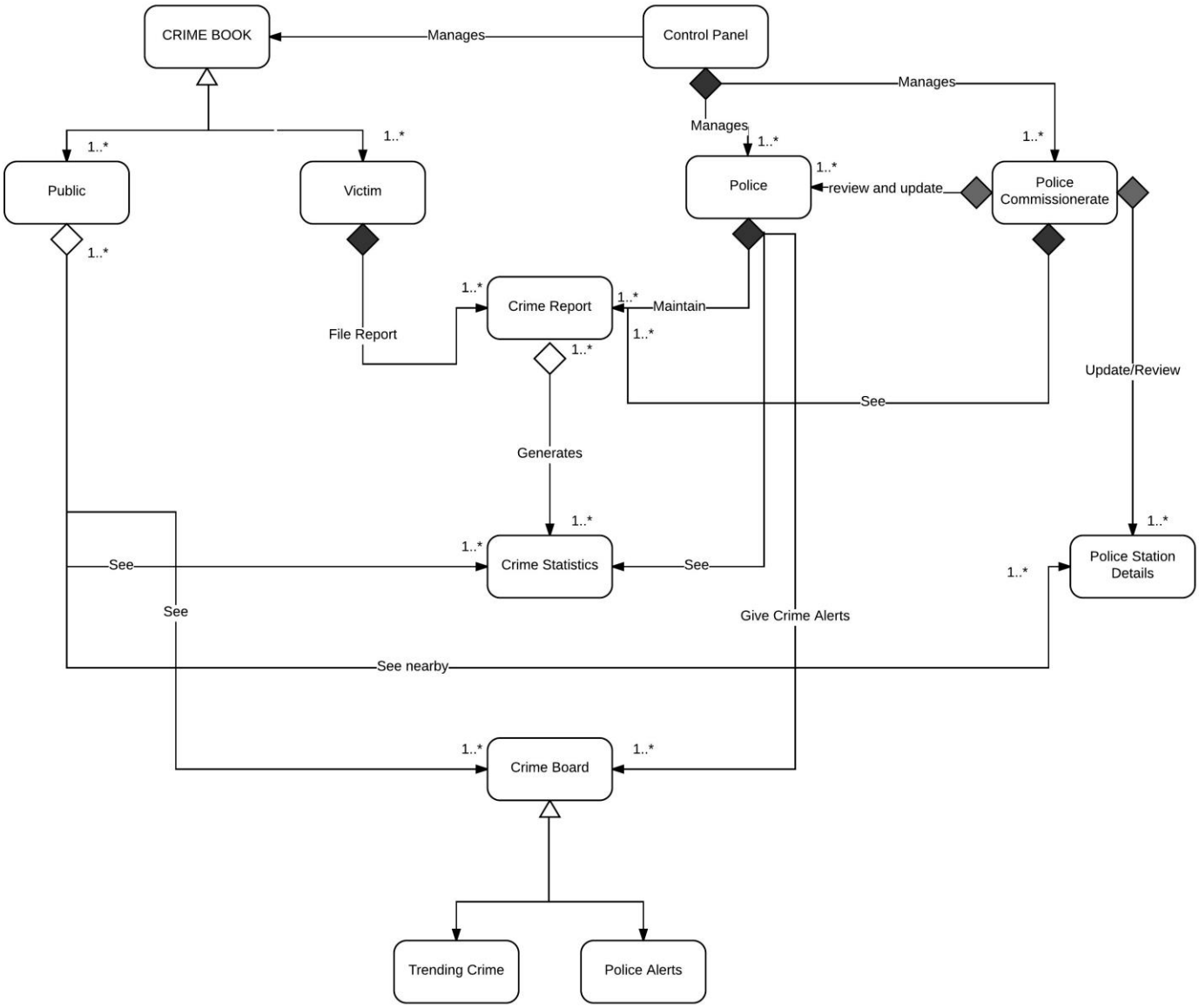
- Public – CHHATRAPATI JAIN(14UCS033)



- Commissionerate – Rajat Ranjan(14ucc030)



Class diagram – Revised and Extended



Notes for Revised Class Diagram Based on State Design Pattern:-

The state design pattern is used in the above class diagram. Initially The Public and victim interface is encapsulated in the "Crimebook" class.Secondly the Crimeboard class wraps Trending Crime and Police alerts class. The wrappee hierarchy's interface mirrors the Crimebook’s interface with the exception of one additional parameter. The extra parameter allows wrappee derived classes to call back to the wrapper class as necessary. Complexity that would otherwise drag down the wrapper class is neatly compartmented and encapsulated in a polymorphic hierarchy to which the wrapper object delegates.

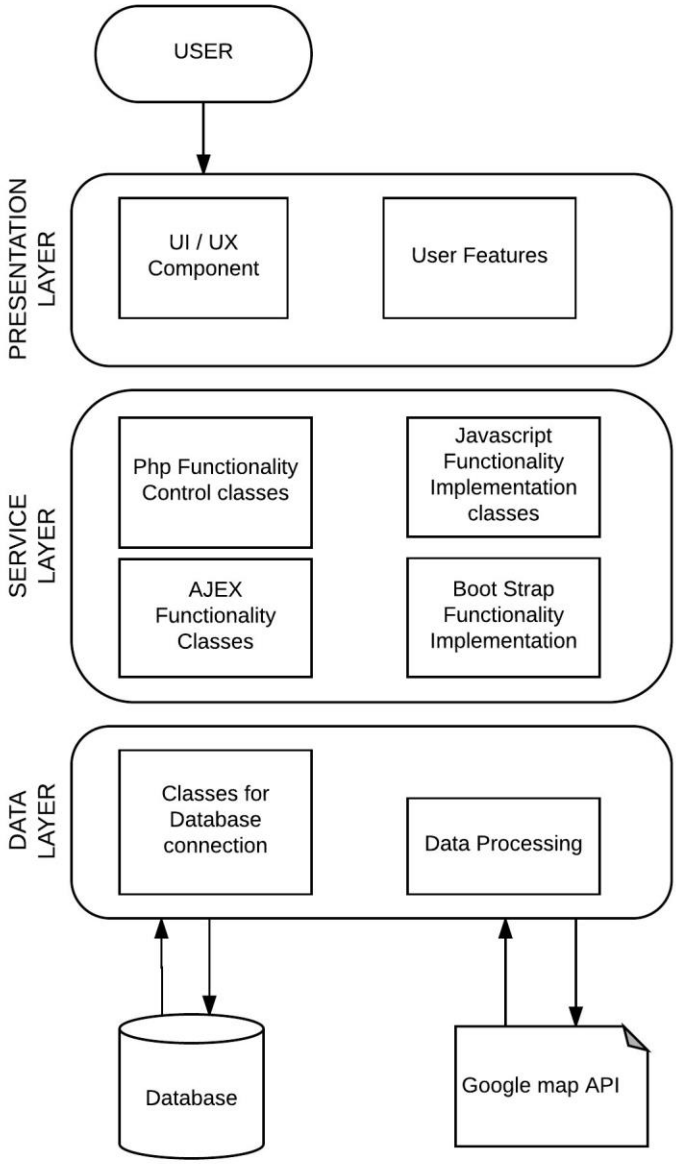
Class Attributes and Methods

Class	Attribute	Methods
Crime Book	Login ID Password	○ validateCredentials(Id , Pass)
Public	No attribute	○ modifyCredentials(ID)
Crime Statistics	Category	○ statsByLocality(state, locality) ○ statsByYear(year) ○ statsByDate(Date) ○ statsByCrimeType(crime type) ○ generateCrimeTable(crime type , total no of crimes) ○ calculateCrimes(crime type) ○ calculateCrimes(locality) ○ successRate(unsolved , solved)
Crime Board	No attribute	○ showTrendingCrime() ○ giveAlerts()
Crime Report	Report id Crime type Date Locality Time Evidence Status	○ returnID() ○ returnCrimeType()
Control Panel	Login id Password	○ validateCredentials(Id , Pass) ○ assignCredentials(Id , Pass)
Police Commissionerate	No attributes	○ addPolice(details) ○ modifyPolice(Police ID) ○ addPoliceStation(details) ○ modifyPoliceStation(PoliceStation ID) ○ modifyCredentials(ID)
Police Station	Police station id Name Address City State	○ returnPsID() ○ returnPsDetails()
Police Person	Police id Position Rating Name	○ returnPoliceId() ○ returnPoliceDetail()

	Address City State	
Victim	Name Address City State DOB Contact details Email id Gender Pin code	○ setID(curr id) ○ setPass(curr pass) ○ seeStatus() ○ checkFIRList() ○ manageCredentials()
Police alerts	No attribute	○ giveAlert()
Trending Crime	No attribute	○ showTrendingCrime()

System Architecture Diagram

Layered Architecture {MCV Model}



Scrum Minutes of the Meeting (Two entries per week for each team member)

Sprint 3 – Week 1

Team member	Work completed	Work planned	Impediments
Anshul Goyal (14ucs020)	**Architecture Diagram**, **Sprint Backlog**	Architecture Diagram , Sprint Backlog	Difficulty in choosing suitable architecture design.
Aditya Sharma (14ucs007)	**Architecture Diagram**, **Class Diagram**	Architecture Diagram, Class Diagram	Problem in extending the previous sprint's class diagram.
Chattrapati Jain (14ucs033)	**Architecture Diagram**, **Sprint Backlog**	Architecture Diagram, Sprint Backlog	Problem in inserting correct architecture design according to structure of project.
Rajat Ranjan (14ucc030)	**Class Diagram** (Commissionerate) , **Sprint Backlog**	Class Diagram, Sprint Backlog	Faced difficulty in applying apt design pattern in class diagram.
Harshit Jain (14ucs047)	**Class Diagram** (Public) , **Sprint Backlog**	Class Diagram, Sprint Backlog	Problem in selecting which design pattern can be used for a problem over and over again.
Vinod Kumar Sharma (14ucc042)	**Class Diagram** (Police) , **Sprint Backlog**	Class Diagram, Sprint Backlog	Difficulty in choosing the correct sprint backlog.

Sprint 2 – Week 2

Team member	Work completed	Work planned	Impediments
Anshul Goyal (14ucs020)	**Data Base for crime statistics and for Updating Status of Report {**Police**} , Acceptance and testing criteria** (Public)	Database, Acceptance and testing criteria.	Difficulty in making graph with the help of crime statistics.
Aditya Sharma (14ucs007)	**Data Base for giving police alert {**police**} and report{**user**}, Estimate and actual points** (Police)	Database, Estimate and actual points.	Problem in maintaining the database of the images which are uploaded in evidence section.
Chattrapati Jain (14ucs033)	**Data Base for crime statistics and For Nearby Police Station {**Public**}**, **Estimate and actual points.** (Public)	Database, Estimate and actual points.	Faced difficulty in integrating google map API.
Rajat Ranjan (14ucc030)	**Data Base for crime statistics and modify Police person Detail {**Commissionerate**}**, **Acceptance and testing criteria.** (Commissionerate)	Database, Acceptance and testing criteria.	Faced difficulty in collecting so much of authenticated police person details.
Harshit Jain (14ucs047)	**Data Base for modify Police station Detail {**Commissionerate**} and for trending Crime {**public**}**, **Acceptance and testing criteria.** (Public)	Database, Acceptance and testing criteria.	Faced problem in making testing criteria and collecting wide variety of police station details.
Vinod Kumar Sharma (14ucc042)	**Data Base for Listing of Report {**Victim**}**, **Estimate and actual points.** (Police)	Database, Estimate and actual points.	Problem in displaying result of each user.

Sprint 2 – Week 3

Team member	Work completed	Work planned	Impediments
Anshul Goyal (14ucs020)	**Testing all the victim functionality {**Report, Signup, Status of previous report, List of all FIR **} , Remaining work and report**	Testing , Remaining work, Improvement Suggested by Other during PEER review and report.	Difficulty in checking all the functionality and implementing the improvement suggested by other.
Aditya Sharma (14ucs007)	**Testing the Police functionality**, **Remaining work and report** (Police)	Testing , Remaining work, Improvement Suggested by Other during PEER review and report.	Problem in implementing the update police alert function.
Chattrapati Jain (14ucs033)	**Testing the Public functionality{**Police alert, Nearby police station**}**, **Remaining work and report** (Public)	Testing , Remaining work, Improvement Suggested by Other during PEER review and report.	Difficulty in implementing the location estimator API for nearby police station.
Rajat Ranjan (14ucc030)	**Testing the all Commissionerate functionality, Remaining work and report.** (Commissionerate)	Testing , Remaining work, Improvement Suggested by Other during PEER review and report.	Faced difficulty in selecting all the testing conditions and applying it as function of Commissionerate.
Harshit Jain (14ucs047)	**Testing the Public functionality{**Trending Crime and Crime statistics**}**, **Remaining work and report** (Public)	Testing , Remaining work, Improvement Suggested by Other during PEER review and report.	Problem in applying the functionality that only the statistics of last 30 days appear in trending crime.
Vinod Kumar Sharma (14ucc042)	**Testing the Police functionality**, **Remaining work and report.** (Police)	Testing , Remaining work, Improvement Suggested by Other during PEER review and report.	Problem in making project summary in one page when you have such a big project.

Sprint 3 Summary

SITE LINK : < hikecoupon.com/test/CrimeBook/index.php >

Review Summary

1	We completed sprint backlog, architecture diagram and class diagram. We learnt the importance of architecture diagram in providing structured solution that meets all the technical and operational requirements.
2	We generated database statistics, acceptance criteria, estimates and actual points. This helped us in visualizing the statistics of all crimes through the graph and table.
3	Testing of the functionality of the site was done along with the improvements suggested by others through Peer review. Project summary was made .Peer review was really helpful in making our project even better.

Retrospective Summary

1	It was difficult to select an architecture diagram that suits our site. Faced some confusion in selecting 2-3 classes where we could apply same design patterns.
2	Adding GOOGLE MAP API was a tiresome but exciting task. Extracting the data from the public and converting it into corresponding graph was little difficult.
3	Reading 13 peer reviews and selecting the apt suggestion was difficult. Applying the suggestion was beneficial. When you have such a big project, concising the whole project in 1 page summary was difficult task.

Overall Project Summary

Our project **crime book** is basically about proliferation and to make interaction between public and police more hassle free. It also makes public aware about different types of crime prevailing in and around different cities. It has various types of features such as trending crimes, police alerts, and statistics of crime and address of nearby police stations. This product encompasses the needs of all the people be it victim, public, police or Commissionerate.

Initially we found difficulty in managing the project. The first problem was the even distribution of work among different team members. But as we moved from one sprint to another our goals and tasks became clearer and everyone was assigned work according to their expertise. Also we faced a little bit difficulty in deploying our project but in the end it was solved. Combining all the codes written by different team members was also a tiring task. We also made enhancements in UI/UX design as we moved from one sprint to another.

We learnt a lot of things from this project. First of all we learnt how to collaborate and cooperate. We also learnt and saw the effectiveness of scrum methodology in doing a software project. Scrum provided a lightweight process frame work that embraces iterative and incremental practices, which helped us to analyze and make changes in our final project. We also felt burndown of work in pieces as sprint method provided an effective way to determine at a glance whether a sprint is on a schedule to have all planned work finished. Over all this method helped us to make a final software that we had in our foresight.

We would like that this project can be applied nationally. We would also like to add some more functionalities and also make it more secure with some more knowledge and help.