State Police System Requirements Specification

Version 2.0

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1. Executive Summary

1.1 Project Overview

Nowadays, we are in the digitalization era. Everything is being processing online. It is faster, better and safer. Unfortunately for Albanian institutions which require a lot of paperwork, we are still behind in this process. The whole process of assigning tasks, searching information, keep tracking of user locations, checking reports and sending reports is done manually in one of the main institutions of our country, such as the State Police. Here comes into play the State Police System, the software we are providing that aims to ease the State Police daily tasks. Since the State Police is a very important institution, this software will try to digitalize every step of the police work and implement some new features that will come to help.

1.2 Purpose and Scope of this Specification

The purpose of this software is to create a system that will help the State Police in their daily work. In the current state, the State Police does most of their work using paperwork and there is not an existing and functional online system which helps them manage, update, upload and check this paperwork. Also, the existing online system needs several improvements, which will be implemented in our online system regarding the daily tasks and services. The main goal is to ease the processes and works of the state police in such a way that both the police employees and users(citizens) will solve their issues and problems without having to wait for a long time.

2. Product/Service Description

Nowadays the police online system has some problems and missing services without whom the employees and citizens face difficulties during the processes. Also, the digitalization and development of technology is something that our country has been going through the past years and therefore everything should be done without difficulties online.

2.1 Product Context

The context of this software is related to State Police of the government of Albania, even though our scope is to provide a solution for every law enforcing institution. This solution will be used by every employee of the police and by the internal affairs department in order to

enhance their cooperation, make their jobs easier and make sure they make a full use of their time and energy, but also improve the efficiency, safety and correctness in work.

2.2 User Characteristics

There are five user groups that will take advantage and use the software:

- Normal citizen
- Police Employee
- Police Officer
- Police Chief
- Internal Affair Officer

a) Normal citizen

These users will not be logged in. They can access the client-side part of the web application. They can file a complaint, find the nearest police patrol, use the police services and read about the police latest news. They don't have an impact on the internal system, but their complaints and requests will be handled by the State Police System.

b) Police Employee

These users are the majority of system. They can login in the State Police website with their email.
They will have their own dashboard where they can take tasks such as investigations, duties, filing reports and sending reports to prosecutors. They will be the ones to accomplish the tasks. They can take part in an investigation, file a report, search in the database, update the profile of a convicted person, communicate with other precincts and report to their leader.

c) Police Officer

These users will have a higher responsibility than the previous ones. They will have a different dashboard than the police employees since they have the ability to access every police section and tasks. They will assign tasks, approve reports, take decisions and see the performance and efficiency of the police troops. They can open an investigation, see old cases, open the archive and send their closed investigation to the prosecutor. They will be able to keep track of their case with checkpoints.

d) Chief Police Officer

These are the leaders of the police structure. They have access over all the precincts of one city. They can take every decision. A chief police officer can review every police officer, he can investigate cases. He will give the approval for the critical cases.

e) Internal Affair Officer

This is the section which manages and controls every documentation, process and work inside the police system. The main purpose of this section is to check for irregularities, corruption and problems among the police employees. They receive complaints from citizens and make sure to check whether this complaint is correct or not and if so, they take measures to legally start a procedure for the police employees (of all ranks) and send them to the prosecutors.

2.3 Assumptions

It is assumed that State Police has the right to go through all the data generated from every other police precinct according to law.

It is assumed that the data generated from the system will be fully confidential and only available to the police and/or higher state institutions such as Prosecution Institution of Albania.

It is assumed that the Police has all the information for every individual of Albania and can see their profile and every penal case.

It is assumed that every police has a computer at their work and internet so they can access the website.

It is assumed further that the police employees are able to use internet and especially the State Police System effectively and efficiently.

It is assumed that every police officer should be limited to watching only tasks assigned to his precinct and not interfere with other precincts.

It is assumed that office employees have a web browser and an active internet connection.

It is assumed that every completed task needs to be stored in the system for documentation and research purposes.

2.4 Constraints

This system will be potentially constrained by:

- There are a lot of files to be digitalized
- The server might be overloaded
- The need of a fast internet connection and working computers
- Having every police employee understand the way the system works and making sure they do not make mistakes
- Cars should have GPS technology

2.5 Dependencies

- Tasks and cases are assigned by the police officer to regular police employees. Although, the tasks need to be added. So, police officers will add new cases in the system and then assign them to employees.

- After a police employee finishes a job and wants to send a report, he has to wait for the approval of his police officer.

- In cases which are labelled confidential and critical, the approval of the Chief Police Officer is required, so all the employees working on that job need to wait to do their investigation.

- The performance evaluation by the officers cannot be done if police employees have not been able to complete any task by using the system. Evaluation will be more realistic and helpful if there are lots of tasks completed.

3 Requirements

3.1 Functional Requirements

Req#	Requirement	Comments	Priority	Date	SME Reviewed / Approved
BR_01	The system should have a web application which will be used by administrators.	This web application will be the main platform.	3	29/03/19	Orges Balla/ Kristian Sota
BR_02	The system should have a client – side interface.	This will allow citizens to be informed and use the police services	3	29/03/19	Orges Balla/ Kristian Sota
BR_03	The police employees must use the data from the database only for work purposes	This will ensure the law is enforced for Data Protection.	1	29/03/19	Orges Balla/ Kristian Sota
BR_04	The Police Officer will have a dashboard where he can manage all his tasks, but also his employees.	Police Officers are responsible for their precinct and also for their respective police employees.	3	29/03/19	Orges Balla/ Kristian Sota
BR_05	Archives data are very important for every police staff. They need to be able to fetch information easily.	Data about old cases or information about citizen are important in the daily work of a police employee.	3	29/03/19	Orges Balla/ Kristian Sota
BR_06	The system should provide officers and chiefs with the ability to assign jobs/cases/filings/investigatio n ns to their employees.	Very important aspect since this will make the workflow.	3	29/03/19	Orges Balla/ Kristian Sota
BR_07	Chief Police Officer should be able to distribute works and tasks to officers based on a map.	This will be accomplished automatically, and locations will be assigned in the beginning.	3	29/03/19	Orges Balla/ Kristian Sota
BR_08	The Police Employee should be able to file a report.	This will be accomplished on the dashboard.	3	29/03/19	Orges Balla/ Kristian Sota

Req#	Requirement	Comments	Priority	Date	SME Reviewed / Approved
BR_09	The reports or cases filed should be approved by the Police Officer.	Every cop should have his boss approval.	3	29/03/19	Orges Balla/ Kristian Sota
BR_10	In very important and critical cases, the approval of the major Chief Police Officer should be given.	The operations cannot be undertaken without the approval of Chief Police Officer in case of confidential cases.	3	29/03/19	Orges Balla/ Kristian Sota
BR_11	When creating reports, a format will be provided so the employees can fill the fields and the format is maintained.	This will be accomplished by having a button that will trigger an action and will store it in the database. If names are provided, the employees will be informed.	3	29/03/19	Orges Balla/ Kristian Sota
BR_12	The Officers should be able to watch the current progress in an investigation and the names of each employee involved.	This will be done in the Officer's dashboard where he can open his investigations.	2	29/03/19	Orges Balla/ Kristian Sota
BR_13	The ability to search for any citizen on the database is something that should be provided.	Each employee will have a search bar where he can search for a citizen.	2	29/03/19	Orges Balla/ Kristian Sota
BR_14	Every employee should be able to access the archive where they can get more information.	There will be an interface where they can search the archive with keywords.	3	29/03/19	Orges Balla/ Kristian Sota
BR_15	The Chief Police Officer can only check on his employees and not all employees of the state.	There will be 6 different districts, therefore 6 Chief Police Officers that will have the authority over their region.	2	29/03/19	Orges Balla/ Kristian Sota
BR_16	The State Police will have a lot of employees. In this case the tabular view of employees should not overflow. Pagination will help officers to slide through employees with ease.	Pagination will be implemented in case of need.	3	29/03/19	Orges Balla/ Kristian Sota

3.2 Non-Functional Requirements

3.2.1 User Interface Requirements

The system shall be a web application, which can be seen either with Mozilla, Chrome or Safari. The application will have a user interface that will be for the citizens. It will have some sections and services.

On the navigation bar there will be a login button. The Login button will redirect to a simple login interface, where it will ask the user for Email and Password. The user will gain access to the system, in case of proven authenticity otherwise, an error message of invalid credentials will be displayed.

As part of the structure of the system, there will be 4 different dashboards that will make possible to ease paperwork, increase work productivity and efficiency.

Once the user is logged in the web application, he/she shall have access to the specific dashboard that he is entitled to. The police employee will see in his dashboard his current work on progress, his previous works, the archive, the database of citizens, the filing section.

The police officer will have a different dashboard. He can assign tasks, open an investigation, add new cases, approve requests. The interface will have a similar design to the regular police employee.

3.2.2 Learnability

- The application is simple to use and understand.
- The web application will come together with a PDF manual, providing a step by step information on how to effectively use the system.
- Specific error messages will be displayed, by also identifying the specific action, that caused the error.
- The application is specified for certain users, thus the system will know, when a certain action is not allowed

3.2.3 Performance

The application will be a web application which will be stored in a web server.
The application's time of execution will depend on:

- The efficiency of fetching data from database
- The Internet connection bandwidth

- The server's hardware capabilities
- The Operating System installed on a server.
- The third-party libraries that need to be installed.
- The number of active users accessing the website.

3.2.4 Capacity

The application needs to be stored in a web server. The application itself will have a maximum size of 100 MB. The database will be complex and considerably large. Anyway, the application is expected to work just fine will every user logged on.

3.2.4.1 Availability

- The web application will be available for use 24/7.
- The web application will work in an optimal manner during the working hours of the day.
- The application can be accessed and used in any geographical area, as long as the user has an active Internet connection.
- By creating separate user sessions, their overall work efficiency and productivity will not decrease by much, while using the application.
- Specific error messages will be provided, in case an action would cause systems fatal error.

3.2.4.2 Latency

The latency of the web application will depend on:

- The internet connection bandwidth
- The efficiency of fetching data from the database
- The size of database.

Some functions such as searching for citizens might take longer.

3.2.5 Manageability/Maintainability

3.2.5.1 Monitoring

The applications user interface will be easy, and it will not provide cases that would crash the system. Necessary actions for any of error will be taken. The login interface needs a (1)

Username and (2) Password as input. These two-input data must be valid input data. The user will log in the system, in case the user has entered valid credentials, otherwise an error message of “Invalid Credentials” will be displayed.

If a police employee, tries to access a file that it does not belong to him, he will see an error specifying Access not authorized. Same will happen for everyone trying to access files that do not belong to them.

3.2.5.2 Maintenance

The system will be developed using MySQL for the database and Apache for the server.

In case the system crashes, the application is going to restart. During this process, the application will redirect the user to the dashboard, but the changes will be saved, and he will be asked to confirm them.

If the problem persists, it is needed to contact the IT squad so a full restart of the server can happen.

3.2.5.3 Operations

Some of the operations that can be taken by the users are:

- File a report
- Add a new case
- Open an on-going case
- Start an investigation on an employee
- Approve a request
- File a complaint
- Search for a citizen
- Report an injustice
- Assign someone to a task

3.2.6 SystemInterface/Integration

The database will provide to the users only as information. They can not change the structure of it. Only IT department will have access to the DB configuration. The application will take care of queries.

3.2.6.1 Network and Hardware Interfaces

The application is a web application that will be stored in a web server, so the browser will create a TCP connection with the server. Every browser supports this connection, so it will function properly.

3.2.7 Security

3.2.7.1 Protection

The application security is very important, since this is a highly confidential system. Protection is added in every form that will make sure that everything entered is correct such as a valid name, valid surname, valid email address and valid password.

3.2.7.2 Authorization and Authentication

- Valid credentials are checked when users log in.
- Authorization will be based on the user type.
- Users will have access only to their information.
- Session to be used for the currently logged user.
- Using Cookies and PubCookie tool.

3.2.8 Data Management

The application might have a complex and large database and some of those classes are:

- Users
- Reports
- Cases
- Proof
- Regions
- Complaints
- Citizens

3.2.9 Standards Compliance

The application will be developed in such way that will follow and respect the rules and regulations determined by the State Police according with the law.

3.2.10 Portability

The application can be accessed via a browser and an internet connection.

4 User Scenarios/Use Cases

4.1 User Scenarios

Number	User Story Name	Description
1.	Web Successful Login	Web user successfully logs in with email and password
2.	Web Failed Login	Web user fails to login with his/her credentials
3.	Police Employee accepts a task	Employee from his dashboard accepts a task assigned to him
4.	Police Employee searches for a citizen	Employee on his dashboard can search for citizen information.
5.	Police Employee files a report	Police employee files a report on his report's dashboard
6.	Police Officer assigns an employee to a task	The officer assigns an available employee for this task.
7.	Police Officer opens the archive	On his dashboard, the officer opens the Archive Module where he can view old cases.
8.	Police Officer checks the location of his employees	The Officer can open the Map Module and check real-time locations.
9.	Police Officer gives approval for an investigation	The officer can approve or decline an investigation started by his employees.
10.	Chief Police Officer checks confidential cases	The Chief Police Officer can check for confidential cases

11.	Police Officer deletes a report	The police officer can delete a report up to 30 days later.
12.	Internal Affairs opens an employee profile	Internal Affairs Officer selects the Employees Dashboard and views the profile.
13.	Internal Affairs Officer starts an investigation through his dashboard	The Internal Affairs Officer can put an employee under investigation.
14.	Internal Affairs Officer gets notified about complaints	The Internal Affairs Officer will be notified about employees complaints.
15.	Internal Affairs Officer suspends an employee	On his employee list, the officer can decide to suspend an employee.

4.2 User Scenarios Extended

1. Web App Scenario – Successful Login

    a. The user clicks on the navigation bar the Login button
    b. The user is asked to enter his email address
    c. The user is asked to enter his password
    d. If the credentials are correct, he is logged in
    e. He will be redirected to the interface of his dashboard

2. Web App Scenario – Failed Login
    a. The user clicks on the navigation bar the Login button
    b. The user is asked to enter his email address
    c. The user is asked to enter his password
    d. The credentials are wrong, a message is displayed.
    e. He will try again.

3. Police Employee accepts a task
    a. A police employee is logged in
    b. He checks his dashboard for assign tasks.
    c. He reads the task and the report.
    d. He presses the Button ‘Confirm’
    e. He starts working on that case/task

4. Police Employee searches for a citizen
    a. A police employee is logged in
    b. He opens the Search Module
    c. He enters the information for a specific search

d. If found, the information is fetched from database.
e. He can read about that citizen.
f. He can put him under investigation on a case.
g. He can close that profile and redirect back to the dashboard.

5. Police Employee files a report
   a. On his dashboard he opens the module of Filing Reports.
   b. He adds a new report by pressing Add a New Report button
   c. He fills the information on the correct form.
   d. He can choose the option to send to his chief or other institution such as prosecution.
   e. He saves the report and has the opportunity to print it.

6. Police Officer assign an employee to a case
   a. The officer opens his current cases.
   b. He reads the cases.
   c. He can select from available employees to assign the case
   d. He sends the case to the employee
   e. He waits for the result

7. Police Officer opens the archive
   a. On his dashboard he selects Archive Module
   b. He enters the keywords for searching a case
   c. The cases related are shown.
   d. He can open each one of them and read in detail.
   e. He closes the case.
   f. He is redirected to the main dashboard.

8. Police Officer checks the location of his employees
   a. He enters the dashboard.
   b. He opens the locations.
   c. Each employee car has a GPS so he can see the location.
   d. On the map he can also see the cases assigned to them.
   e. He can select an employee and perform an action.

9. Police Officer gives approval for an investigation
   a. He opens the dashboard.
   b. He opens the module Pending Approvals.
   c. He can select a request.
   d. He can approve or deny the request.
   e. The employee is informed about the decision.

10. Chief Police Officer checks confidential cases
    a. In the dashboard, he will get an alert that a confidential/ critical case is in process.
    b. He opens the confidential case
    c. Checks the important info
    d. He can choose if he wants to inform the Supreme Chief Police Officer
    e. He gives his approval and assigns officers for this task
    f. He can choose the option of information sharing
    g. He closes the report

11. Police Officer deletes a report
    a. He can open the report
    b. He can report it as invalid
    c. He deletes the report
    d. The reports are saved for a period of 1 year even after deletion

e. Internal Affairs get notified when a report is deleted

12. Internal Affairs opens an employee profile
    a. He goes to his dashboard
    b. He opens the employee profile
    c. He can see all his cases and each particular one
    d. He can see the overall review for that employee

13. Internal Affairs Officer starts an investigation through his dashboard
    a. He goes to his dashboard
    b. He opens the module which writes 'Start an investigation'
    c. He enters the information of the employee/s
    d. The employees under investigation will be on watch
    e. The officer can see his private messages

14. Internal Affairs Officer gets notified about complaints
    a. If there are many complaints about a police employee, the IA officer will get a notification on his dashboard.
    b. He can read the complaints for that specific employee.
    c. After reviewing, he can take action depending on the issue.
    d. He will have several options valid so he can choose.
    e. After choosing, he closes the dashboard.

15. Internal Affairs Officer suspends an employee
    a. He logs in the system
    b. He opens the on-going cases/investigations
    c. He opens an employee profile
    d. He suspends the employee by checking the button
    e. The employee and his officer are informed immediately by the system.

4.3 Use Cases

Name	User logs in
Summary	User enters personal information to access his account.
Actor	Employee / Officer / Chief Officer / Internal Affairs
Description	User gains access on his account after typing his correct email and password.
Precondition	The account should have been registered beforehand and the email should be of the domain policiashtetit.gov.al
Alternatives	Each user has its own account. They can own only one account.
Post Condition	User is logged on his account.

Use Case 1 – User Scenario 1 - User logs in successfully

Name	User fails to login

Summary	User enters personal information to access his account.
Actor	Employee / Officer / Chief Officer / Internal Affairs
Description	User enters incorrect information 5 times. His account gets locked for security purposes.
Precondition	The account should have been registered beforehand and the email should be of the domain policiashtetit.gov.al
Alternatives	After 5 attempts, the account of that user will get locked. He can unlock the account by resetting his password through his email.
Post Condition	User is locked out for security purposes.

Use Case 2 – User Scenario 2 - User fails to login

Name	Police Employee accepts a task
Summary	The employee accepts a task assigned to him by the Police Officer.
Actor	Employee
Description	When he opens his dashboard, he goes to the dashboard of new tasks. There he reads the task and its description.
Precondition	The task/job should have been assigned prior to the employee by the Police Officer.
Alternatives	The employee will confirm the task and immediately start working. If the employee leaves it on pending, the officer responsible will be informed.
Post Condition	The officer is informed for the confirmation.

Use Case 3 – User Scenario 3 – Police Employee accepts a task

Name	Police Employee searches for a citizen
Summary	The employee searches for a citizen in all citizen database.
Actor	Employee
Description	When he opens his dashboard, he navigates to the Search Module. Then he searches for a citizen.
Precondition	You should be logged in to use this feature.

Alternatives	Employees can either type the name, the surname, or both. If there is no patient found, an informative message will be shown.
Post Condition	If results were found, a table with all the results will be shown.

Use Case 4 – User Scenario 4 – Police Employee searches a citizen

Name	Police Employee files a report
Summary	The employee files a new report.
Actor	Employee
Description	Employee will click on reports page. He will click "Add a new file report" and a form will be shown. The form will have the appropriate format
Precondition	The employee has access on his reports only. Only he can add a report.
Alternatives	The file report might be for different purposes. Several types will be provided to ease the work.
Post Condition	The report may be sent to different institutions based on the purpose of report.

Use Case 5 – User Scenario 5 – Police Employee files a report

Name	Police Officer assigns an employee to a case
Summary	Police Officer assigns an employee to a case that he can work on that investigation/issue.
Actor	Officer
Description	On his dashboard, he will open valid cases. On the cases he can see the employees working on it. He can assign a new employee for that case.
Precondition	Officer should be logged in. Only officers and chief officer have access to this section.
Alternatives	The officer will be able to see the work load of the employees and based on his judgement he will assign. The system will prevent overloading in work.
Post Condition	The cases employee list is updated, and the employee is informed.

Name	Police Officer opens the archive
Summary	Police Officer opens the archive to search for old cases and reports
Actor	Officer / Chief

Description	On his dashboard, he can open the Archive. On the archive, he can search for old cases. The case will contain every information for that case.
Precondition	Officer should be logged in. Only officers and chief officer have access to this section.

Alternatives	The officer will search by keyword. The cases will be shown. He can also search by date, month, year and the respective cases will be shown.
Post Condition	The officer gets the information about past cases.

Use Case 7 – User Scenario 7

Name	Police Officer checks the location of his employees
Summary	Police Officer opens the map to see the location of the cars under his jurisdiction.
Actor	Officer / Chief
Description	On his dashboard, he can open the Map. On the map, he can see real time location of employees that are under his orders.
Precondition	Officers should be logged in. Employee do not have this option. Employee cars are assumed to have GPS.
Alternatives	The map will have markers that show location on map. The officer can click on the marker for more information.
Post Condition	The officer gets the information about the location of his employees.

Use Case 8 – User Scenario 8

Name	Police Officer gives approval for an investigation
Summary	Employees will issue new investigations. The police officer will decide whether the investigation will be conducted.
Actor	Officer
Description	On his dashboard, he will see Requests and the employee who issued the request.

Precondition	Officers should be logged in. Only officers will have this feature implemented.
Alternatives	After opening the request, he will read it, he can print it and decide if the request is approved or not.
Post Condition	The employee gets notified if his request is approved.

Use Case 9 – User Scenario 9

Name	Police Officer gives approval for an investigation
Summary	Employees will issue new investigations. The police officer will decide whether the investigation will be conducted.
Actor	Officer
Description	On his dashboard, he will see Requests and the employee who issued the request.
Precondition	Officers should be logged in. Only officers will have this feature implemented.
Alternatives	After opening the request, he will read it, he can print it and decide if the request is approved or not.
Post Condition	The employee gets notified if his request is approved.

Use Case 10 – User Scenario 10

Name	Chief Police Officer checks confidential case
Summary	CPO will give his approval on confidential cases.
Actor	Chief Police Officer

Description	The Chief Police Officer will get informed about a critical case being on progress. He will decide whether to approve the Supreme Chief Police Officer.
Precondition	Only CPO will have access for confidential cases.
Alternatives	After reading the case, he will assign officers to this task. He can decide what information and files they can see.
Post Condition	The case is on process and the officers are informed.

Use Case 11 – User Scenario 11

Name	Employee deletes a report
Summary	Employee deletes a report that he filed up to 30 days.
Actor	Employee/ Officer
Description	The employee might want to delete a report that he has filed up to 30 days. He will be able to do that on the reports page.
Precondition	The employee should be logged in and he can only delete his files.
Alternatives	The files will still be stored for a year to ensure transparency.
Post Condition	The case is on process and the officers are informed.

Use Case 12 – User Scenario 12

Summary	Internal Affairs Officer will open the profile of an employee.
Actor	Internal Affairs Officer
Description	On his web application, he can check the employees. On the employees list, he will select a specific employee by clicking on his profile.
Precondition	The Internal Affairs will have a special role so they can access the profiles. They must be logged in.
Alternatives	On the profile he will see all his information, cases, complaints, issues and everything that the employee has completed or been part in.
Post Condition	The information for the employee is shown to the Internal Affairs Officer.

Use Case 13 – User Scenario 13

Name	Internal Affairs Officer starts an investigation
Summary	Internal Affairs Officer will start an investigation on an employee based on his profile
Actor	Internal Affairs Officer
Description	On his dashboard, he will go to investigations and there he can select one or several individuals that he wants to put under investigation.
Precondition	The IA officer should be logged in. Only Internal Affairs Officers have access in this section.
Alternatives	The investigation would have reasons and the severity level of the investigation. The officer will decide if he wants to inform the employee.
Post Condition	An investigation is started for the employee.

Use Case 14– User Scenario 14

Name	Internal Affairs Officer suspends an employee
Summary	Internal Affairs Officer will suspend an employee based on his information.
Actor	Internal Affairs Officer
Description	On his dashboard, he will go to investigations and there he can open ongoing investigations and decide to suspend an active employee.
Precondition	The IA officer should be logged in. To suspend an employee, an investigation must be going on.
Alternatives	The decision would be made in an on-going investigation. He will choose the amount of time that the employee should be suspended and what steps should be taken.
Post Condition	An employee is suspended by Internal Affairs.

Use Case 15 – User Scenario 15

Name	Citizen checks his tickets
Summary	The citizen will check the fines and ticket for his car.
Actor	Citizen
Description	On the homepage, the citizen can navigate to Services in NavBar. There he can select Car Fines.
Precondition	Everyone can access this section since it is public. No need for authentication. Anonymous.
Alternatives	He should enter his car license plate and his manufacturing number and search. The tickets will be shown. In case of failure, a message will be shown.

Use Case 16

Name	Citizen files a complaint
Summary	A citizen can file a complaint anonymous or with his personal information.
Actor	Citizen
Description	On the homepage, the citizen can navigate to Services in NavBar. There he can select Complaints. He will write a complaint.
Precondition	Everyone can access this section since it is public. No need for authentication. Anonymous or with personal information.
Alternatives	He can decide to be anonymous or enter his personal information such Name Surname Personal Number etc.
Post Condition	A complaint will be filed.

Use Case 17

Name	View Profile
Summary	An employee views his profile.
Actor	Employee/Officer/Chief Police Officer/ Internal Affairs Officer
Description	On his dashboard, he will see an Icon Profile. On click, he will be redirected to his Profile. He can check every information about his profile.
Precondition	They need to be logged in. Regular Police, Officers, Chiefs and Internal Affairs can check their profiles.

Alternatives	He can decide to print / export the profile in a PDF format.
Post Condition	The profile will be shown.

Use Case 18

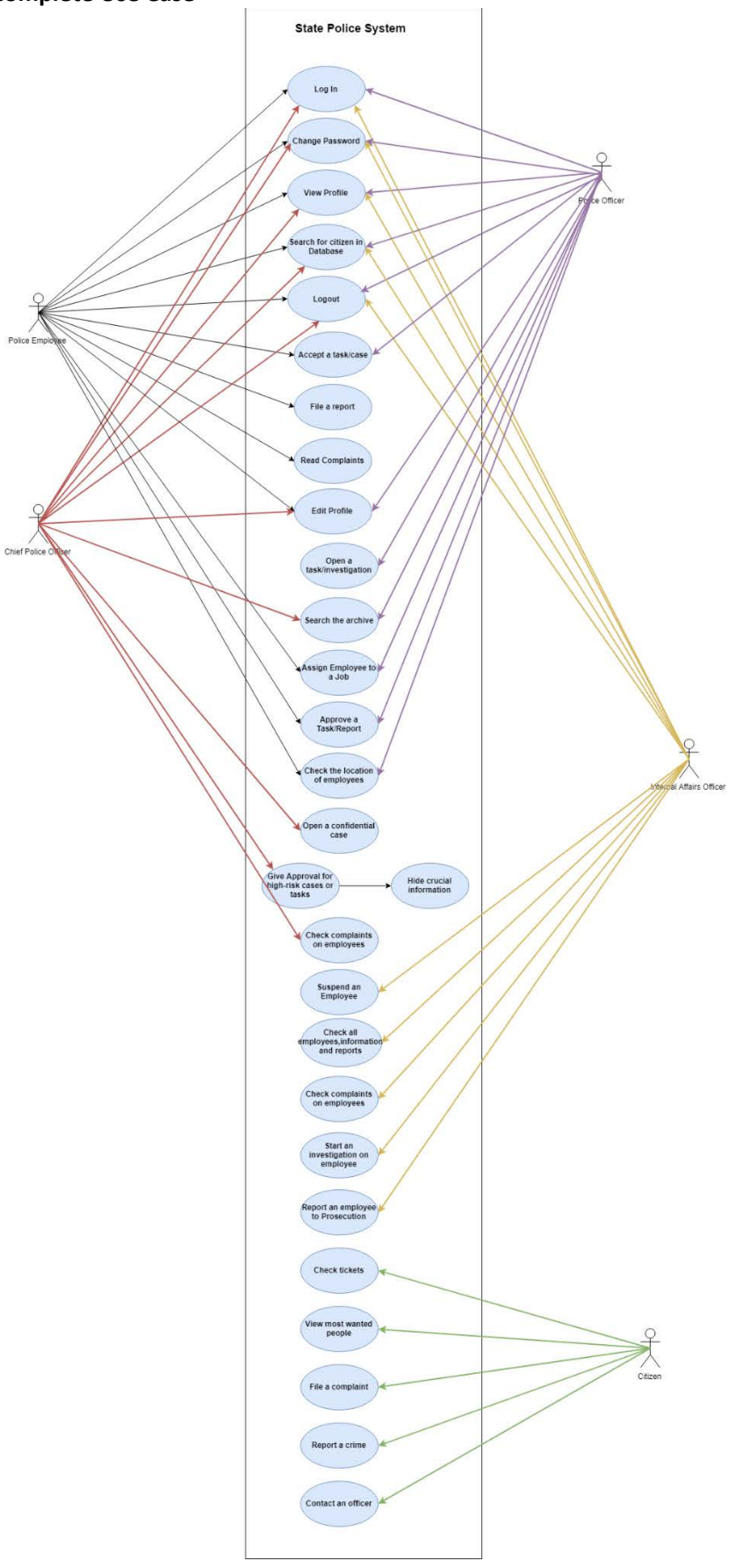
Name	Logout
Summary	Employees logout from the web application.
Actor	Regular Employee/ Police Officer / Chief Police Officer / Internal Affairs Officer
Description	The user logged in the system can log out by pressing under his profile Logout button.
Precondition	They should be logged in.
Alternatives	Since it is a high-level security system, a cookie will be used. The user would get logged out after 15 minutes of being inactive.
Post Condition	The user is logged out.

Use Case 19

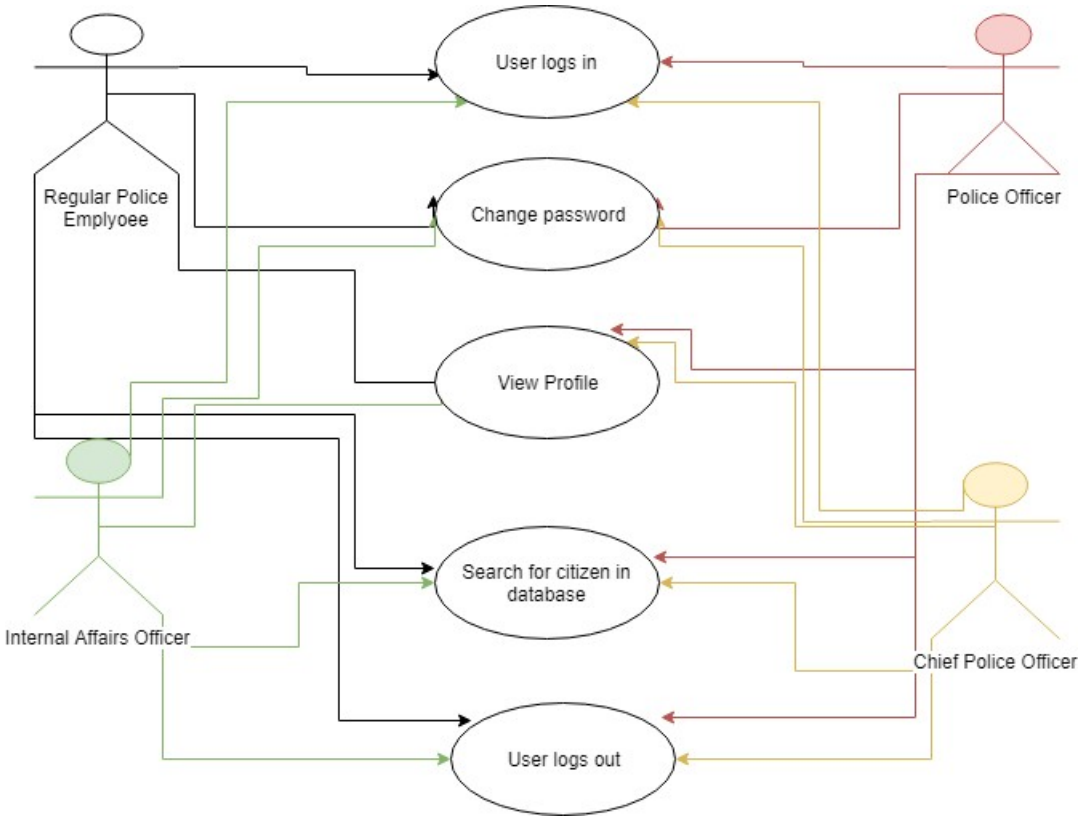
Name	Change password
Summary	Employees changes his password.
Actor	Regular Employee/ Police Officer / Chief Police Officer / Internal Affairs Officer
Description	The user logged in the system can change their password by clicking Change Password under their Profile section.
Precondition	They should be logged in.
Alternatives	They need to enter the old password and confirm the new password.
Post Condition	The password is changed.

4.4 Use Case Diagrams

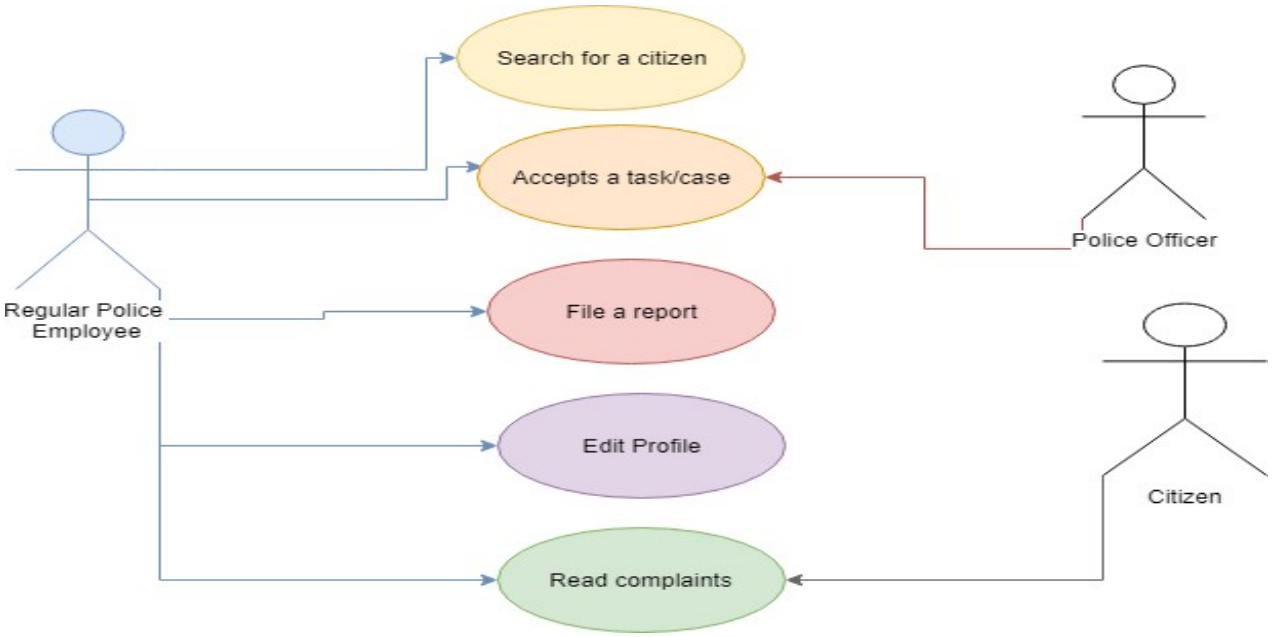
Complete Use Case



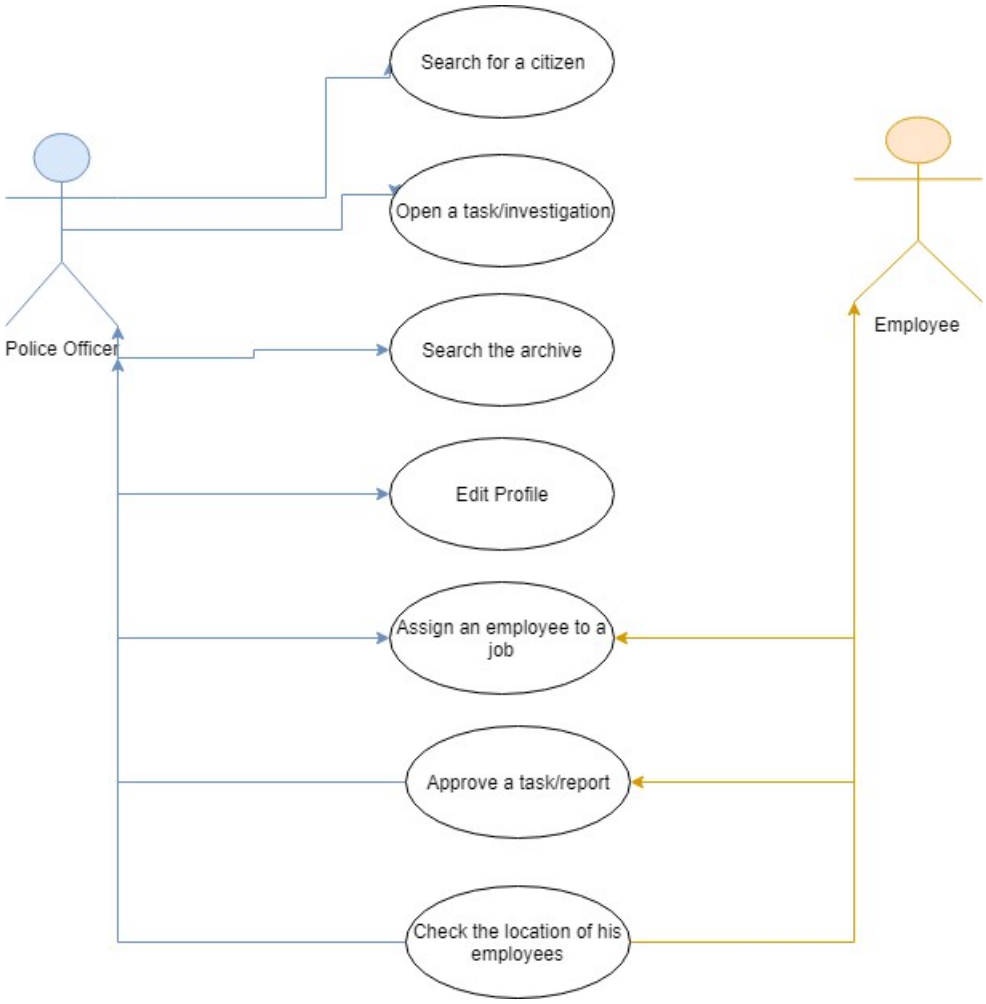
All users Use Case



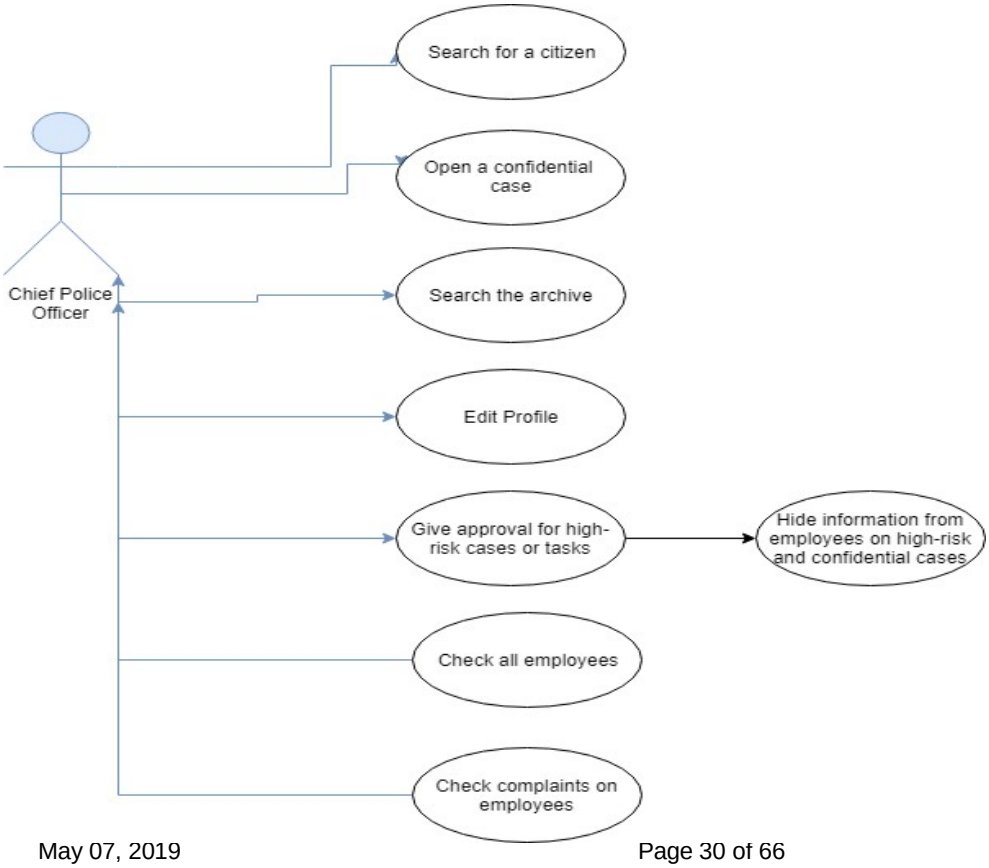
Regular Employee Use Case



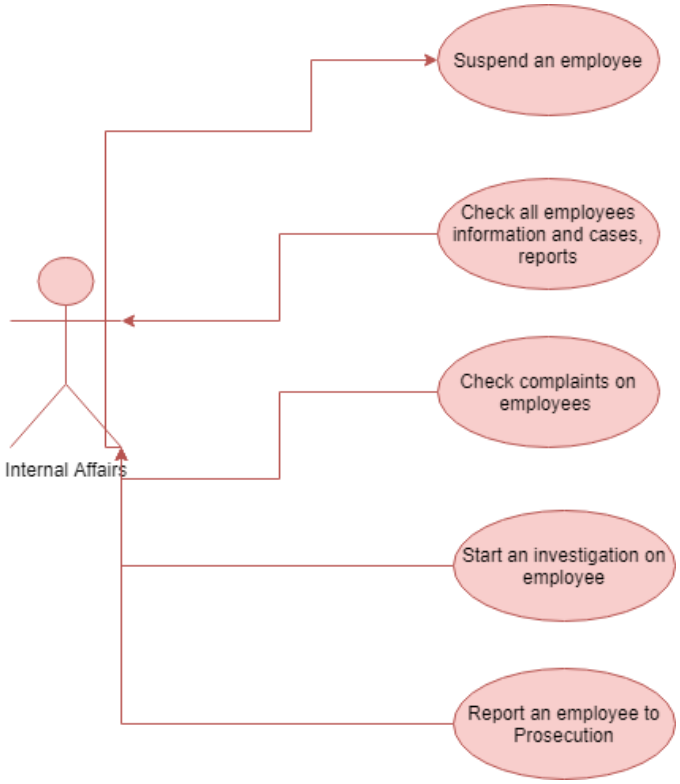
Police Officer Use Case



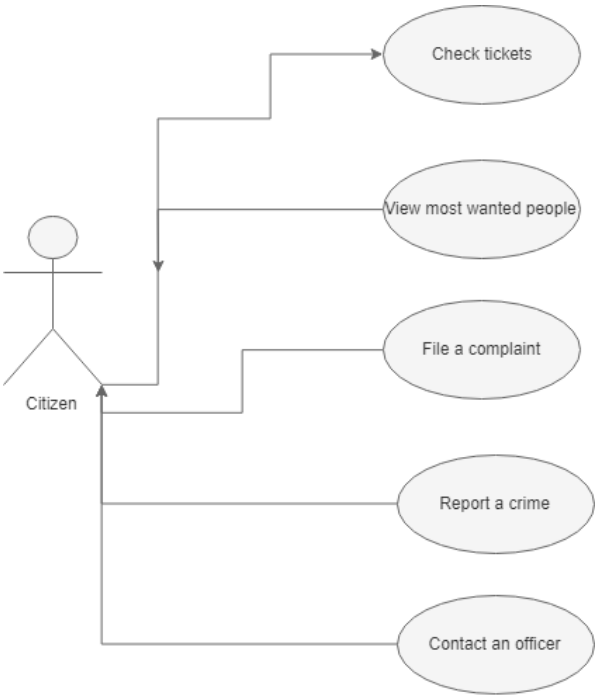
Chief Police Officer Use Case



Internal Affairs Officer Use Case

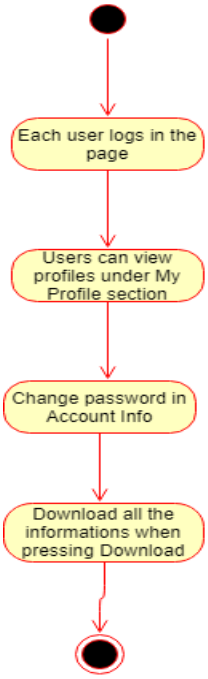


Citizen Use Case

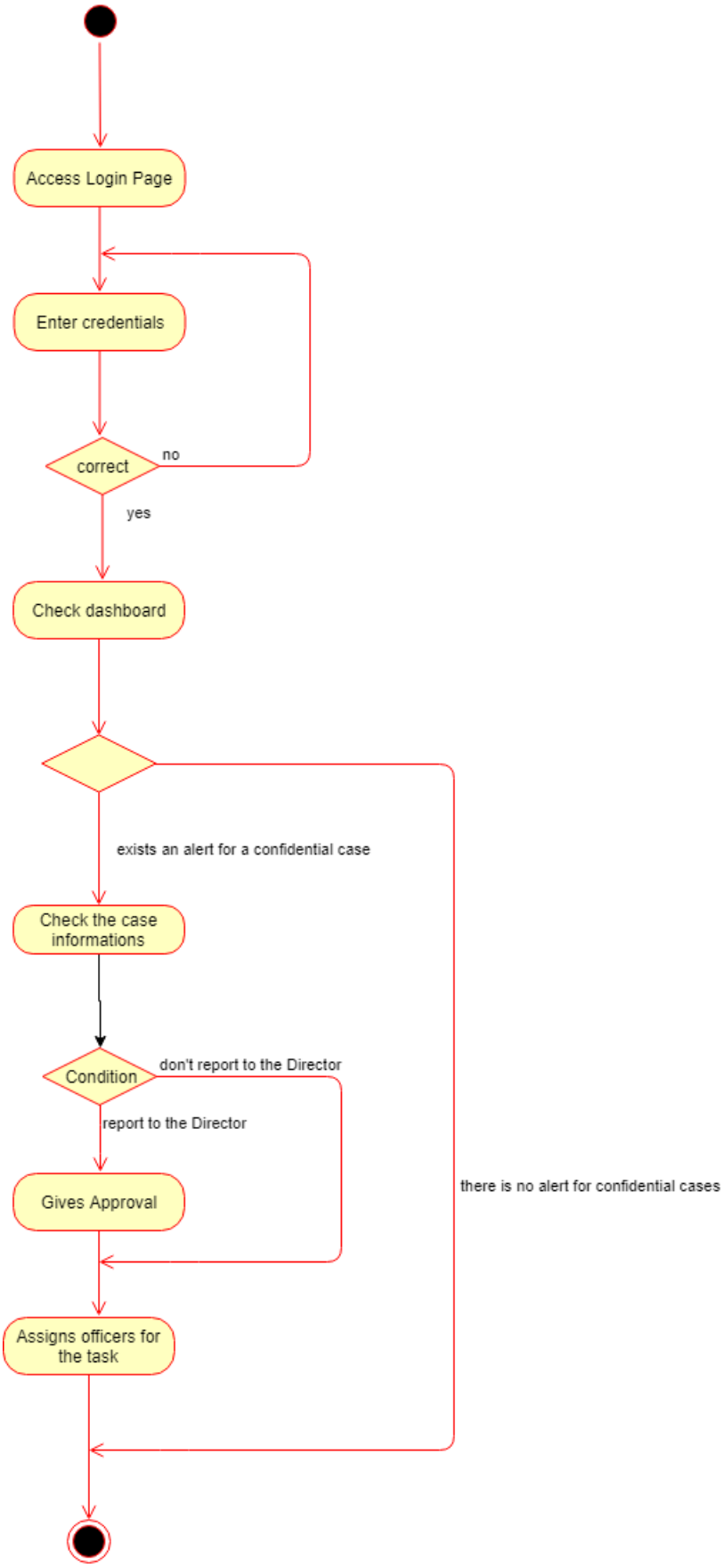


4.5 Activity Diagrams

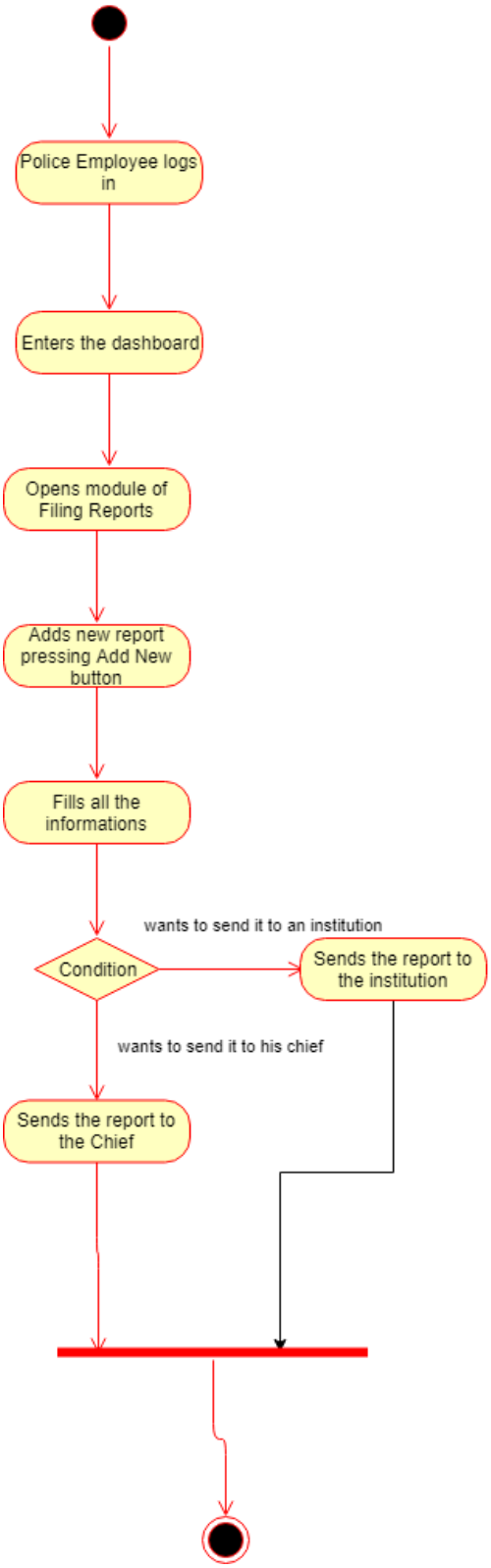
Users view profile Activity Diagram



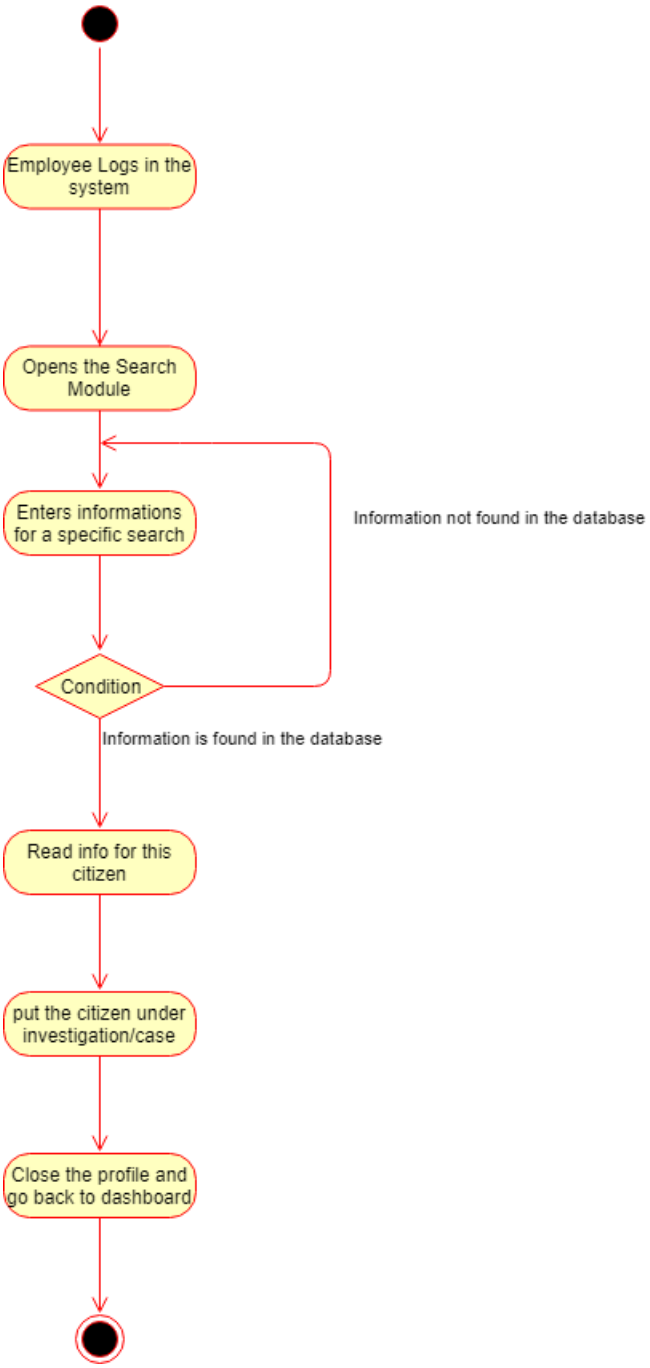
Chief Police Officer Confidential Cases Activity Diagram

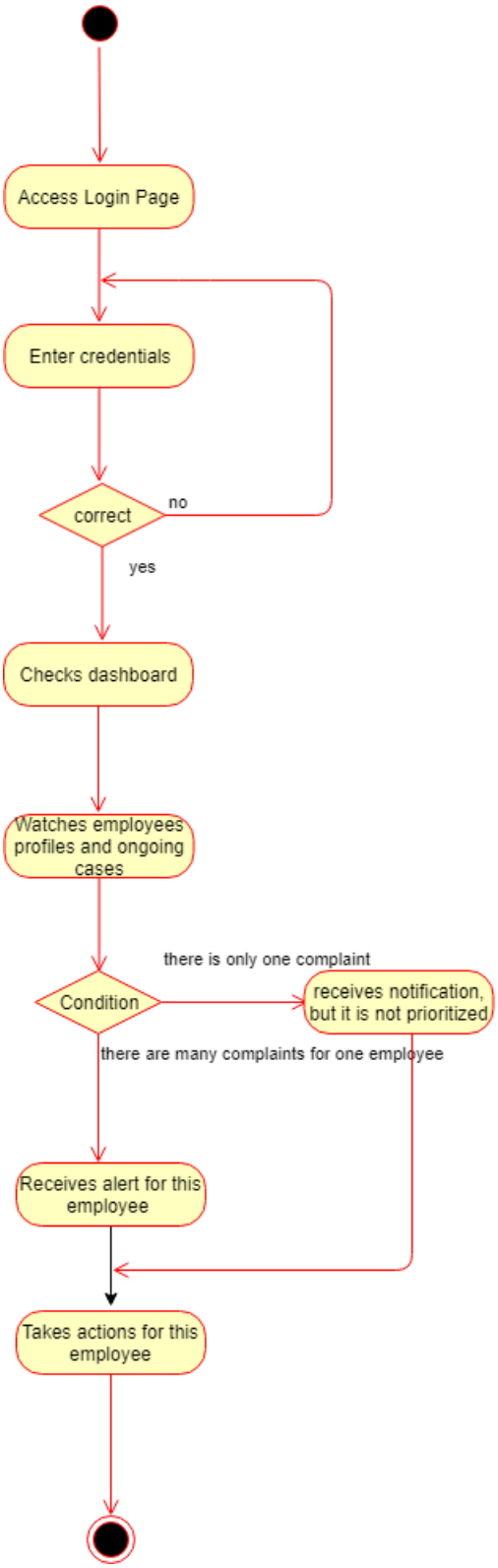


Employee Add File Report Activity Diagram

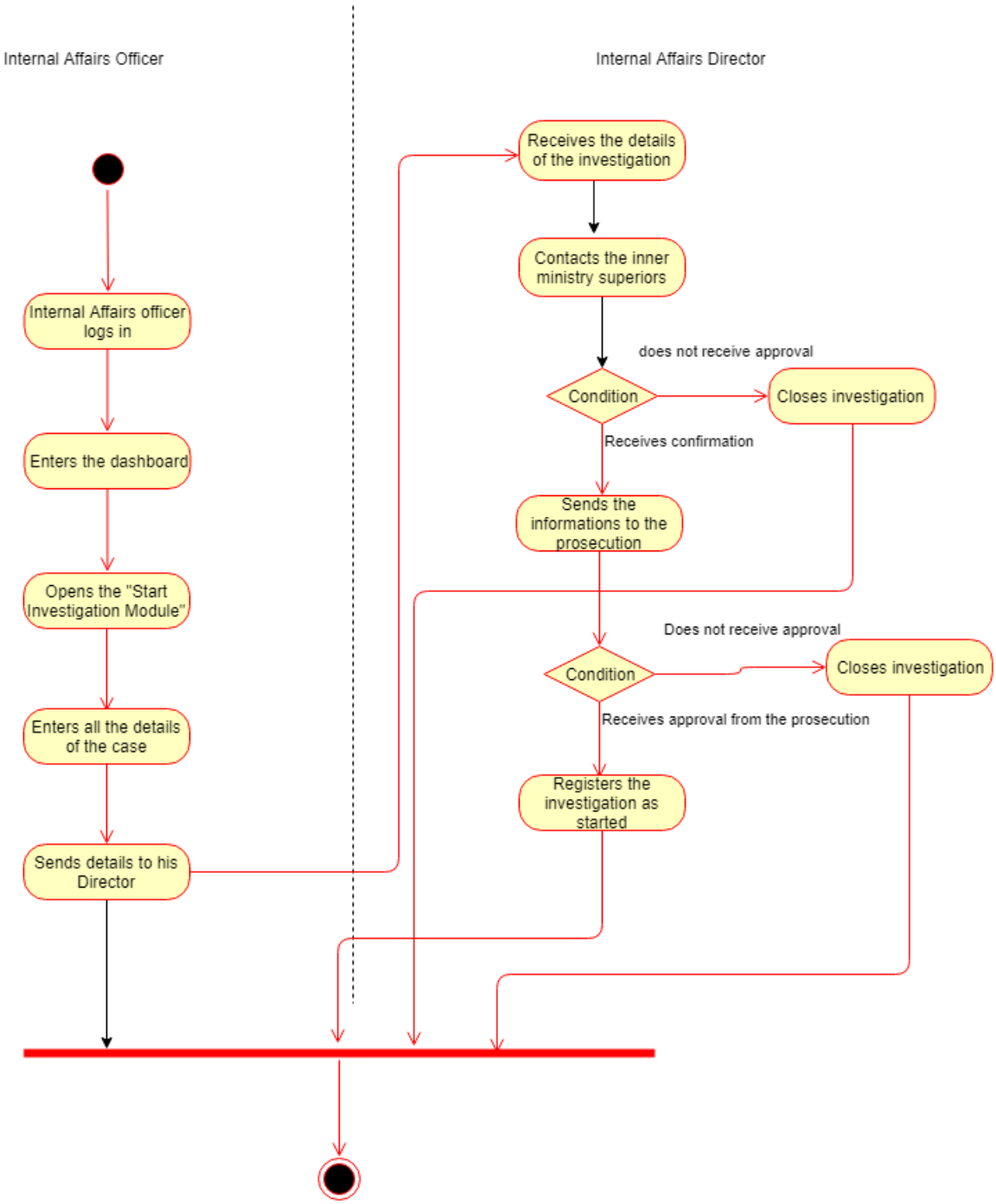


Employee Search Citizen Activity Diagram

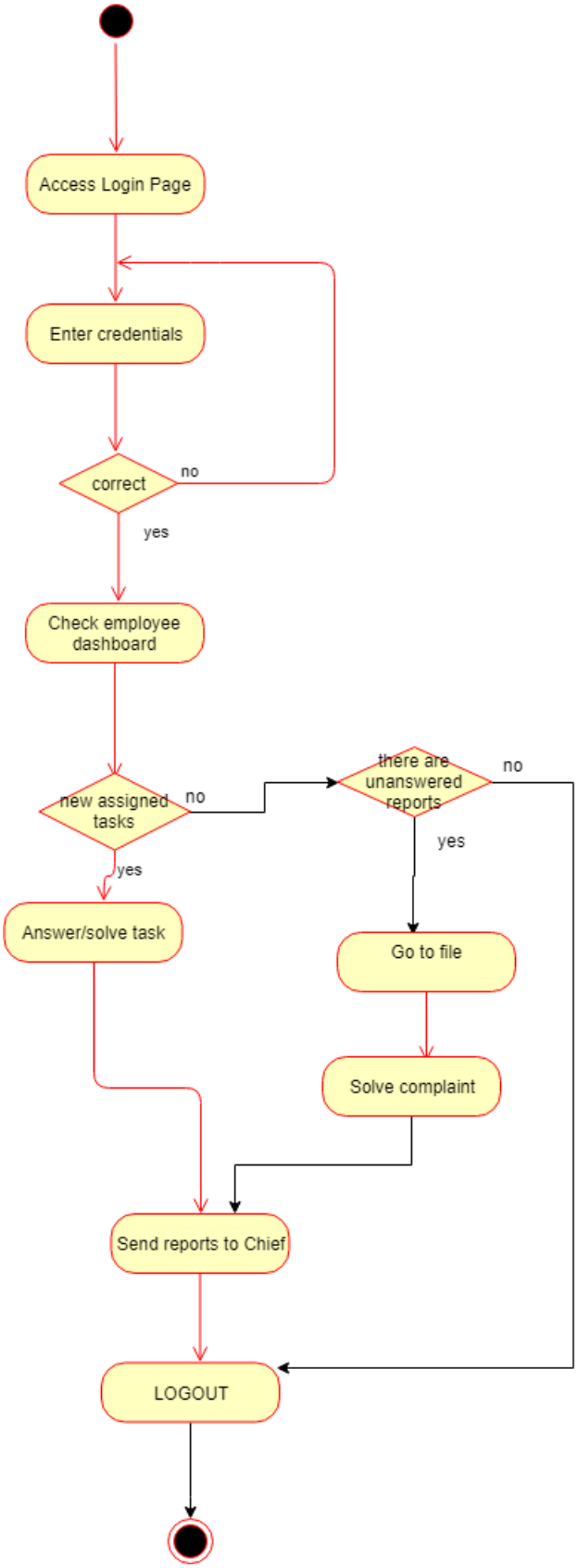

Employee Logs in the system
Opens the Search Module
Enters informations for a specific search
Information not found in the database
Condition
Information is found in the database
Read info for this citizen
put the citizen under investigation/case
Close the profile and go back to dashboard



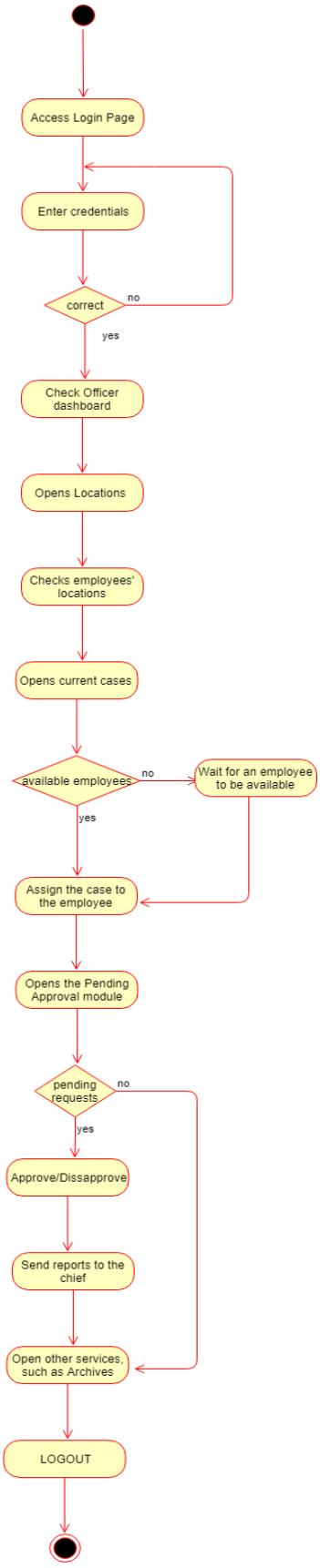
Internal Affairs Investigation Activity Diagram


Internal Affairs Officer
Internal Affairs Director
Internal Affairs officer logs in
Enters the dashboard
Opens the "Start Investigation Module"
Enters all the details of the case
Sends details to his Director
Receives the details of the investigation
Contacts the inner ministry superiors
does not receive approval
Condition
Closes investigation
Receives confirmation
Sends the informations to the prosecution
Does not receive approval
Condition
Closes investigation
Receives approval from the prosecution
Registers the investigation as started

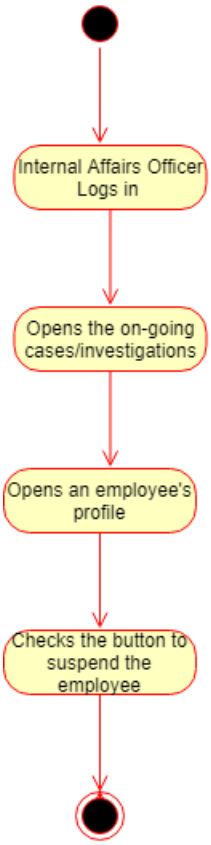
Police Employee Login Activity Diagram



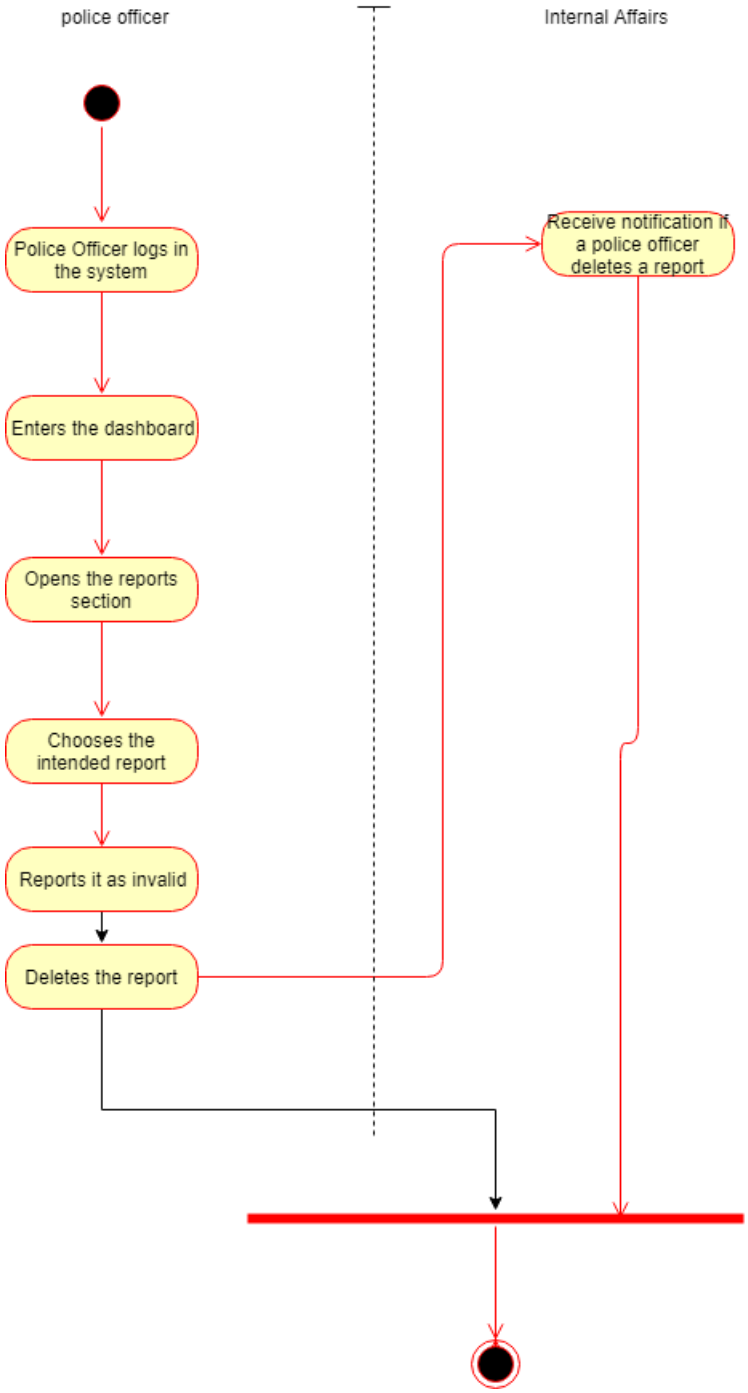
Police Officer Activity Diagram



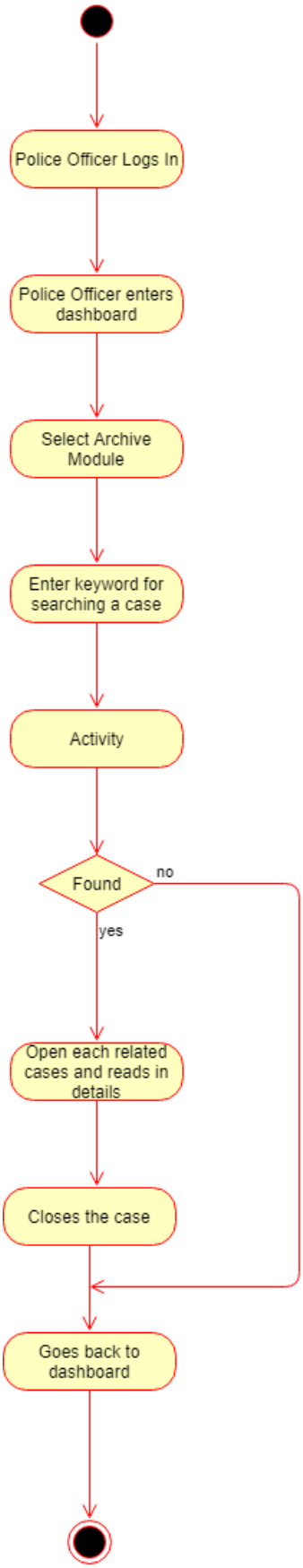
Internal Affairs Suspends Employee Activity Diagram



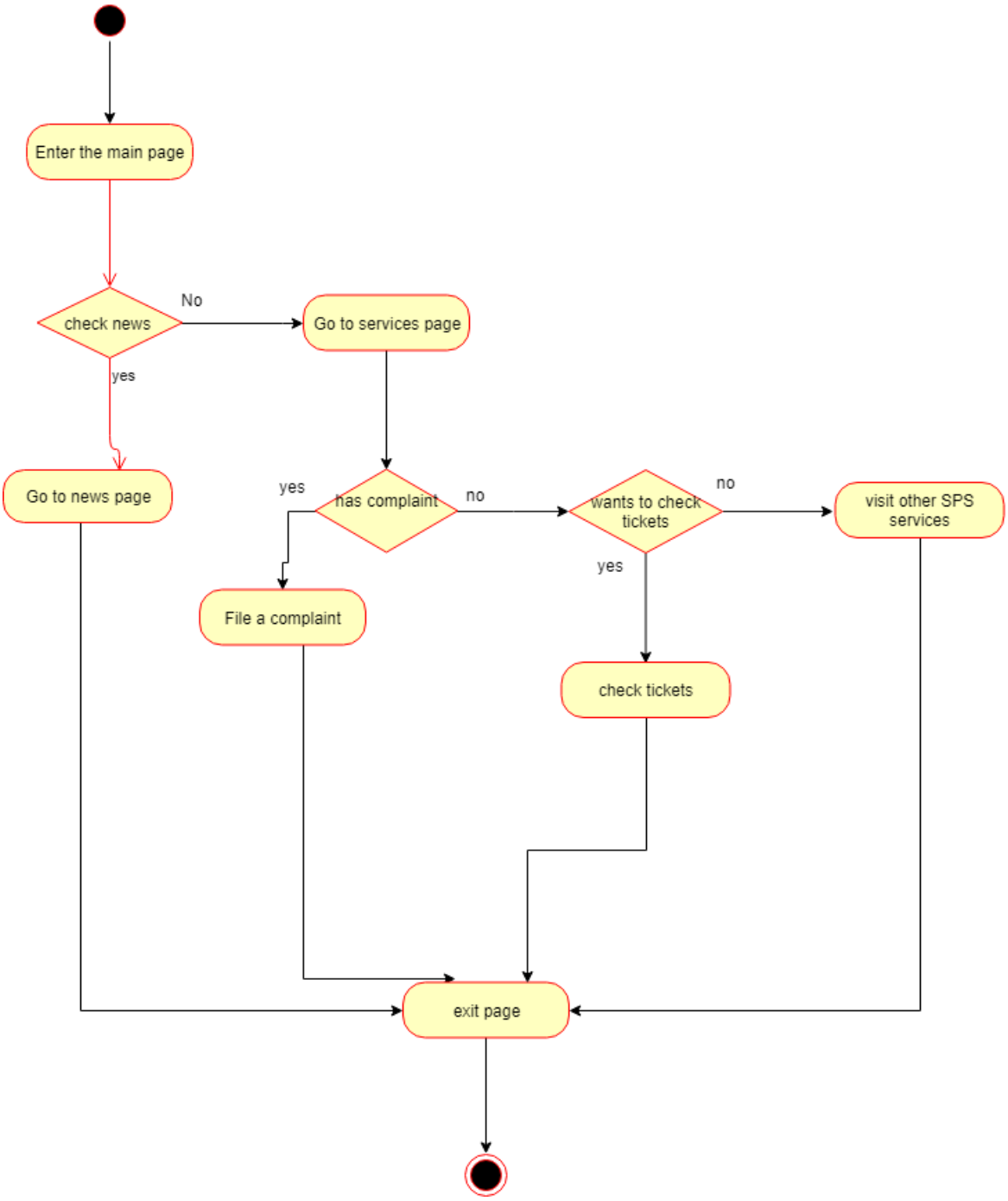
Police Officer Delete Report Activity Diagram



Police Officer Opens Archive Activity Diagram

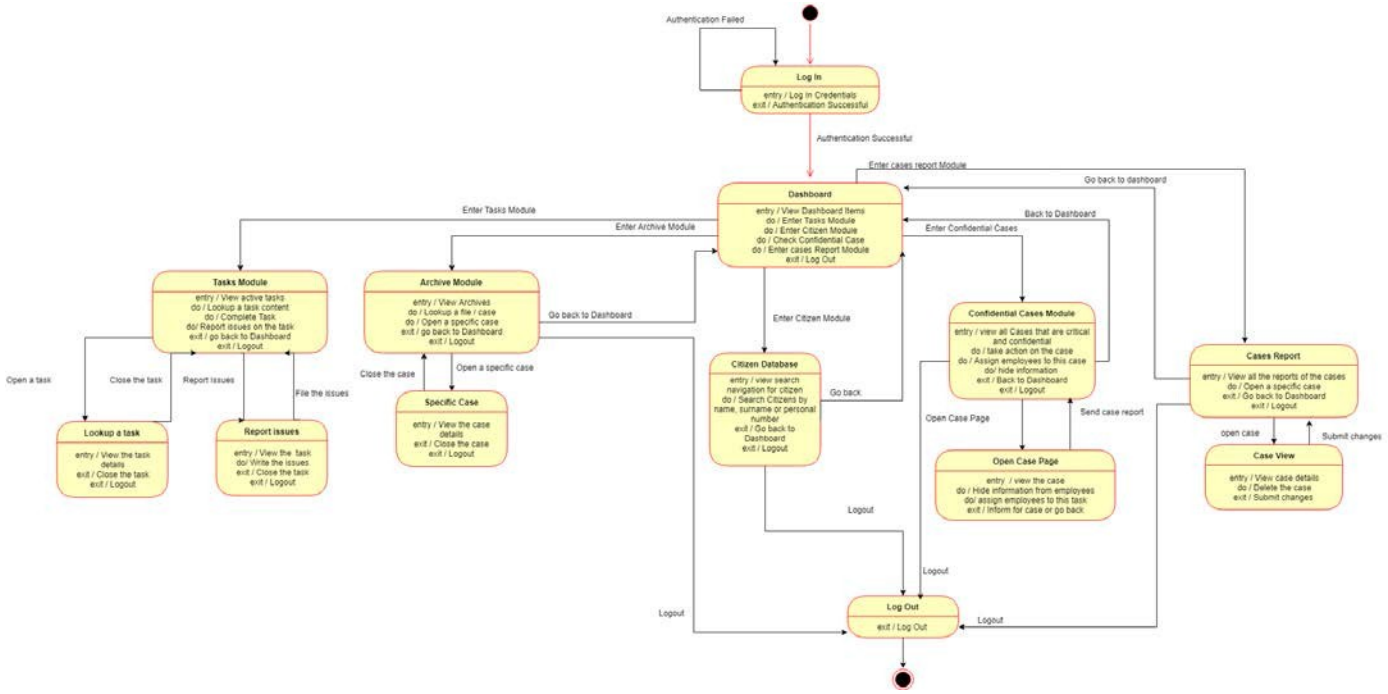


User Interface Activity Diagram

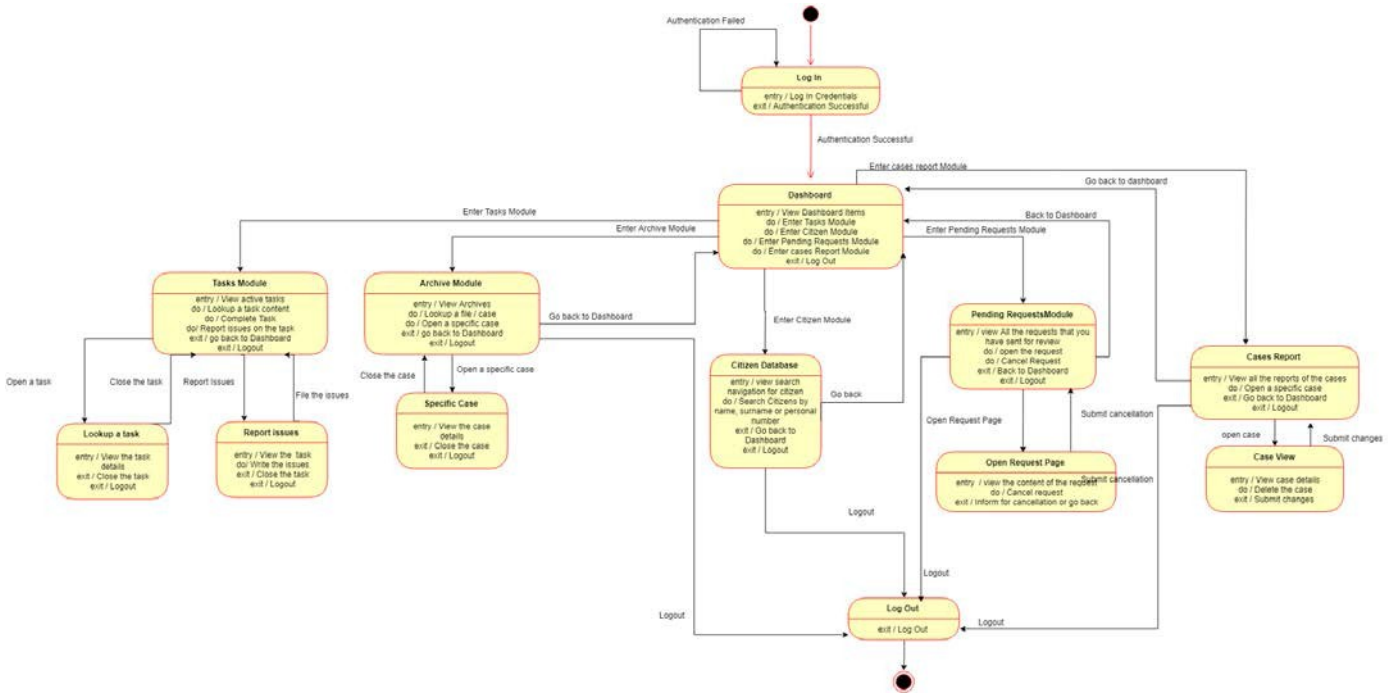

Enter the main page
check news
No
Go to services page
yes
Go to news page
yes
has complaint
no
wants to check tickets
no
visit other SPS services
yes
File a complaint
check tickets
exit page

4.6 State Diagrams

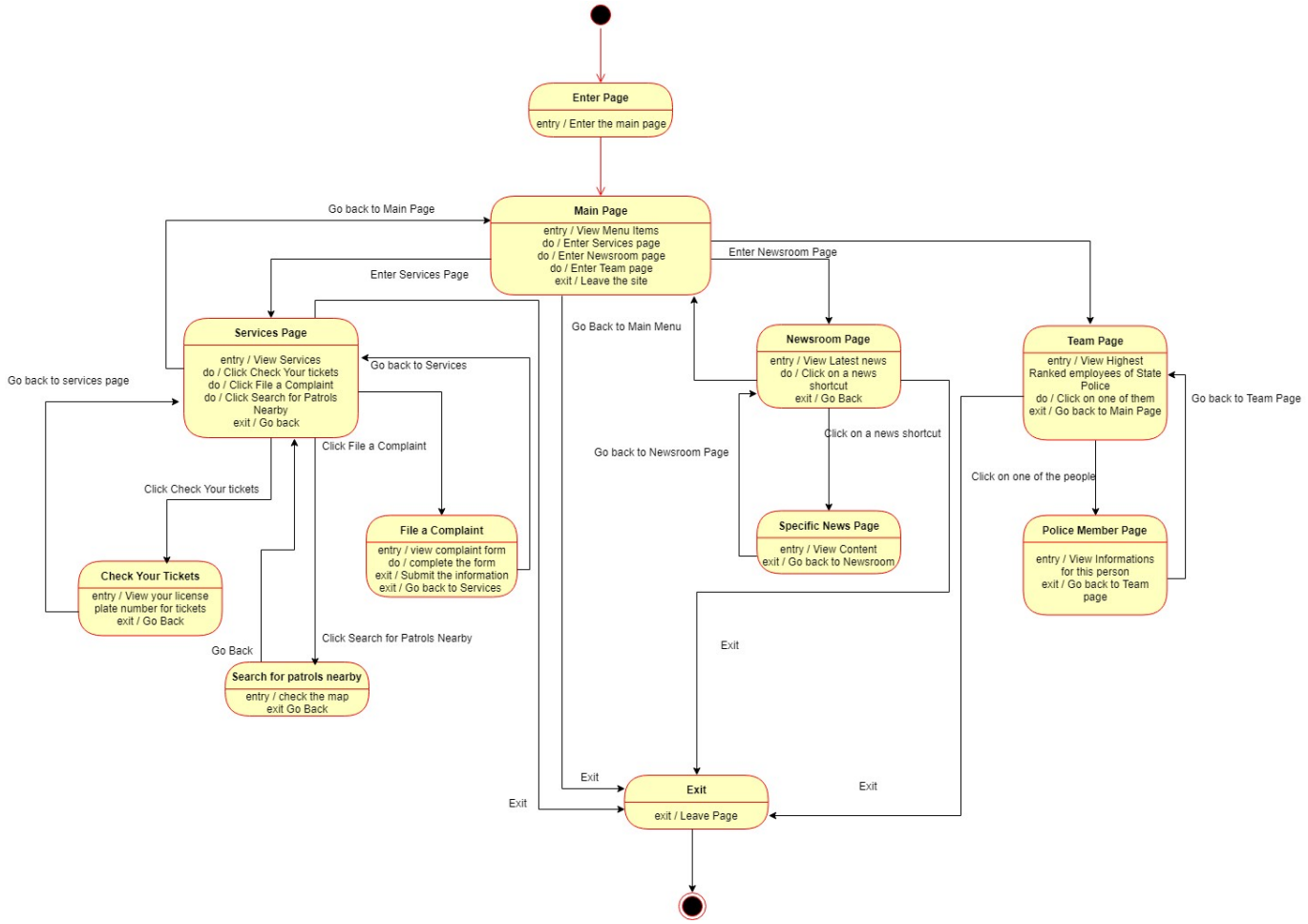
Chief Police Officer State Diagram



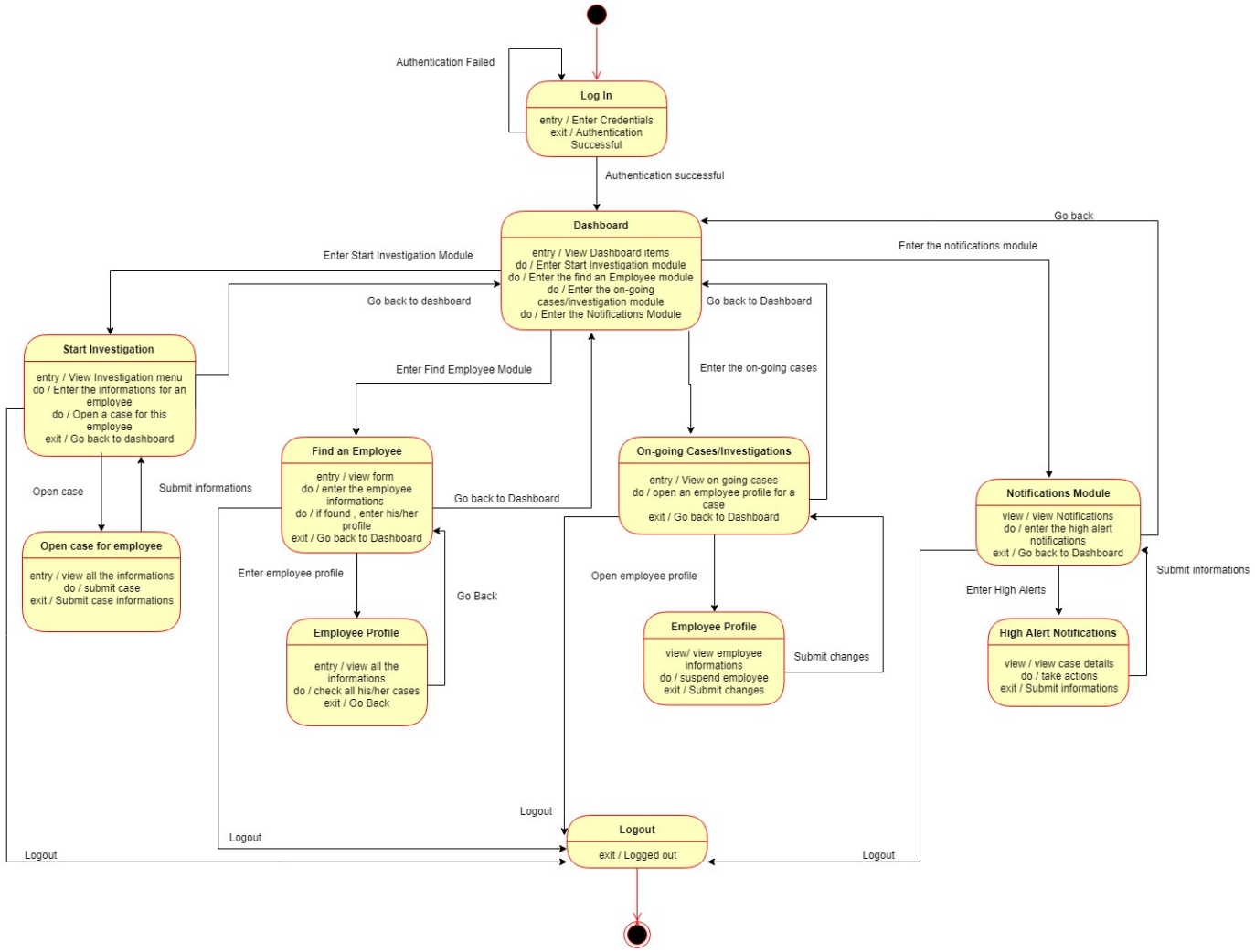
Police Employee State Diagram



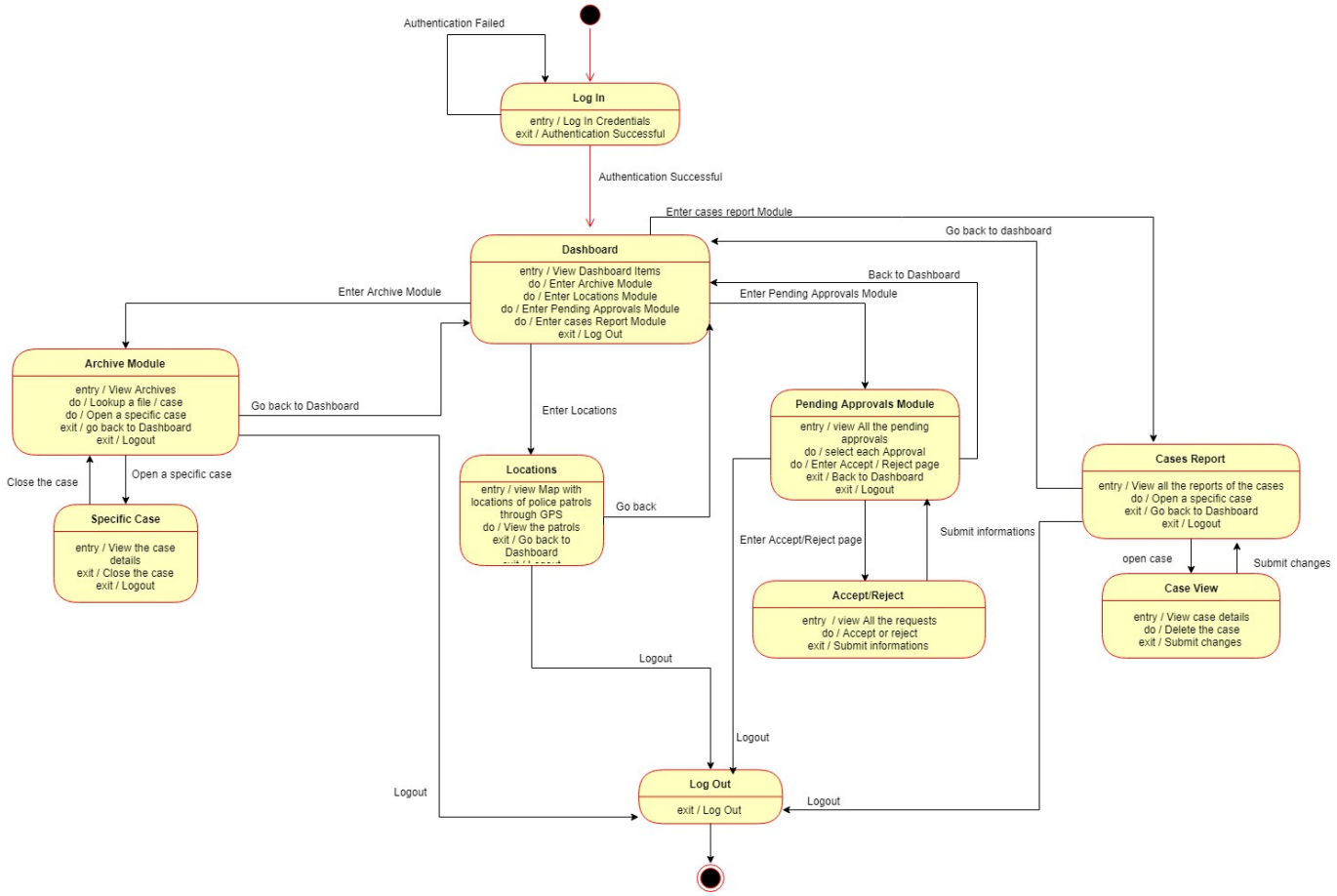
Citizen State Diagram



Internal Affairs Officer State Diagram

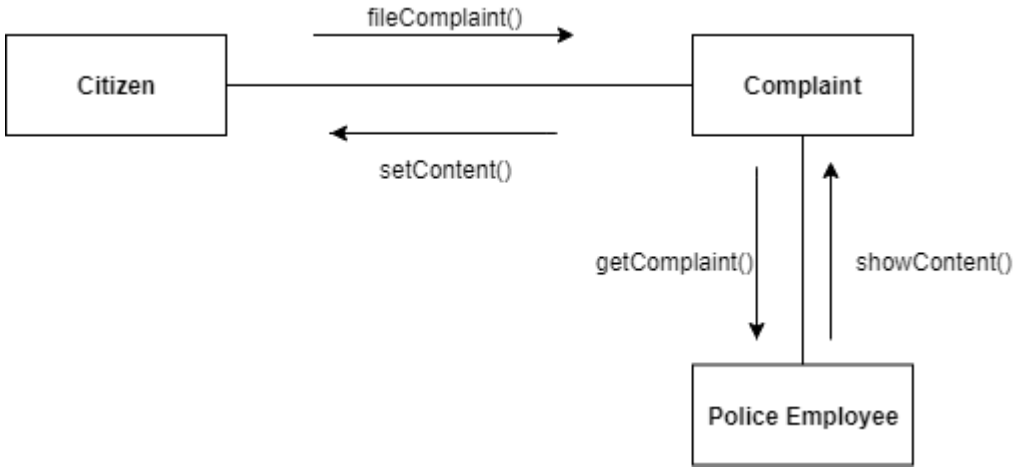


Police Officer State Diagram

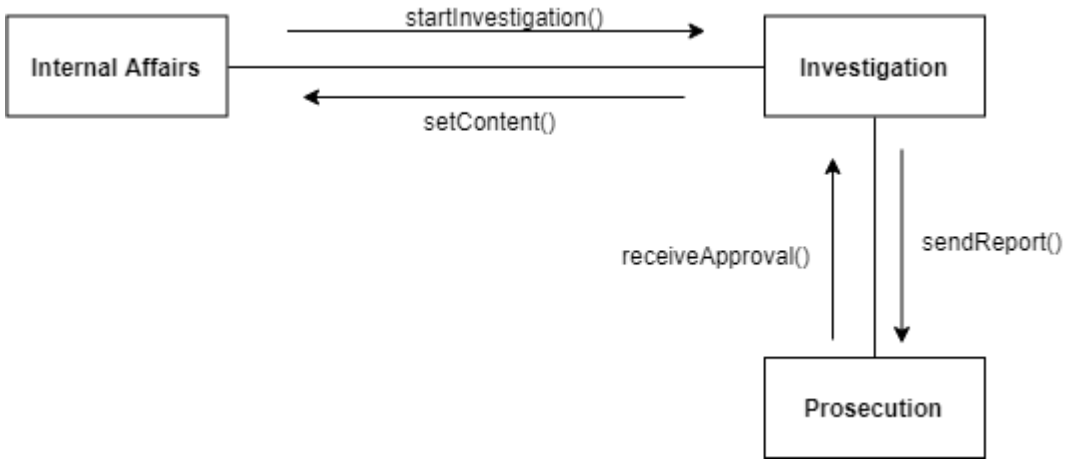


4.7 Collaboration Diagrams

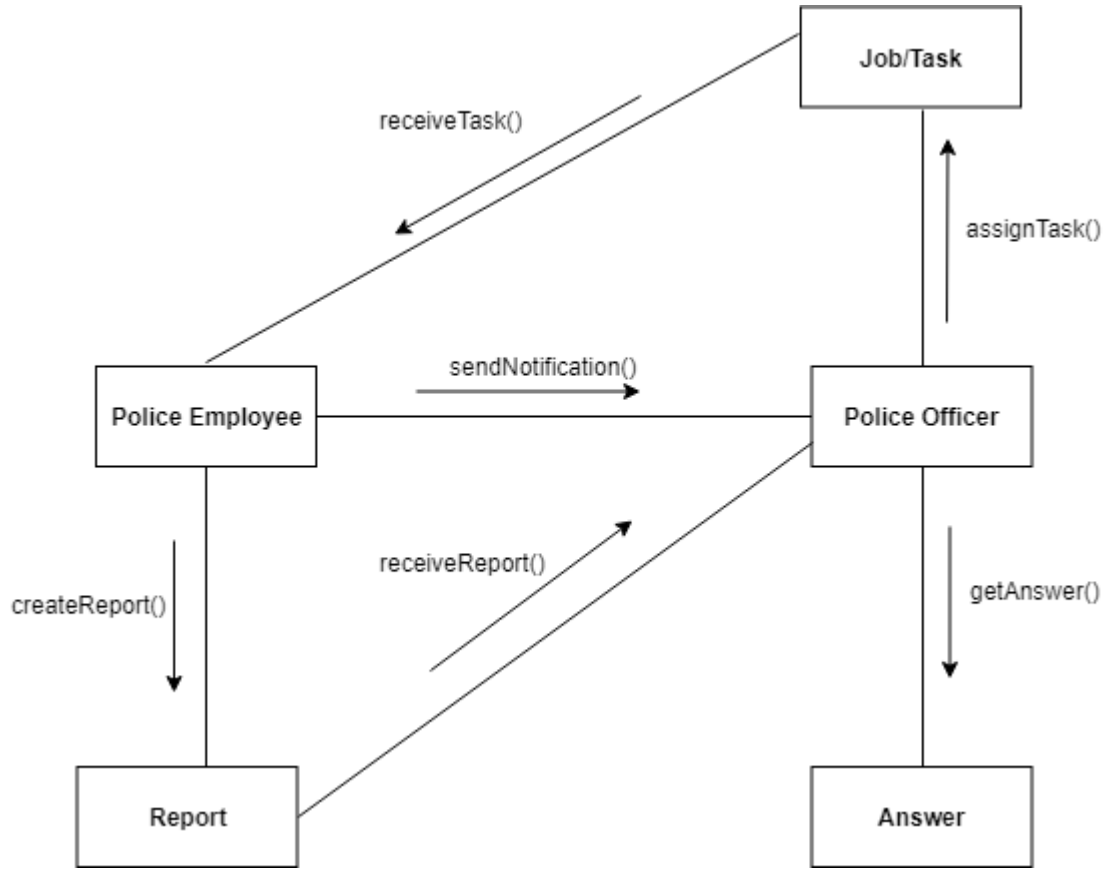
Citizen-Police Employee Collaboration Diagram



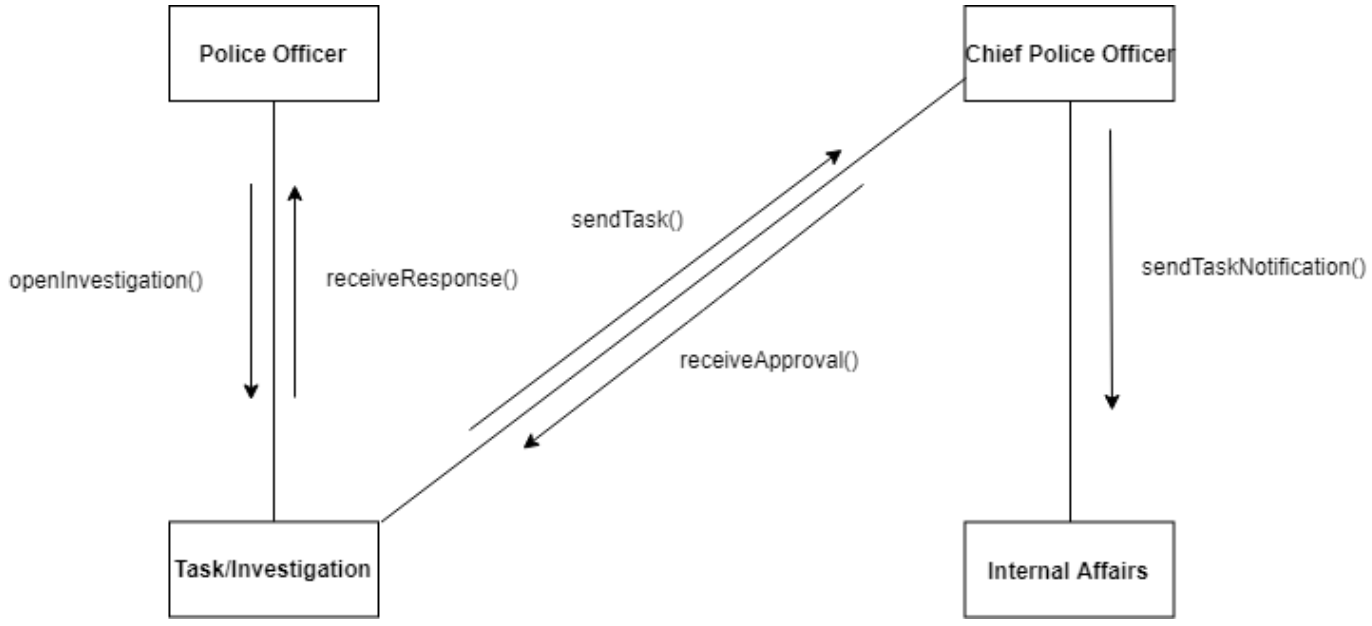
Internal Affairs – Prosecution Collaboration Diagram



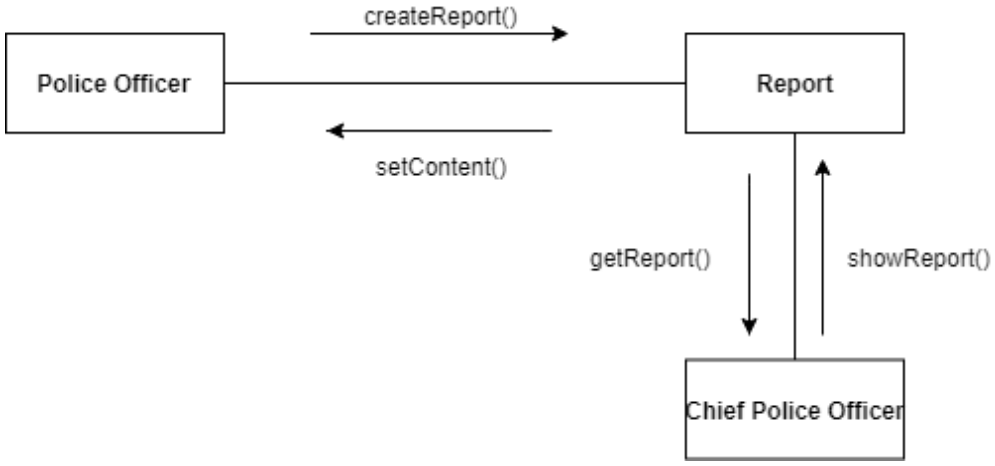
Police – Employee Police Officer Collaboration Diagram



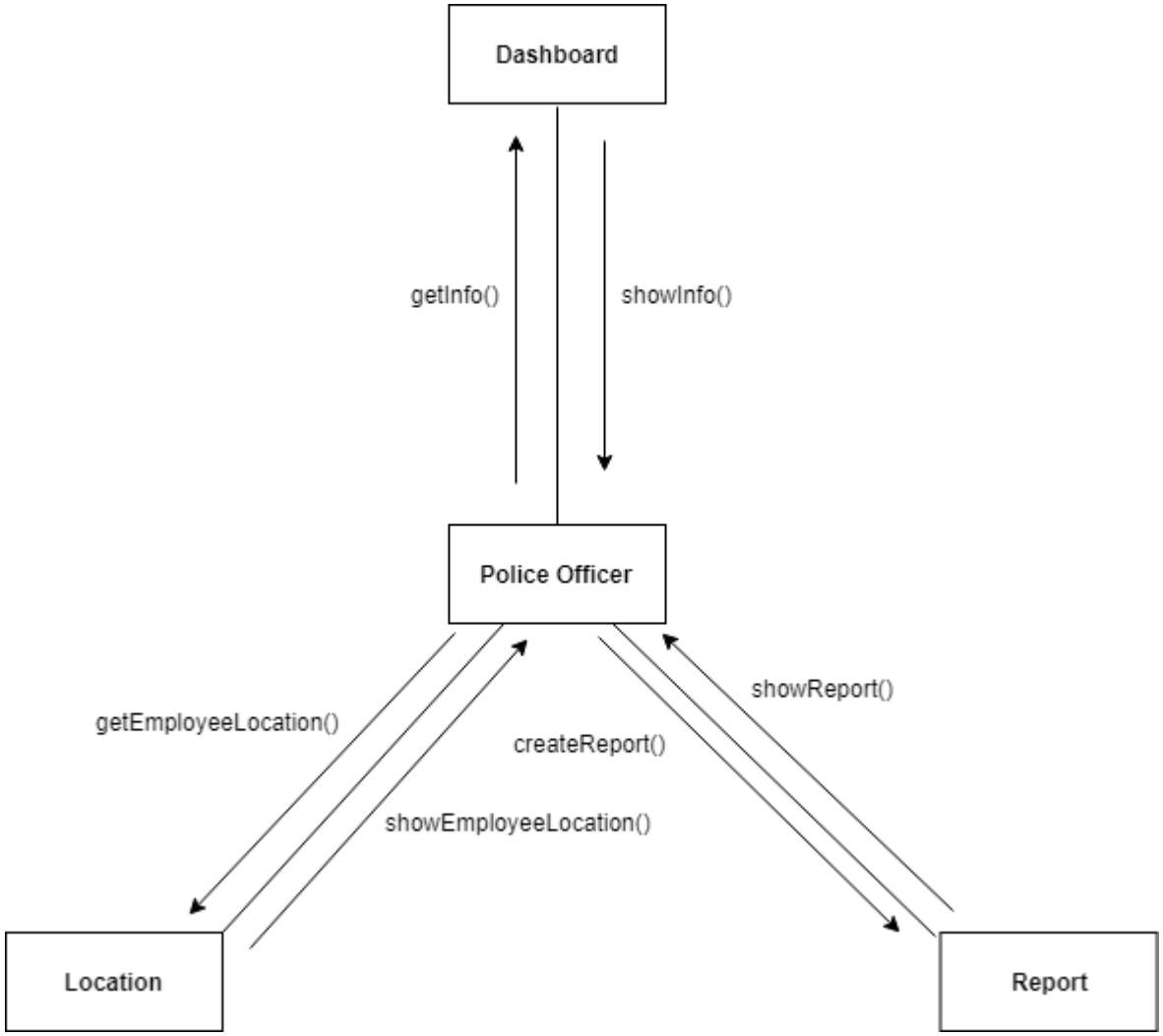
Police Officer – Chief Police Officer – Internal Affairs Collaboration Diagram



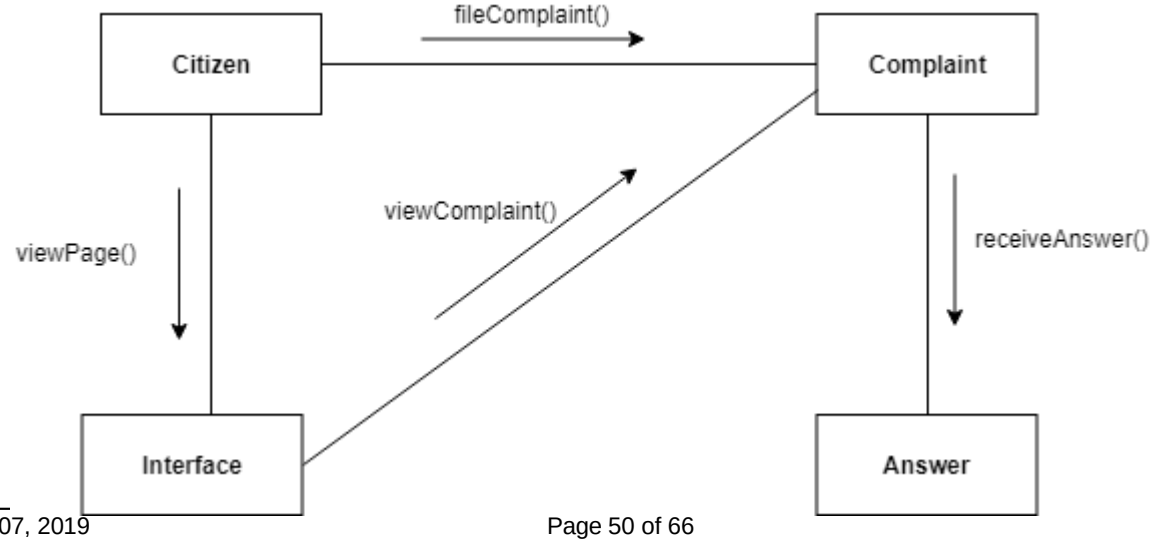
Police Officer – Chief Police Officer Report Collaboration Diagram



Police Officer - Modules Collaboration Diagram

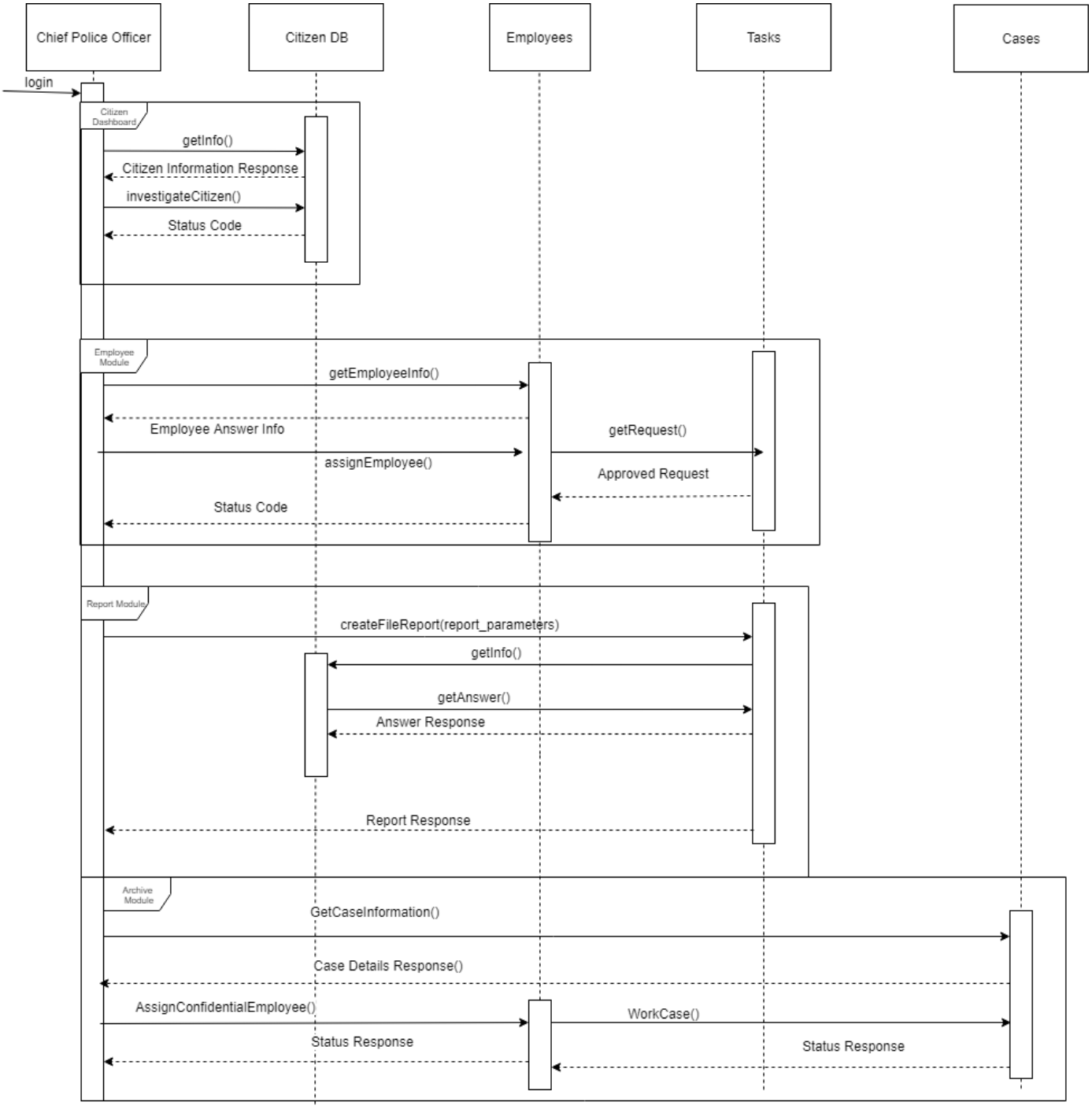


Citizen Collaboration Diagram

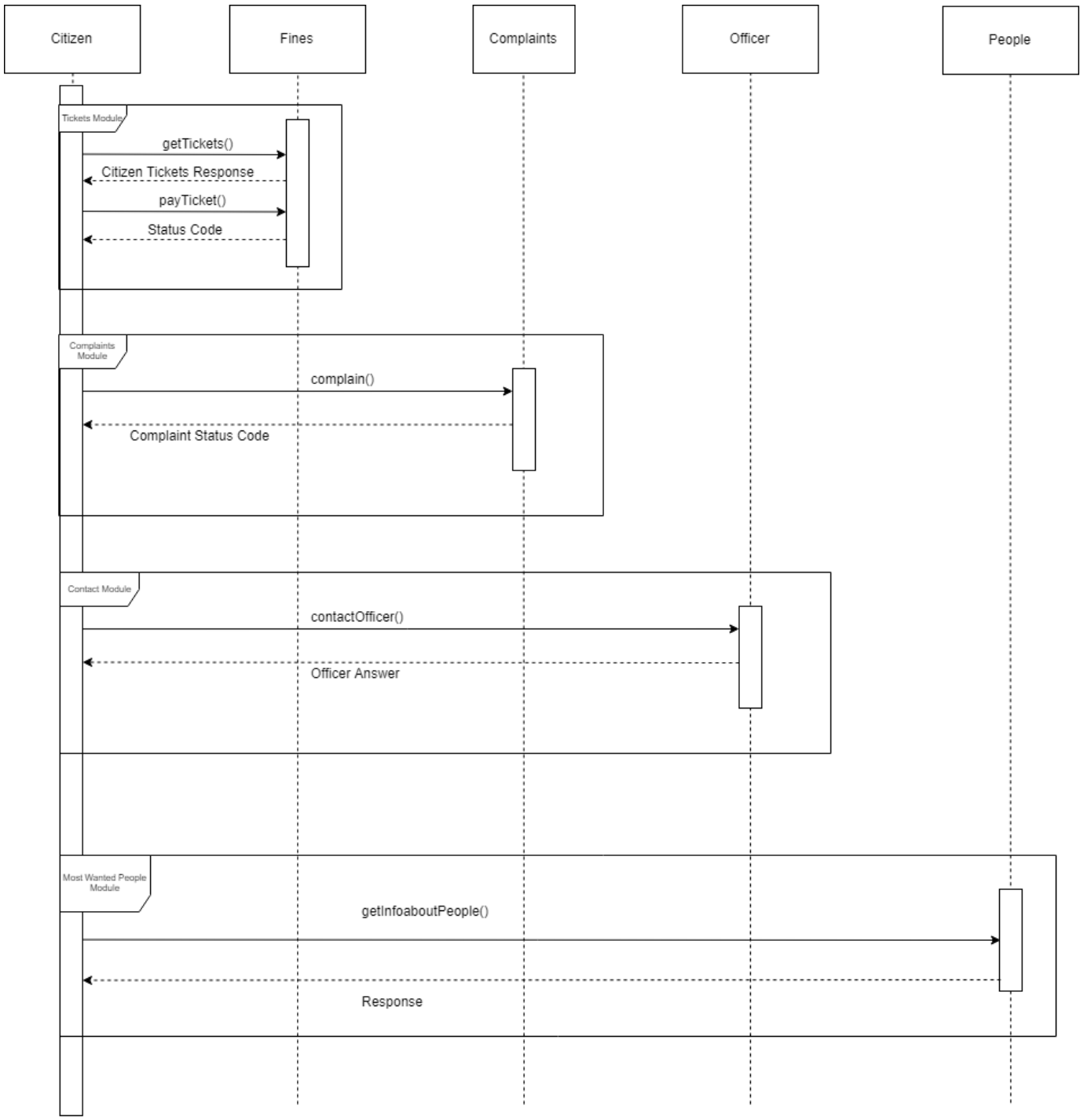


4.8 Sequence Diagrams

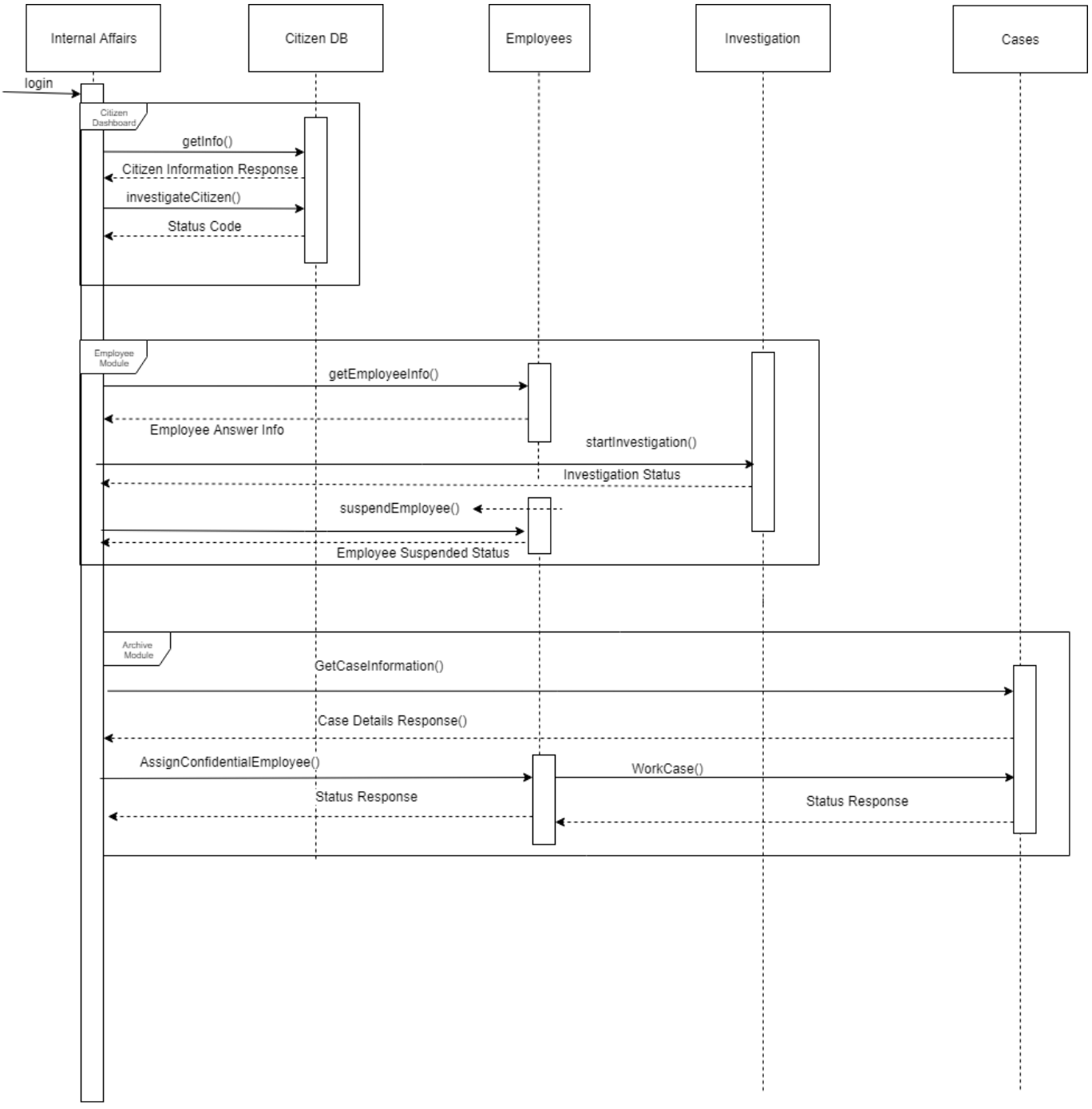
Chief Police Officer Sequence Diagram



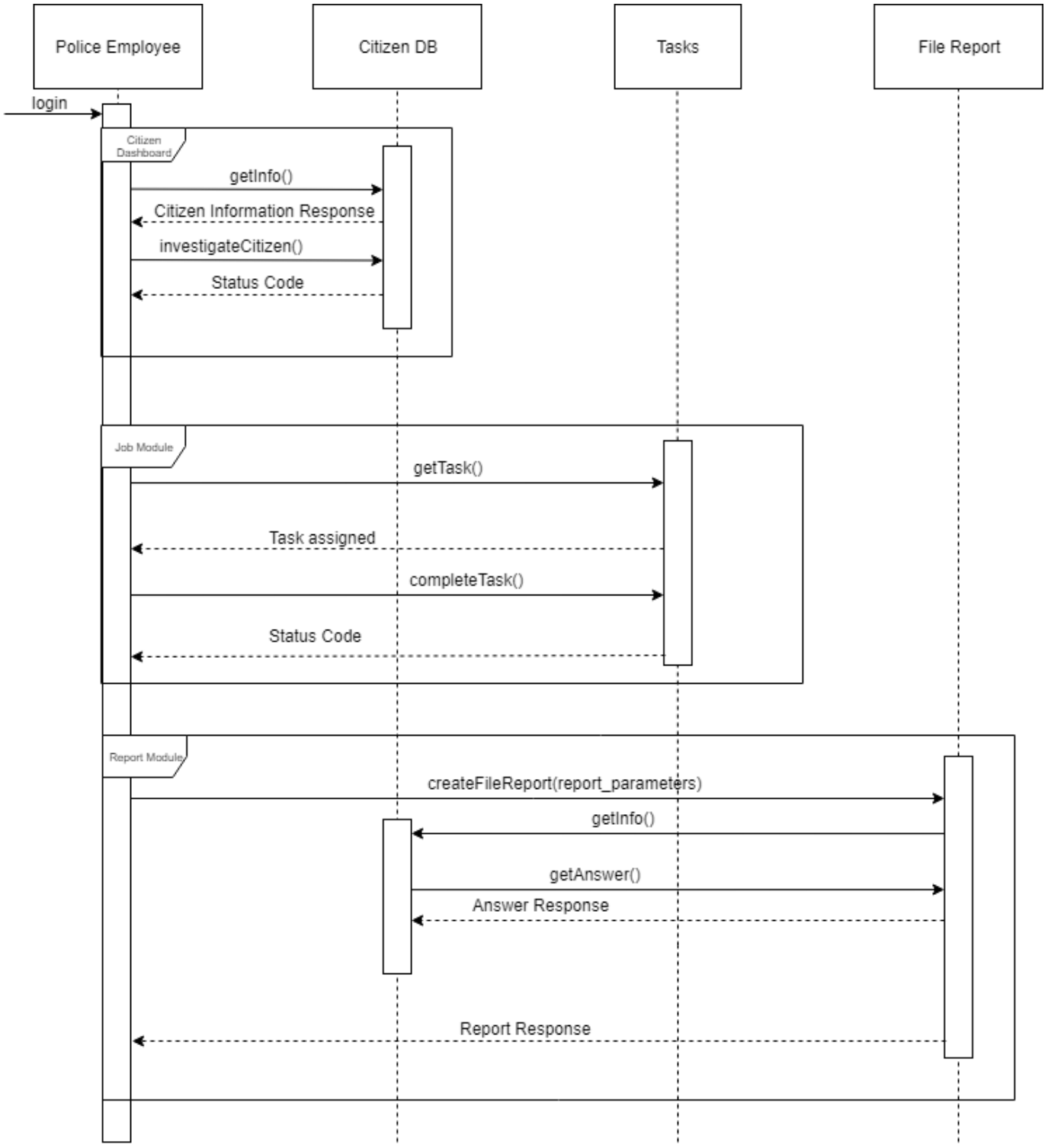
Citizen Sequence Diagram



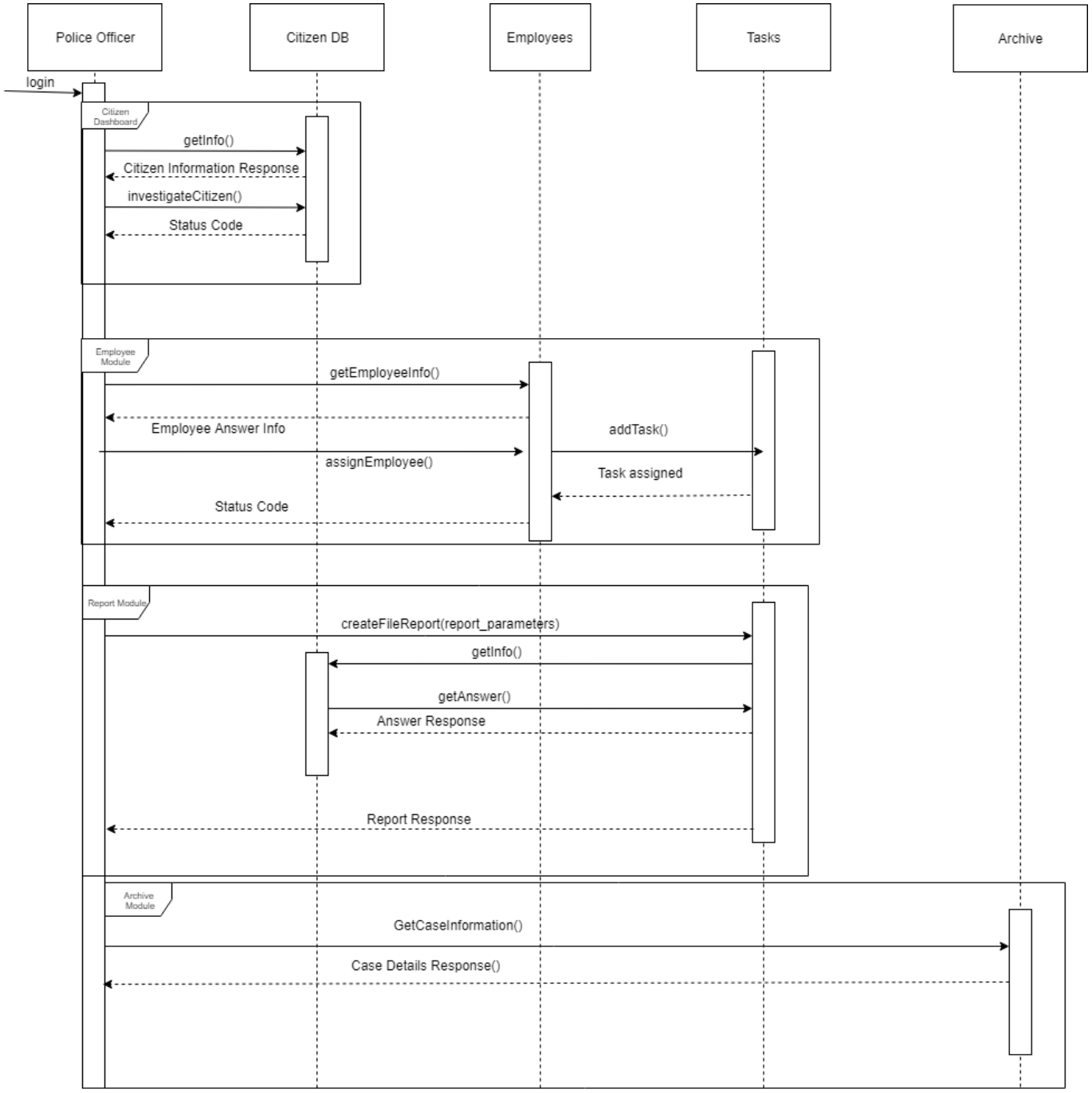
Internal Affairs Sequence Diagram



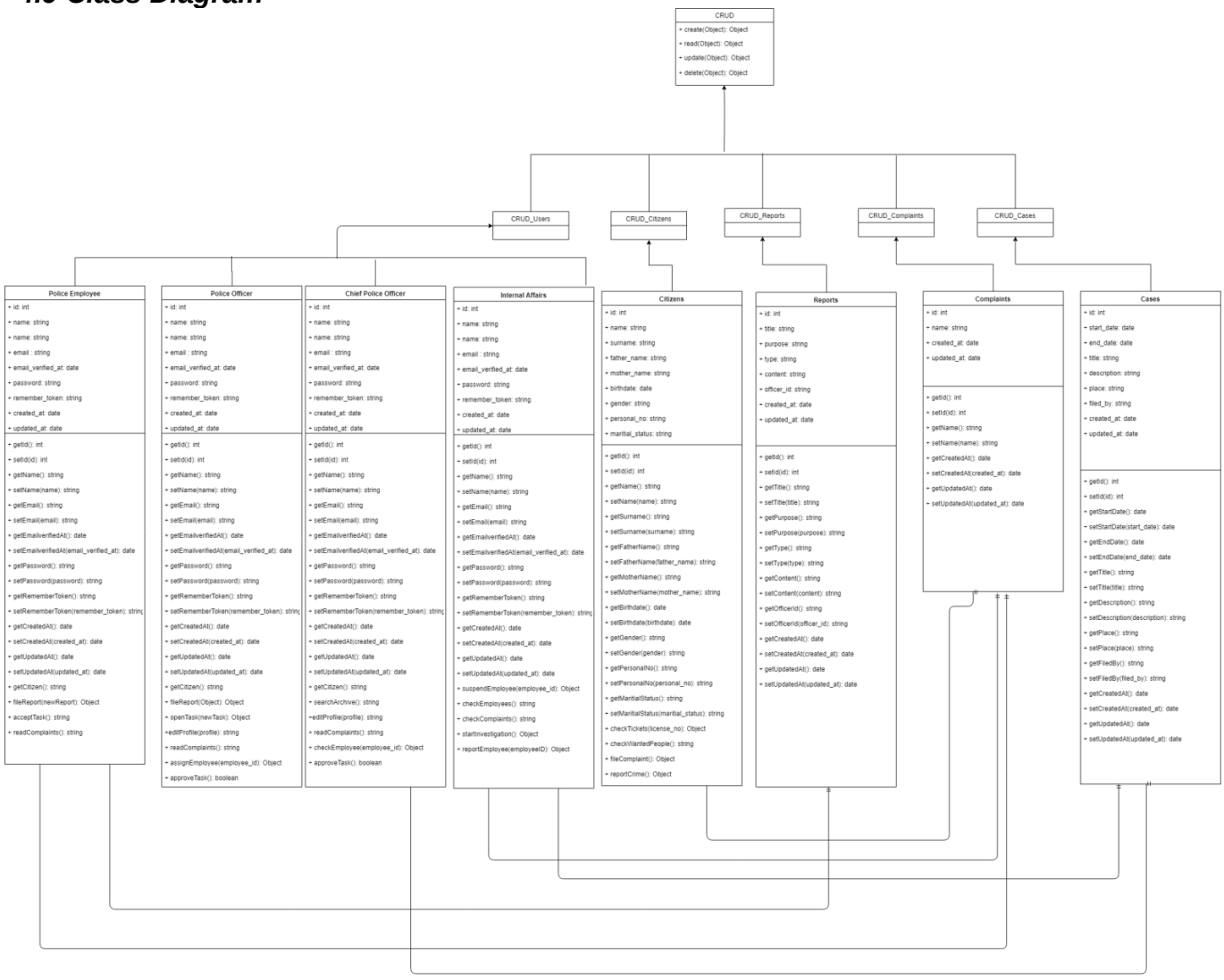
Police Employee Sequence Diagram



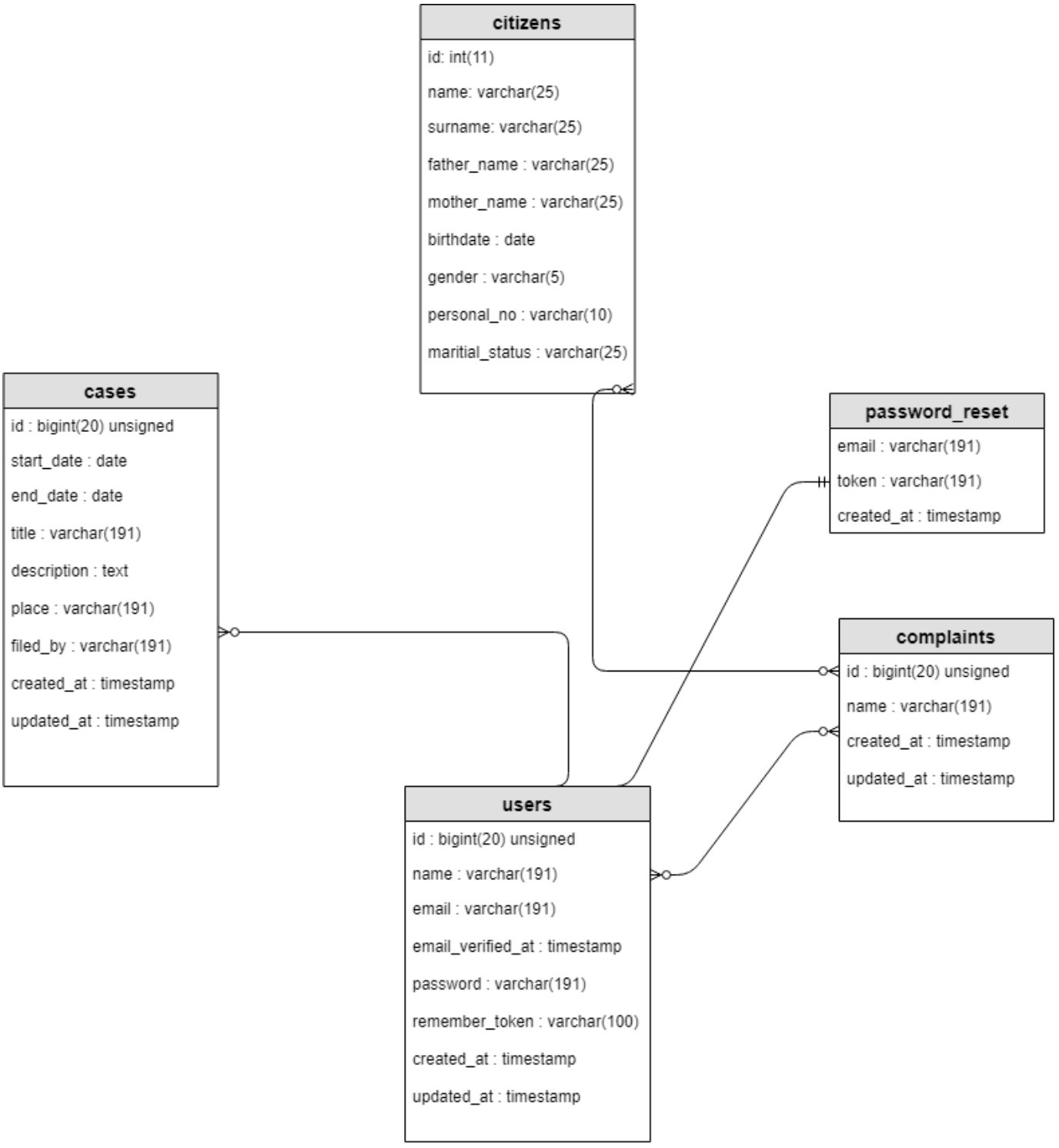
Police Officer Sequence Diagram



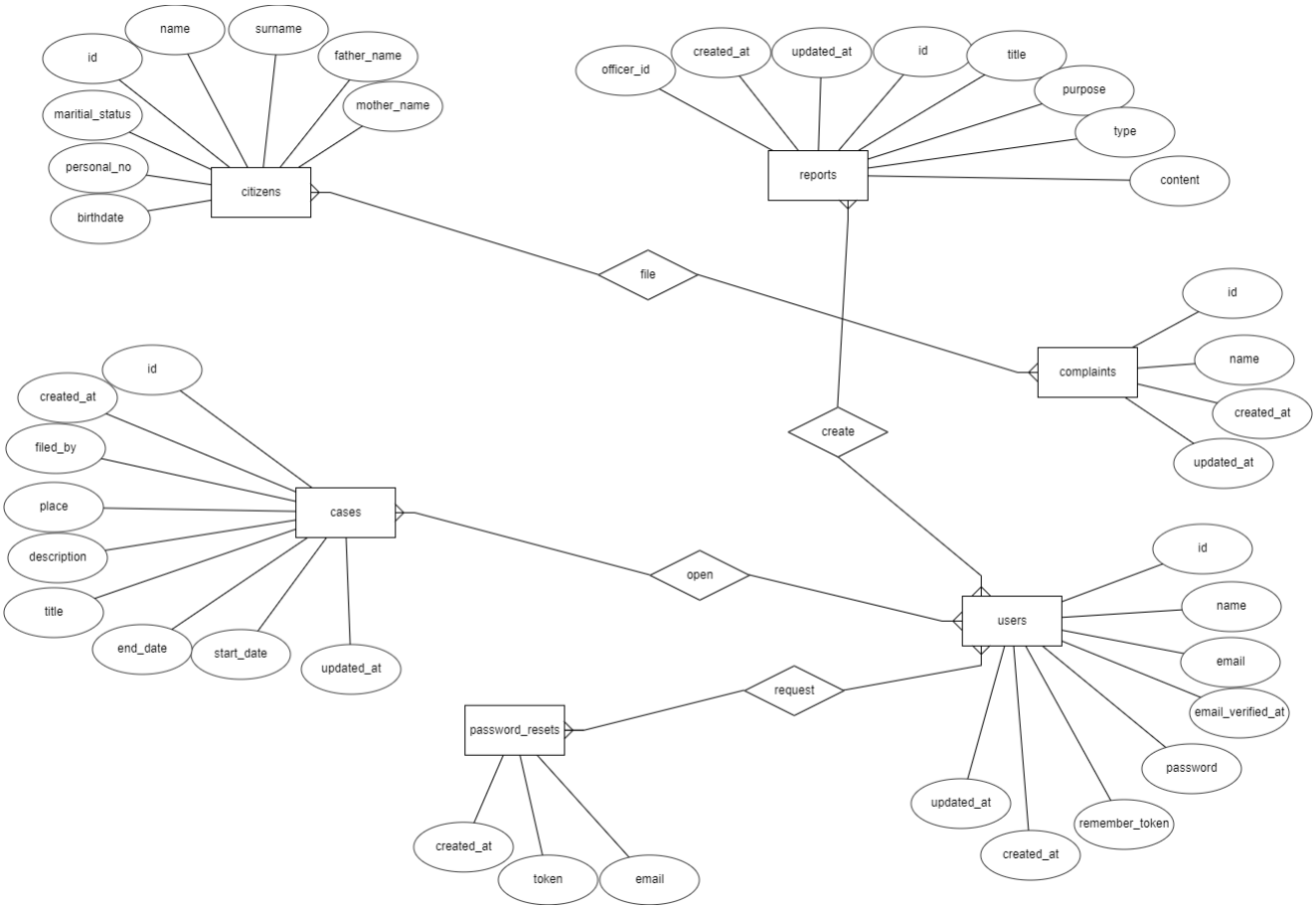
4.9 Class Diagram



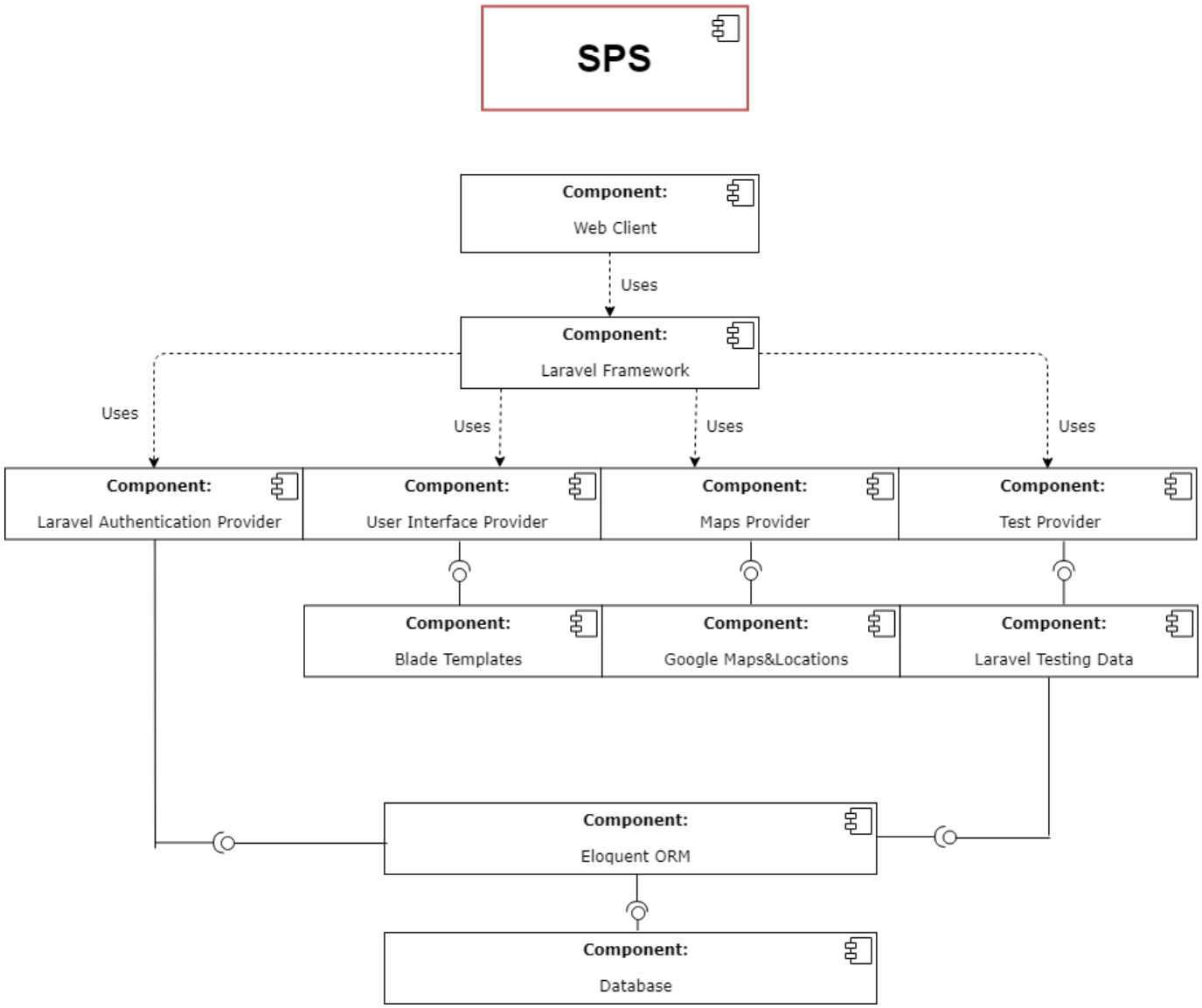
4.10 DB Schema



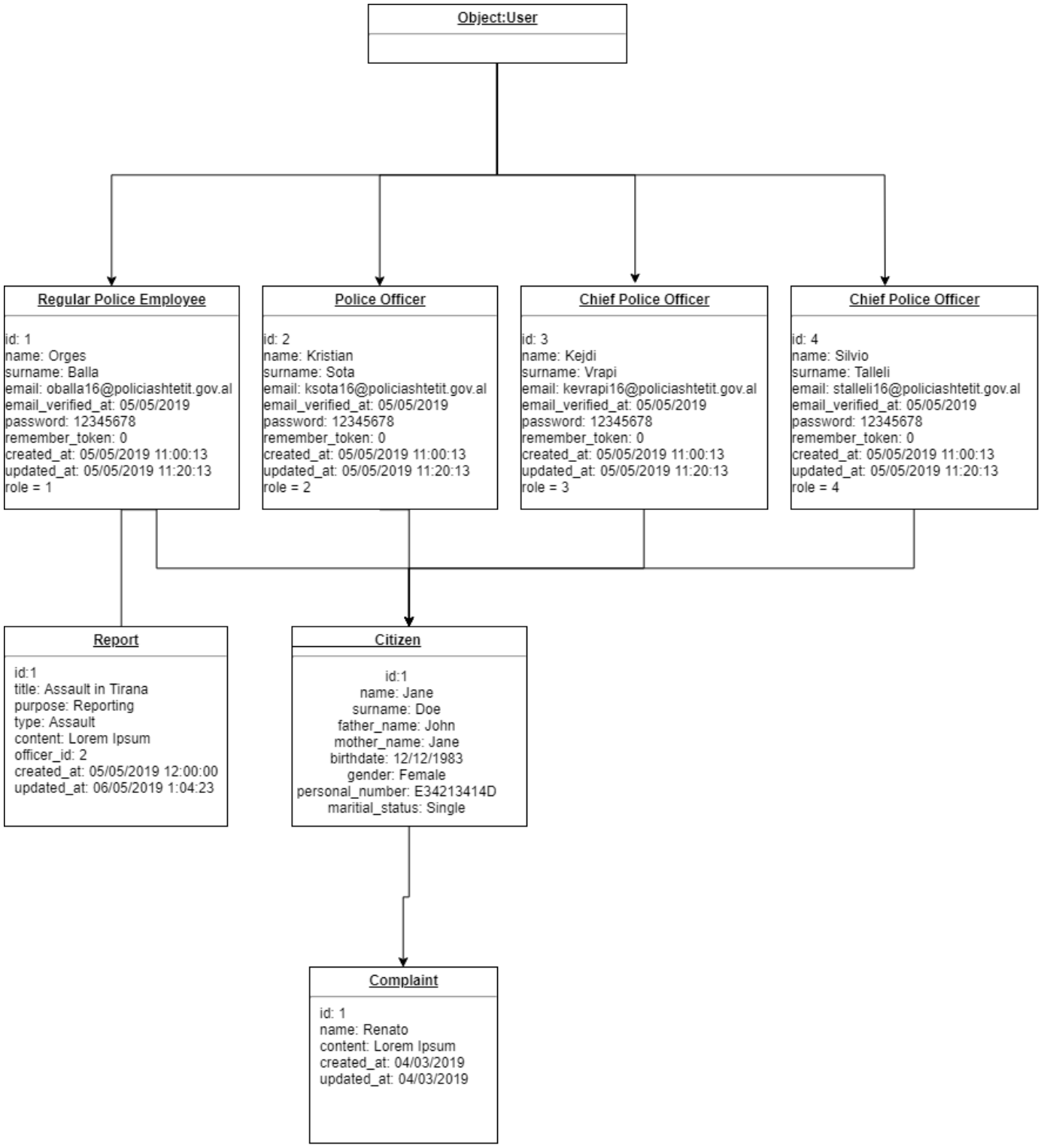
4.11 Entity Relation Diagram



4.12 Component Diagram

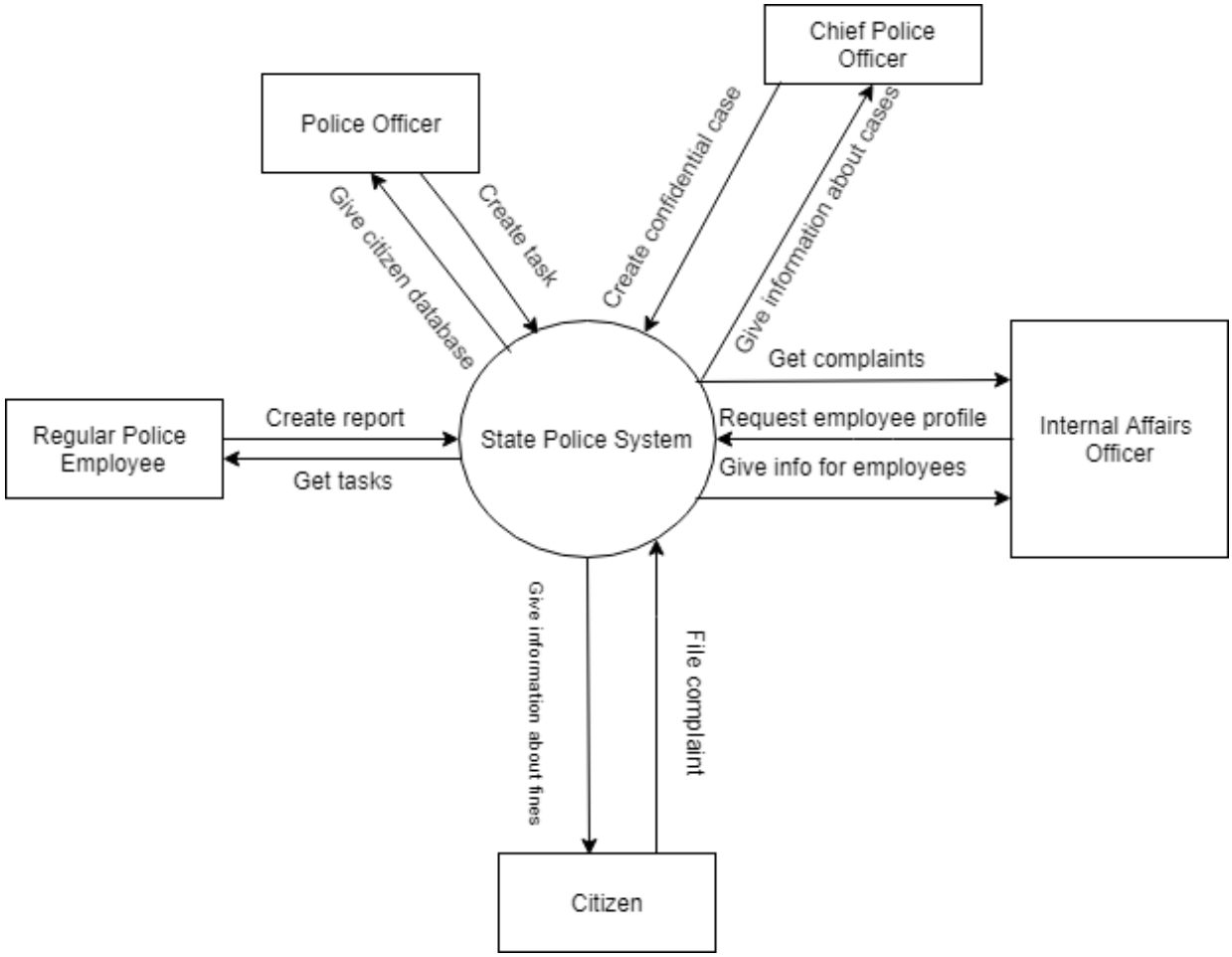


4.13 bject Diagram

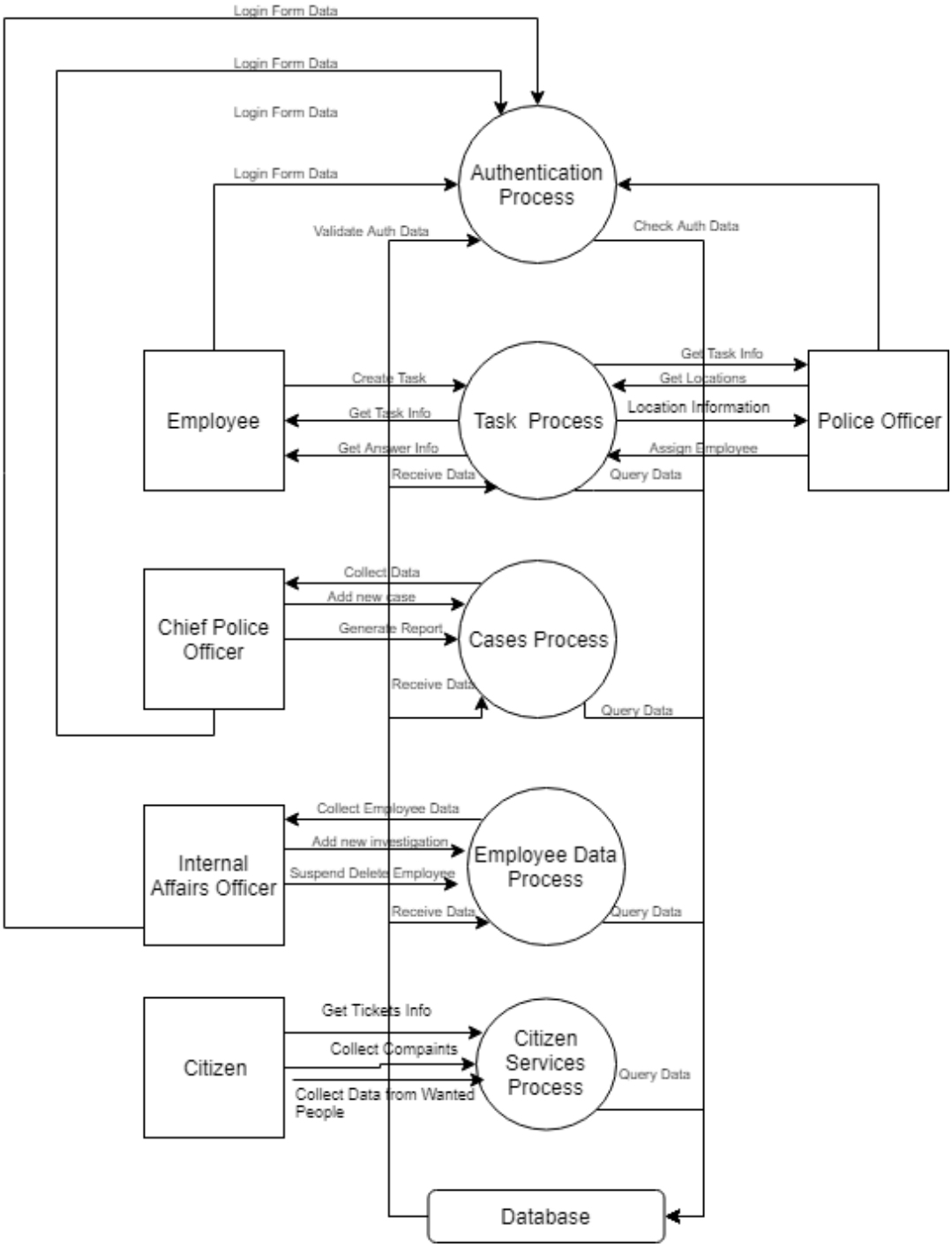


4.14 Data Flow Diagrams

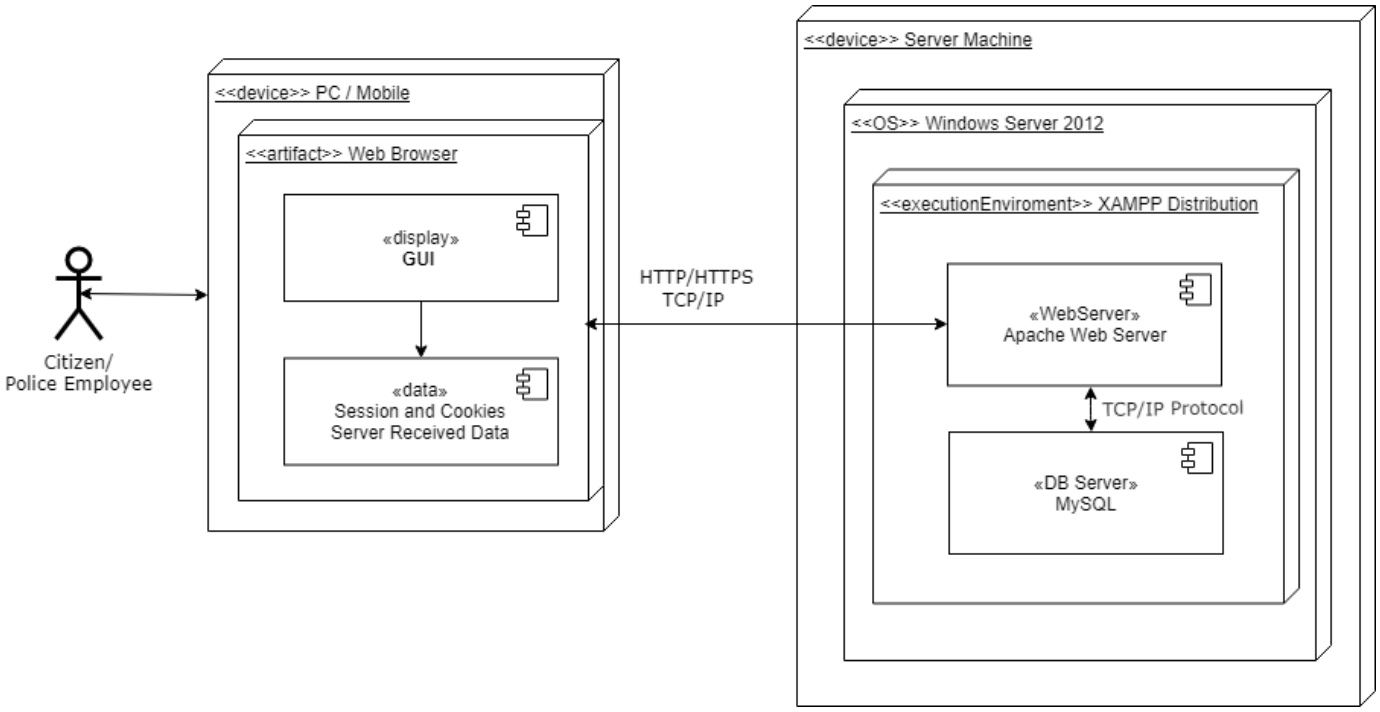
Data Flow Diagram – Level 0



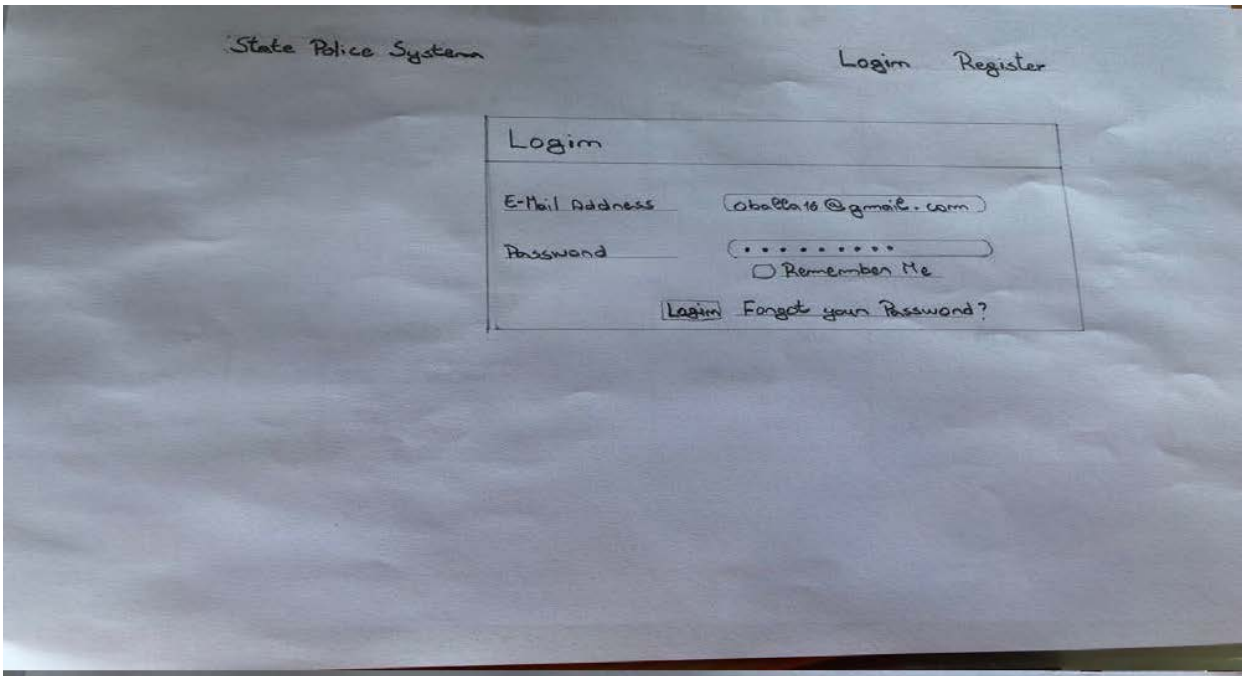
Data Flow Diagram – Level 1

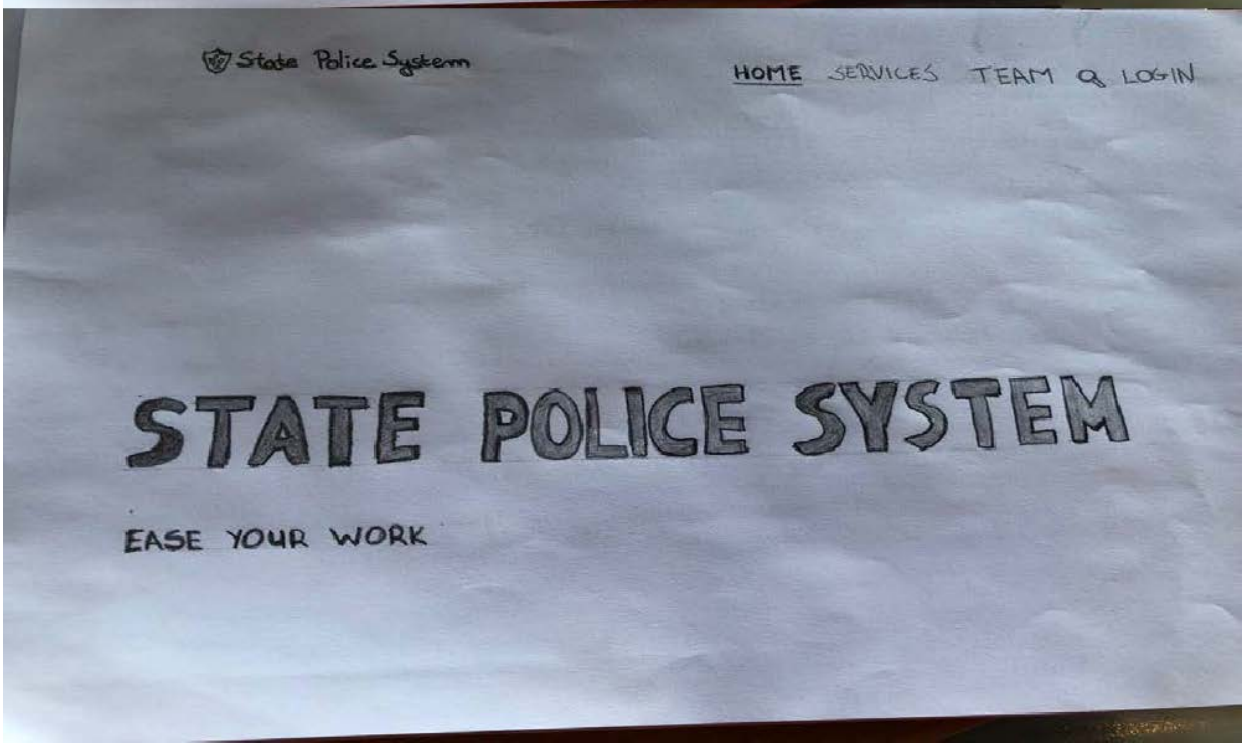


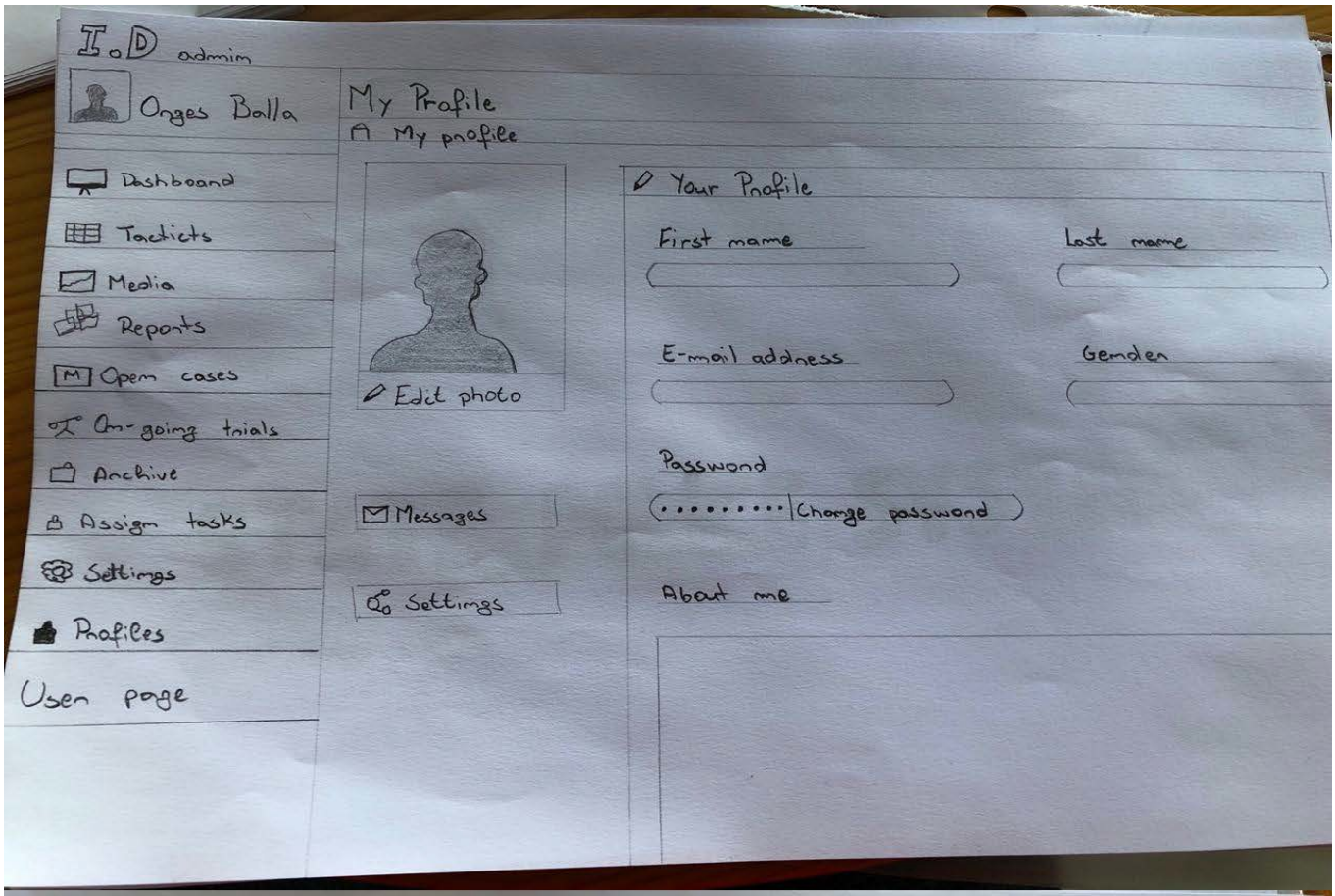
4.15 Deployment Diagram

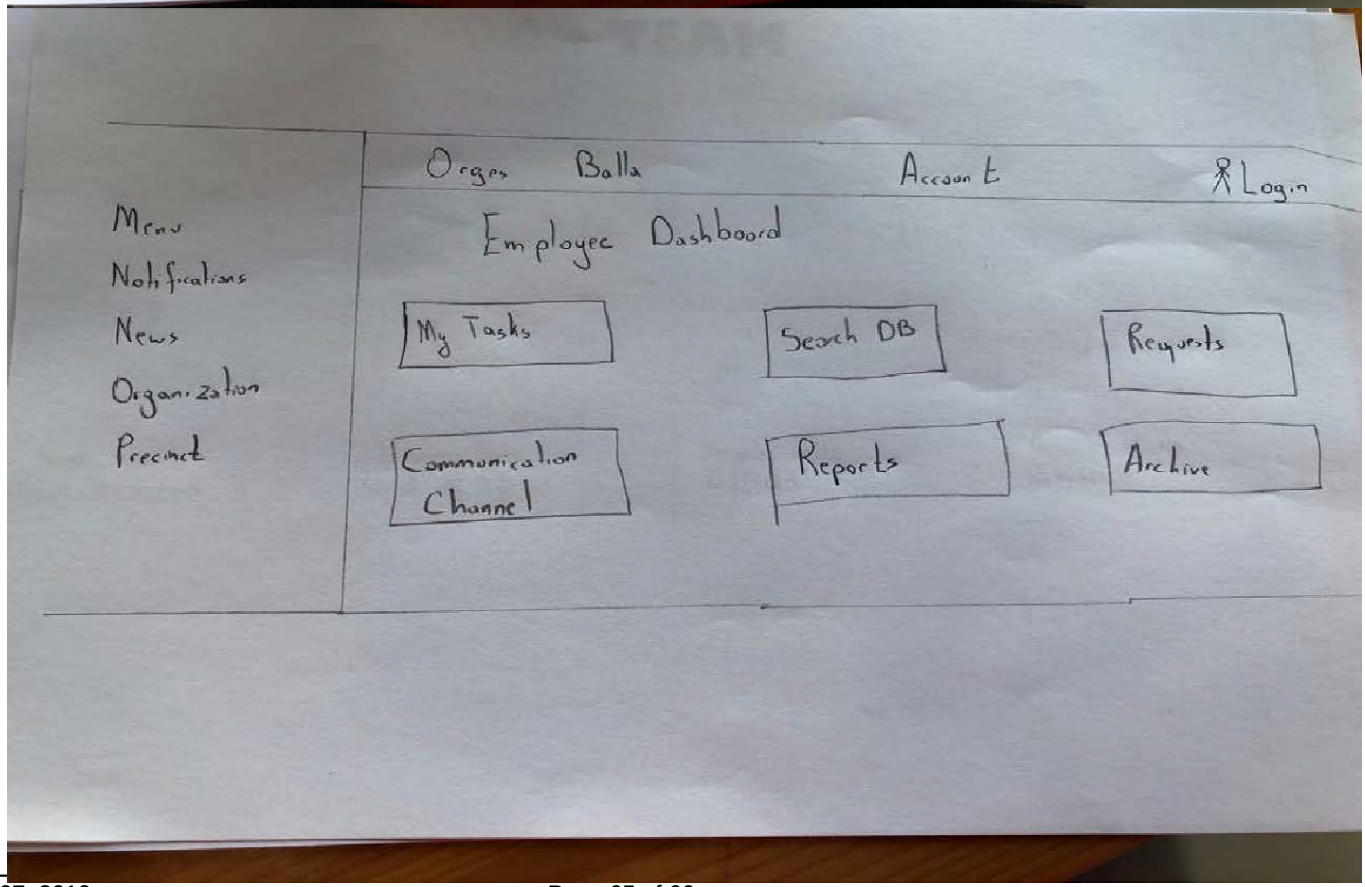


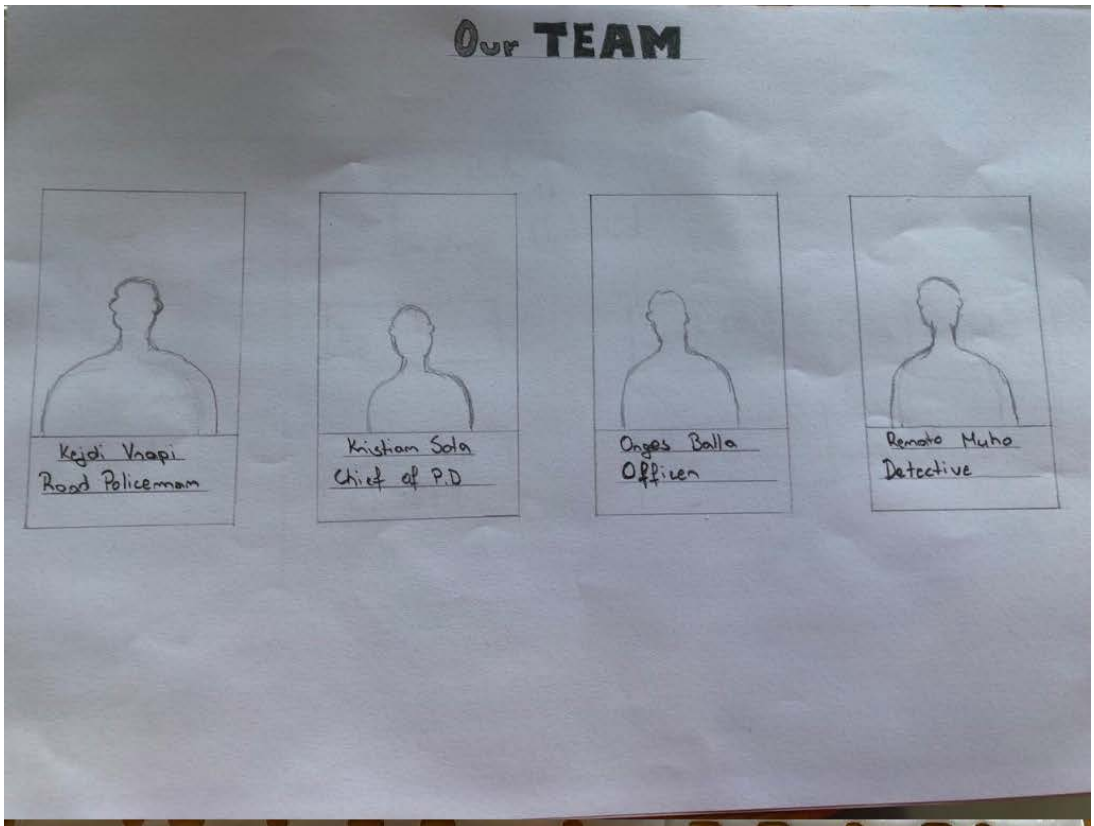
Appendix C. Sketches

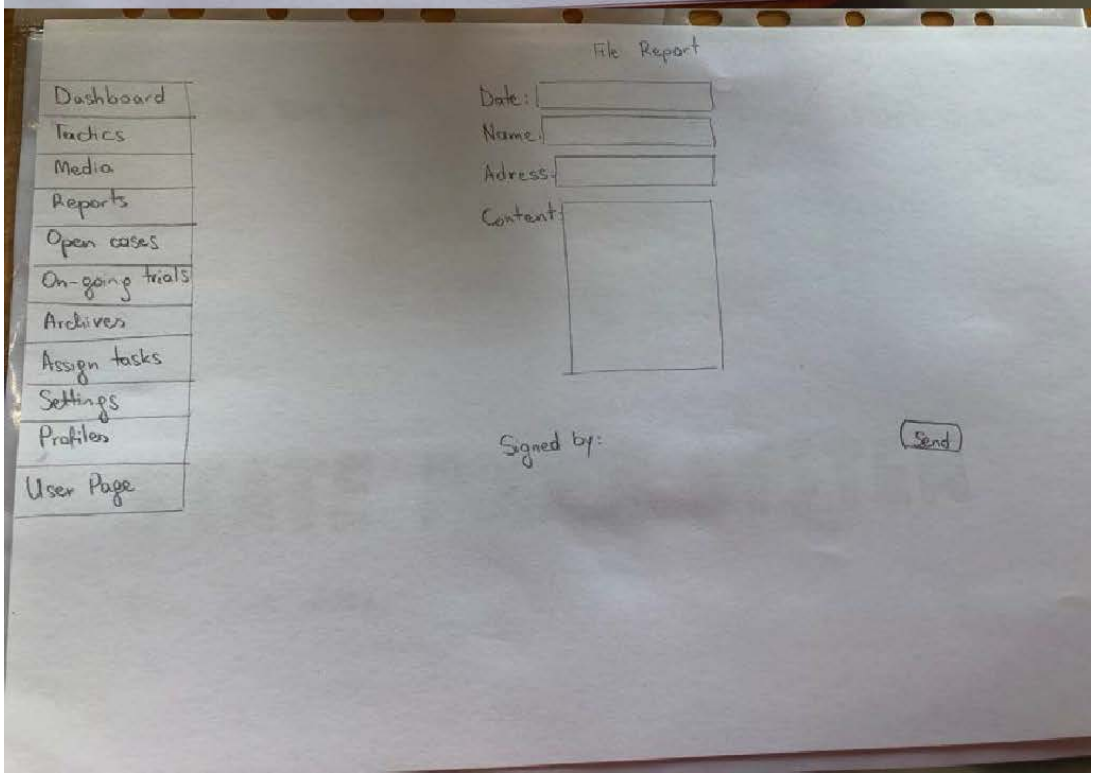


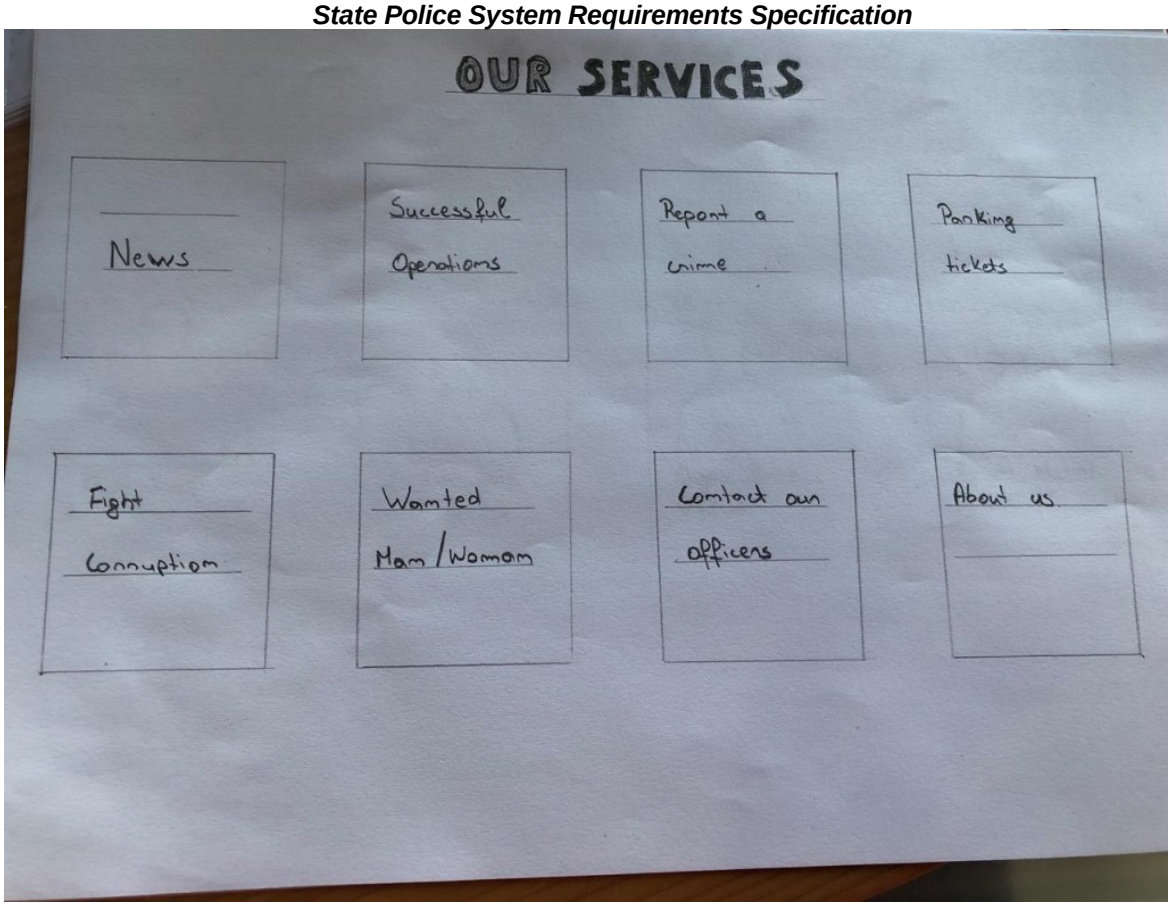



I.D admin
Onges Balla
Dashboard
Tactics
Media
Reports
Open cases
On-going trials
Archive
Assign tasks
Settings
Profiles
User page
My Profile
My profile
Edit photo
Messages
Settings
Your Profile
First name
Last name
E-mail address
Gender
Password
Change password
About me


Menu
Notifications
News
Organization
Precinct
Onges Balla
Account
Login
Employee Dashboard
My Tasks
Search DB
Requests
Communication Channel
Reports
Archive


Our TEAM
Kejdi Vnapi
Road Policeman
Kristian Sota
Chief of P.D
Onges Balla
Officer
Remato Muho
Detective


File Report
Dashboard
Tactics
Media
Reports
Open cases
On-going trials
Archives
Assign tasks
Settings
Profiles
User Page
Date:
Name:
Adress:
Content:
Signed by:
Send


OUR SERVICES
News
Successful Operations
Report a crime
Parking tickets
Fight Corruption
Wamted Mam / Womam
Contact our officers
About us