Software Requirement Specification

Tax Payment System

Course Code: SWE331
Course Title: Object Oriented Software Development
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Section: B

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1. Introduction

1.1 Purpose

The purpose of this document is to describe all the requirements for the targeted Tax payment Govt. of Bangladesh. The intended audience includes all the Citizen of Bangladesh in the potential system. These include, but are not necessarily limited to, the following: Government Employee, Tax officer, Circle, Officer, Tax payer.

Developers should consult this document and its revisions as the only source of requirements for the project. They should not consider any requirements statements, written or verbal as valid until they appear in this document or its revision.

The Government Employee, Tax officer, Circle, Officer, Tax payer should use this document and its revisions as the primary means to communicate confirmed requirements to the development team. The development team expects many face-to-face conversations that will undoubtedly be about requirements and ideas for requirements. Please note that only the requirements that appear in this document or a future revision, however, will be used to define the scope of the system.

1.2 Documentation Conventions

This SRS is divided up into sections detailing an overall description, the external interface requirements, system features, and other non-functional requirements. As this is the final draft, any future modifications of this document would involve adapting the product to changing systems and uses. We hope to have the product evolve to changing times as to ensure continued use and success. The Document and Specification team have prepared the overall information in this document to the best of their ability. Once read, it is evident that each section is important to the overall SRS and significant to the project in its own right.

1.3 Case Study

According to National Board of Revenue (NBR) data, as of June 2018, there are about 3.5 million tax identification number (TIN) holders, of which about 1.95 million submitted tax returns. However, this does not mean that those who have paid tax have not evaded tax.

1.3 Gap

Tax evasion can have many forms. In Bangladesh, businessmen who collect value added tax from consumers also evade tax by under-reporting the same. Importers avoid tax by under-invoicing. Tax avoidance is thus a major problem.

1.4 Product Scope

The proposed software product is Tax Payment System for Citizen. It will be used to maintain various Tax payer records such as Submit Income Tax Return, Tax Calculation, Tax Payment, Audit and Report.

The system is expected to

- Ensure better revenue distribution,
- Efficient collection of revenue,
- User-friendly service,
- Fraud detection,
- Higher rate of collection,
- Standard solutions for all tax types in whole tax system,
- Integrated solution for all revenue types,
- Significant decrease of costs and faster tax collection.

1.5 Glossary

Here there are some clarifications of the terms uses in this document and also some explanation related to Tax Payment System (TPS)

Terms Definition: A Citizen must register to use this system, they can add their whole information of their properties and make a list of their legal properties like Gold, Other

valuable jewelry. The system automatically calculates the tax over the citizen's properties, so the citizen can view how much tax he/she have to pay.

On the other side the circle officer can see the Assessment report of the citizen and submit the from to Area officer.

And the Area officer can see the citizen and Circle officer audit report and give the tax clearance.

1.6 Overview

This Software Requirements Specification (SRS) specifies all the requirements for TPS. Various techniques such as interviews, brain storming and idea reduction, use cases and prototyping were used to elicit the requirements and we have identified the needs, analyzed and refined them. The objective of this document therefore is to formally describe the system's high-level requirements including functional requirements, non-functional requirements and constraints.

2. User Classes & Characteristics

2.1 Area Officer

In the TPS the major and sensitive role is played by the Area Officer, in TPS this role is played by the Main character. The Area officer will check and validate all the process of Tax payment. Audit Circle officer work and tax payer details report.

2.2 Circle Officer

In the TPS the secondary important role plays by circle officer, He can check the report of tax payer and audit tax payer properties information.

2.3 Tax Payer

The role of a tax payer is also a most important role because, it's the main primary actor of our system. A taxy payer can register in the system and input validated information for calculate how much max he/she have to pay. And see his/her report, and track his/her tax payment process in home. He /She can payment the tax using online mobile banking system or credit card.

3. Design & Implementation Constraints

3.1 Operating Environment:

The TPS will be web-based system. Thus, anyone having a browser can hit the specific link and can get access to it. Thus, it will ensure its best usage and will ease the means of getting access to the system. Moreover, it will remove the complexities of running the system in multiple platforms as it will be deployed in a web server.

3.2 Software Language Used:

The application will be developed using Laravel 6.0 Framework. The used language will be PHP and the front end will be developed using Laravel MVC. Besides for eye soothing user interface experience CSS 4 will also be used.

3.3 Development Tools:

For the development purpose ATOM edition will be used. For handling different database operations XAMPP MySQL server will be used.

3.4 Database Support:

The database that will be used is XAMPP server. Entity framework 4.1 will be used from the applications end to insert, update and delete the data.

4. List of Functional & Non-Functional Requirement

4.1 Functional requirement

Functional requirement: Tax Payer

Requirement ID	FR.TP.1
Requirement Name	Log in
Description	Tax Payer can log in using user name and password

Requirement ID	FR.TP.2
Requirement Name	Calculate Tax
Description	Customer can Calculate Tax

Requirement ID	FR.TP.3
Requirement Name	Select Assessment From
Description	Customer can Submit Tax Information in Assessment From

Requirement ID	FR.TP.4
Requirement Name	Tax Payment
Description	Customer can Pay Tax

Requirement ID	FR.TX.5
Requirement Name	Select Report
Description	Customer can See Details about his Tax

Functional requirement: Circle Officer:

Requirement ID	FR.CO.1
Requirement Name	Log in
Description	Circle Officer can log in using user name and password

Requirement ID	FR.CO.2
Requirement Name	See Tax Payer Submission
Description	Circle Officer can see all Tax Payer Submission

Requirement ID	FR.CO.3
Requirement Name	Submit Report for Tax Payer
Description	Circle Officer can Submit Report

Functional requirement: Area Officer:

Requirement ID	FR.AO.1
Requirement Name	Log in
Description	Area Officer can log in using user name and password

Requirement ID	FR.AO.2
Requirement Name	Assessment Tax Payer Return
Description	Area Officer can Assessment all Tax Payer

Requirement ID	FR.AO.3
Requirement Name	Action for Tax Payer
Description	Area Officer can Action for Tax Payer

4.2 Non-Functional Requirement

✈ System Security

The objective of system security is the protection of information and property from theft, corruption and other types of damage, while allowing the information and property to remain accessible and productive. System security includes the development and implementation of security countermeasures. There are a number of different approaches to computer system security, including the use of a firewall, data encryption, passwords

✈ Maintainability

Software maintenance is not about fixing wear and tear. Software is not physical, and therefore it does not degrade by itself the way physical things do. Yet most software systems are modified all the time after they have been delivered. This is what software maintenance is about. Four types of software maintenance can be distinguished:

- Bugs are discovered and have to be fixed (this is called *corrective maintenance*).
- The system has to be adapted to changes in the environment in which it operates—for example, upgrades of the operating system or technologies (this is called *adaptive maintenance*).
- Users of the system (and/or other stakeholders) have new or changed requirements (this is called *perfective maintenance*).
- Ways are identified to increase quality or prevent future bugs from occurring (this is called *preventive maintenance*).

✈ Performance

Software performance testing is the practice of determining whether a given application has the capacity to perform in terms of scalability and responsiveness under a specified workload. Responsiveness refers to the ability of a given application to meet pre-determined objectives for throughput, while scalability is the number of activities processed within a given time.

Performing this type of testing is a key factor when ascertaining the quality of a given application.

The entire process of software performance testing is done to accomplish a set of four goals:

- To determine the throughput or the rate of transaction.
- To determine the server response time, which is the time taken by a given application node to give a response to a request made by another node.
- To determine the response time of the render, which requires the inclusion of functional test scripts in the test scenario.
- To determine the performance specifications and document them in the test plan.

5. Use Case

User profile: 1

User Class: Tax Payer	**Characteristics**	**Requirement Implied**
User type	Primary	Must give input
Age range	18-65	Minimal Design
Number of users	Unlimited	Bandwidth should be high
Education	Educated	Simple interface
Language Skill	English	Simple English
Computer/ Mobile Knowledge	Yes	Type option or Touch
Training	Not required	Not required
Goal	Payment Tax, Submit Return, Calculation	Must see from and Submit Return, Tax Calculator

User profile: 2

User Class: Circle Officer	**Characteristics**	**Requirement Implied**
User type	Primary	Must see output
Age range	35-40	Minimal Design
Number of users	5	Bandwidth should be normal
Education	Higher education	Simple interface
Language Skill	English	Simple English
Computer/ Mobile Knowledge	Yes	Only type or click option
Training	Required	2 days training will be provided
Goal	Assessment, Report	Must See Dashboard Assessment, Report

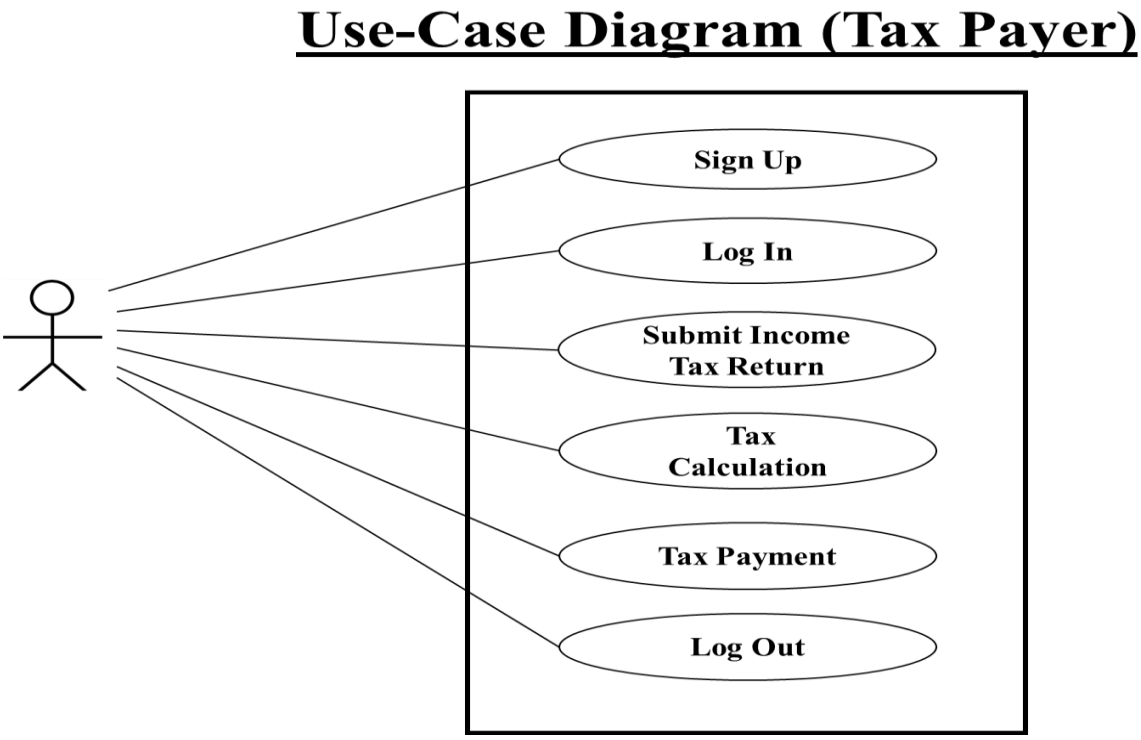
User profile: 3

User Class: Area Officer	**Characteristics**	**Requirement Implied**
User type	Primary	Must see output
Age range	35-40	Minimal Design
Number of users	2	Bandwidth should be normal
Education	Higher education	Simple interface
Language Skill	English	Simple English

Computer/ Mobile Knowledge	Yes	Only type or click option
Training	Required	2 days training will be provided
Goal	Report, Action Against Tax Payer	Must See Dashboard Report, Action Against Tax Payer

6.Use case diagram

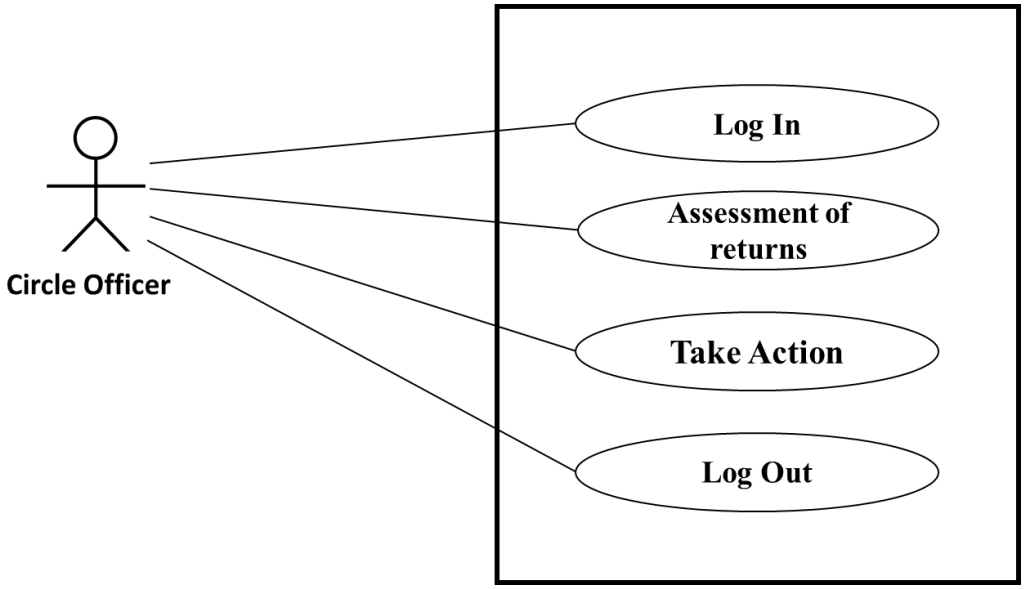
Use case diagram: Tax Payer



Use Case Description

Name of Use Case:	Tax Payer
Description:	Tax Payer Input Information, Submit Return, Calculate Tax, Tax Payment
Actors:	Tax Payer
Preconditions:	1. Tax Payer must be Registered 2. Must be Submitted Information 3. Must be Calculate Tax
Postconditions:	1. Tax Payer must use Payment gateway option 2. See Report
Flow:	1. Tax Payer Registration Account for Payment 2. Select Tax Return Information 3. Input All Information 4. Calculate Tax Charge 5. Tax Charge Payment 6. View Feedback /Report
Alternative Flows:	5. In step 5 of the normal flow, if the tax payer Payment by Credit Card or Mobile Banking.
Exceptions:	
Requirements:	The following requirements must be met before execution of the use case 1. Tax Payer Must be Registered 2. Must Be Input Details Tax Return Information

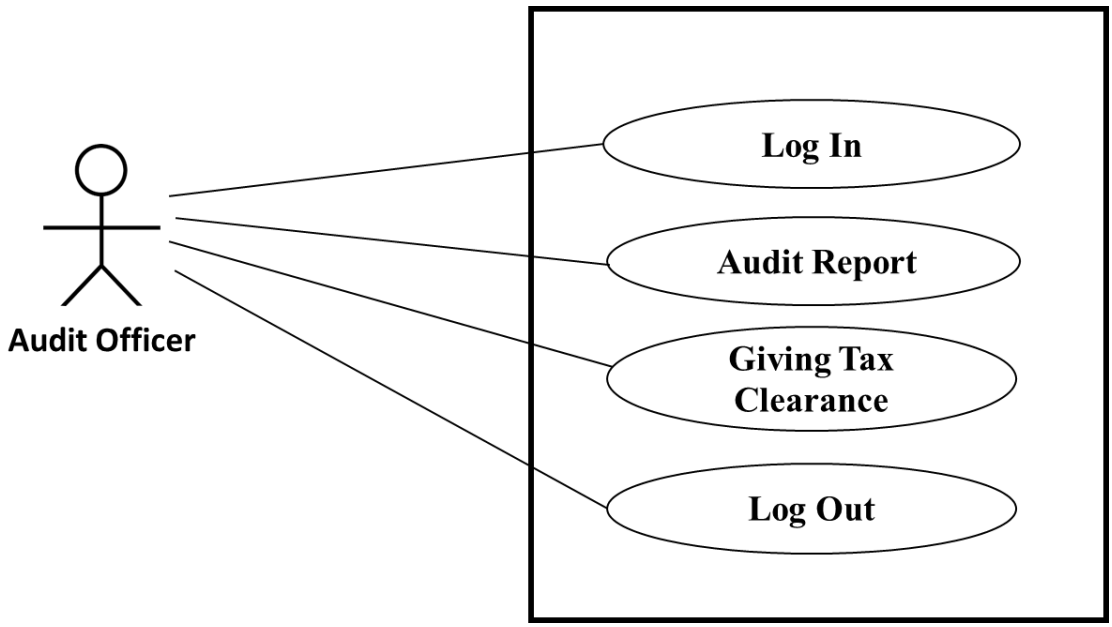
Use case diagram: Circle Officer



Description:	Circle Officer Assessment Tax Payer Information and Submit Report
Actors:	Circle Officers
Preconditions:	1. Officer Must be Registered
Postconditions:	
Flow:	1. Circle Officer Login their Portal 2. See Tax Payer Details 3. Assessment Tax Payer Return Document 4. Create Reports
Alternative Flows:	

Exceptions:	
Requirements:	The following requirements must be met before execution of the use case 1. Must Be Registered

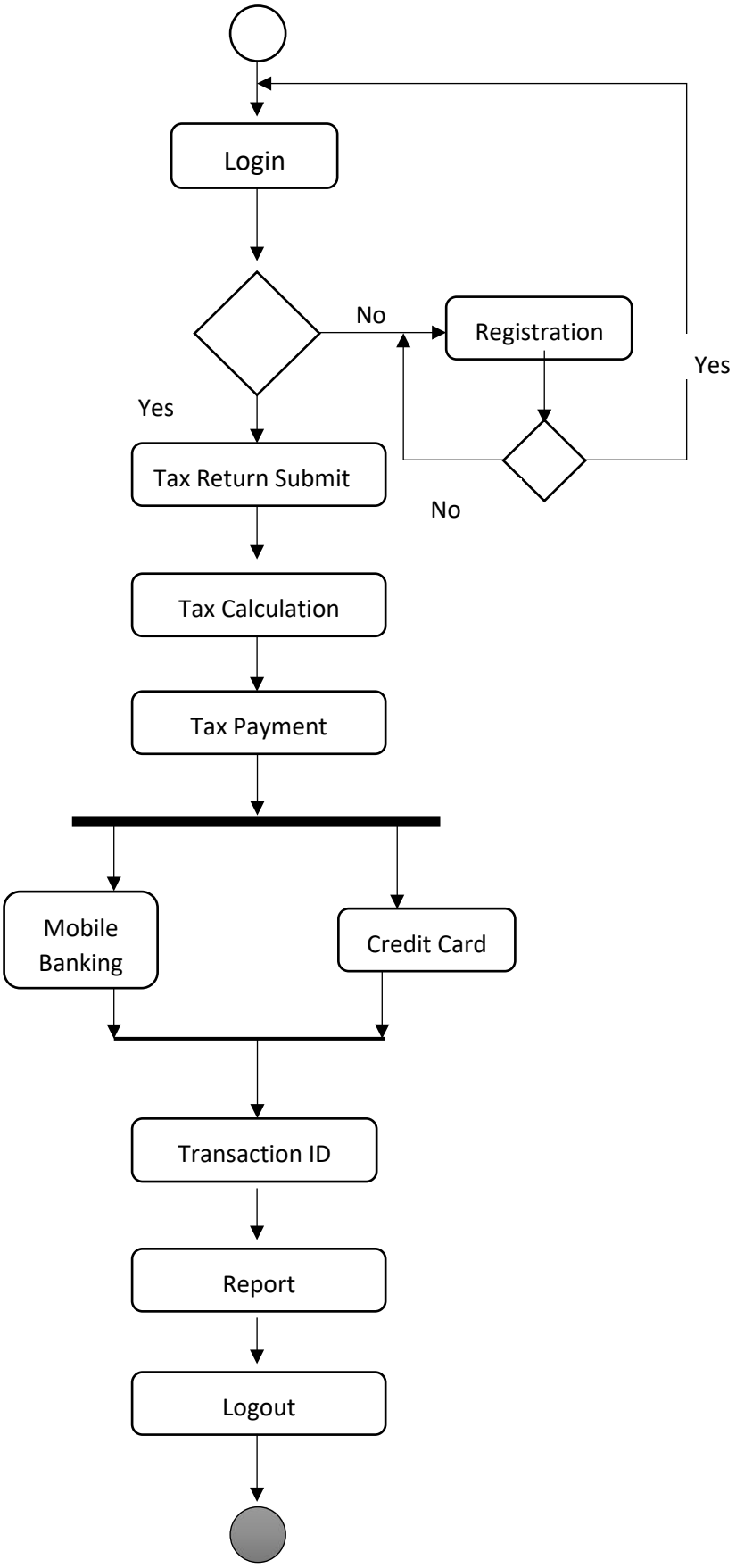
Use case diagram: Area Officer



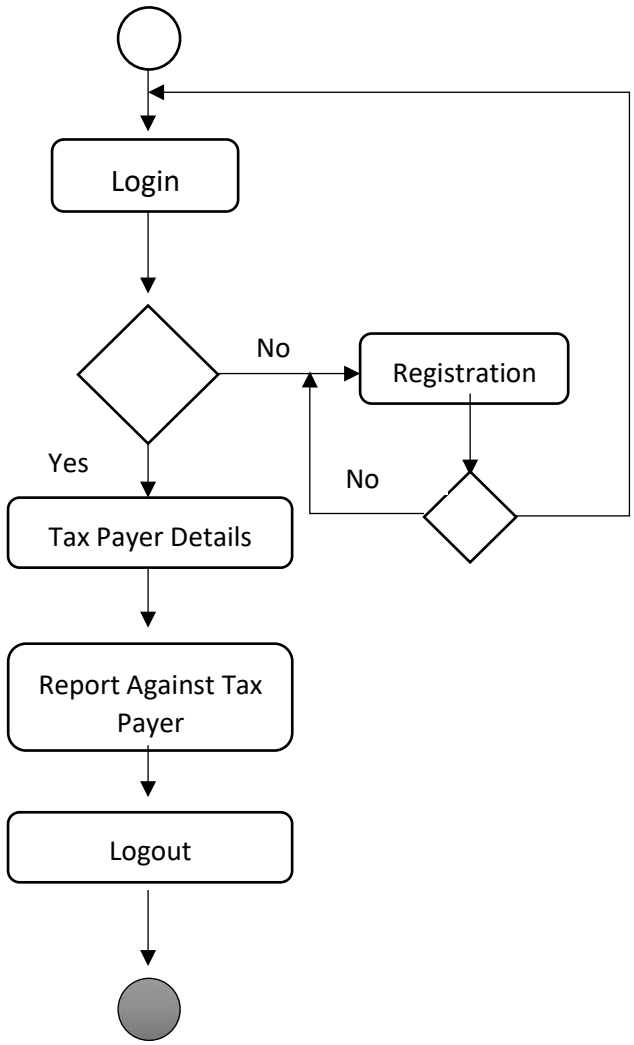
Description:	Area Officer See Assessment Report, See Payment, See Details and Action against Tax Payer
Actors:	Area Officers
Preconditions:	1. Officer Must be Registered
Postconditions:	

Flow:	1. Area Officer Login their Portal 2. See Tax Payer Details 3. See Assessment Reports 4. Take Action
Alternative Flows:	
Exceptions:	
Requirements:	The following requirements must be met before execution of the use case 1. Must Be Registered

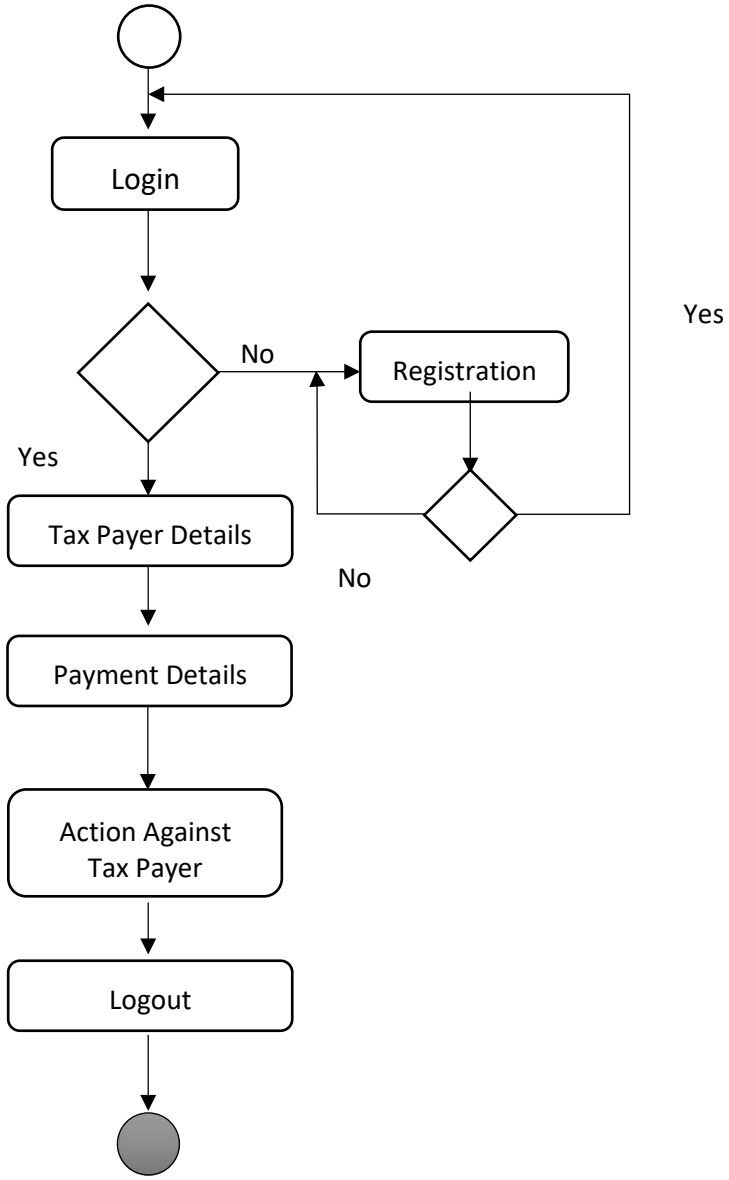
7. Activity Diagram (Tax payer)



Activity Diagram (Circle Officer)

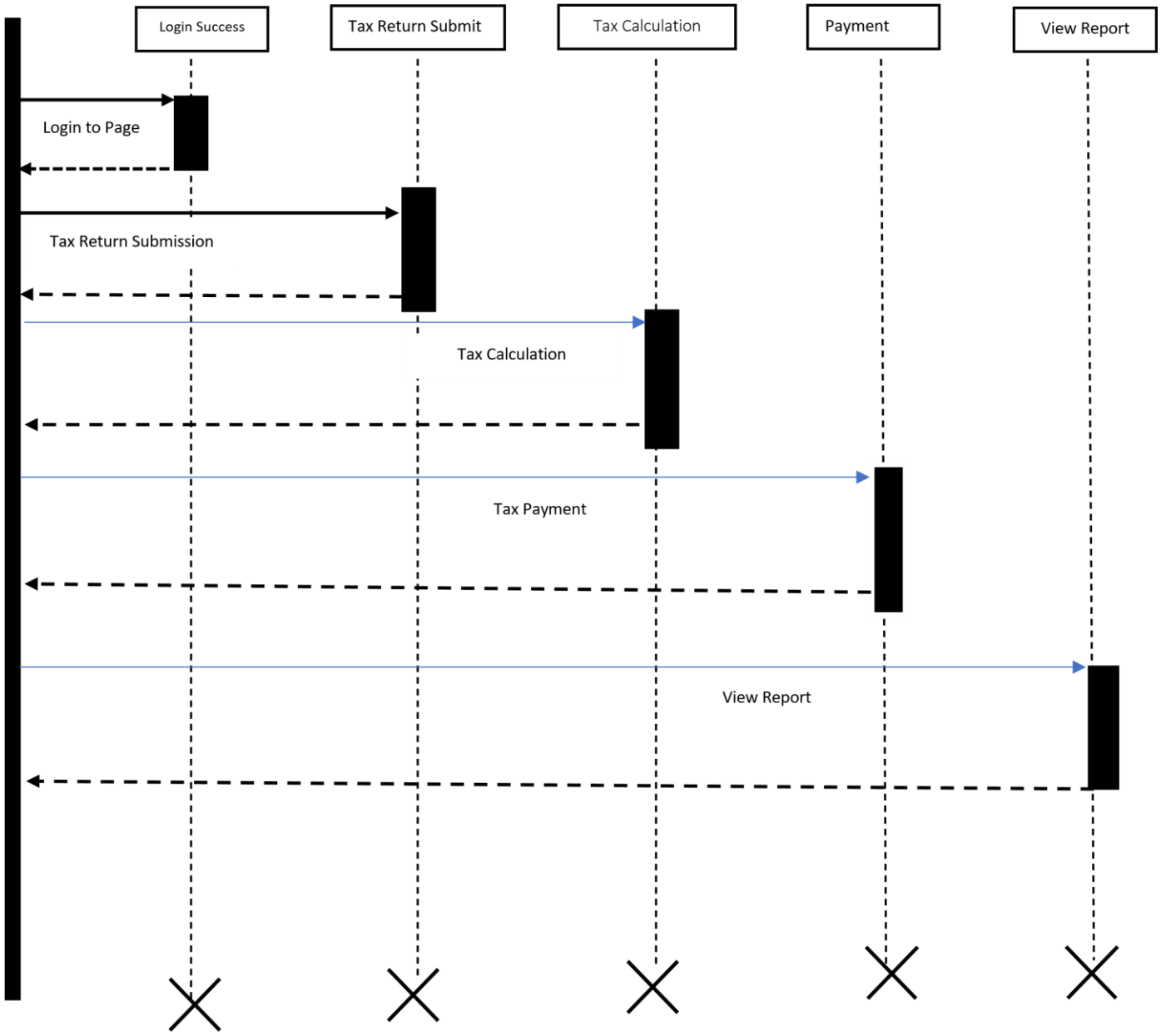


Activity Diagram (Area Officer)

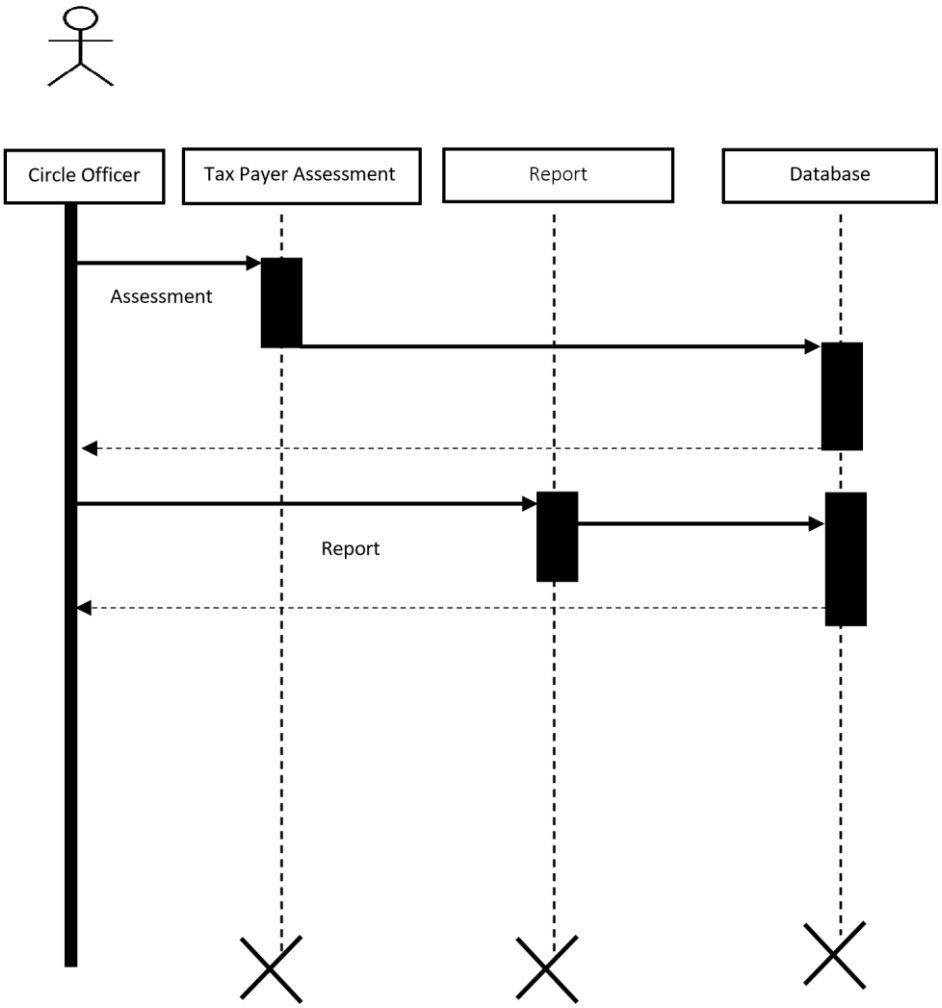


8. Sequence Diagram (Tax Payer)

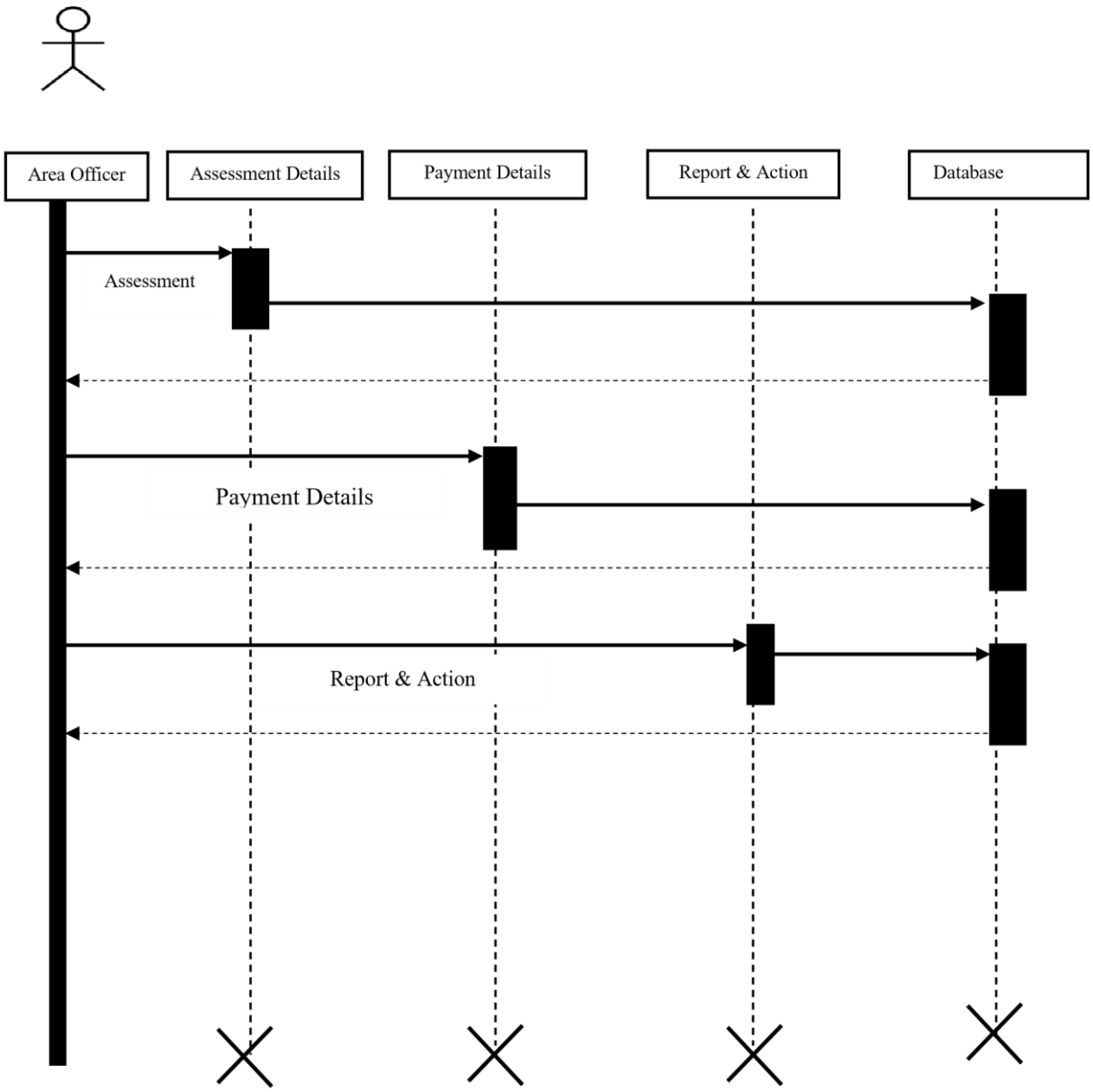
Tax Payer



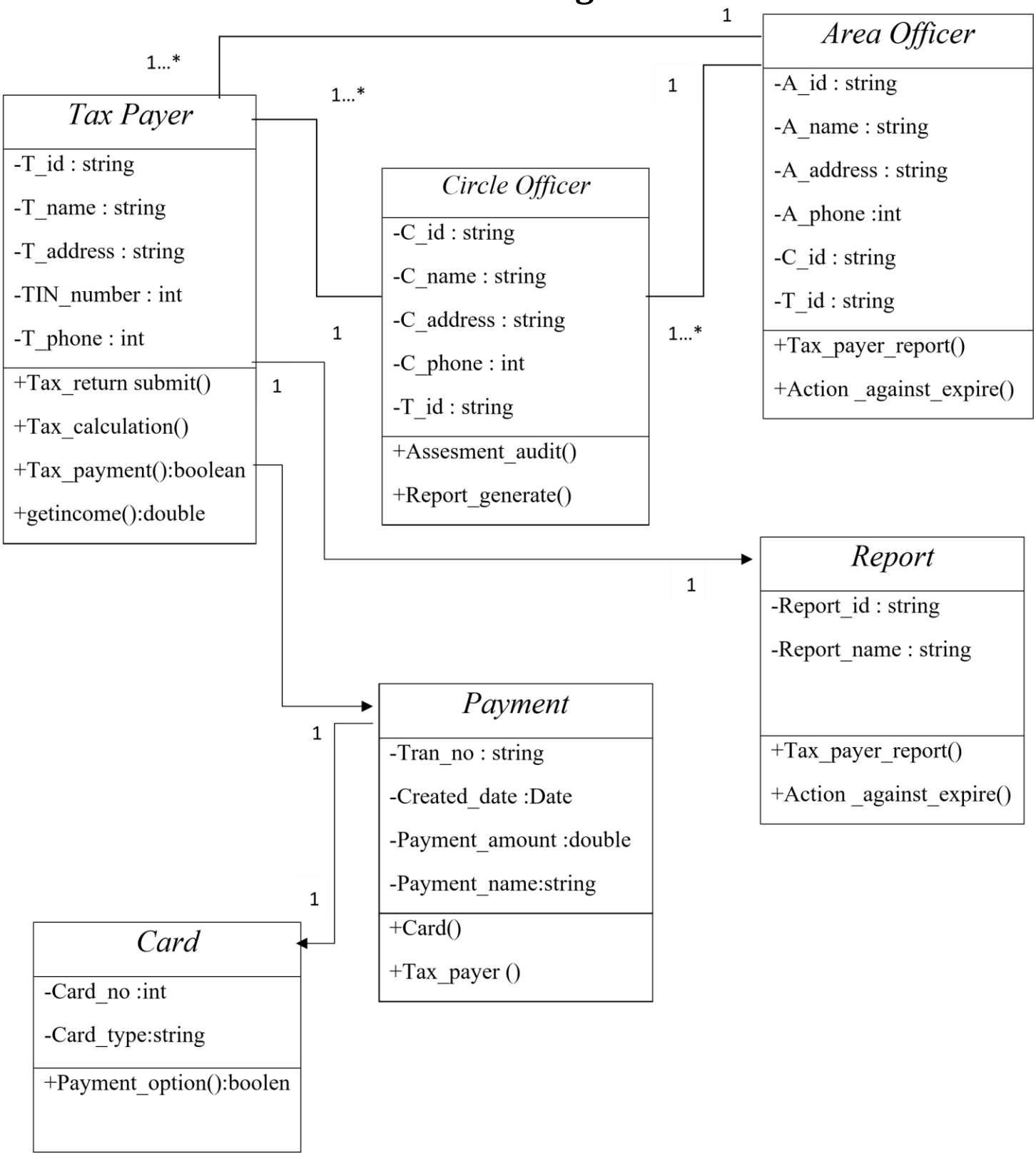
Sequence Diagram (Circle Officer)



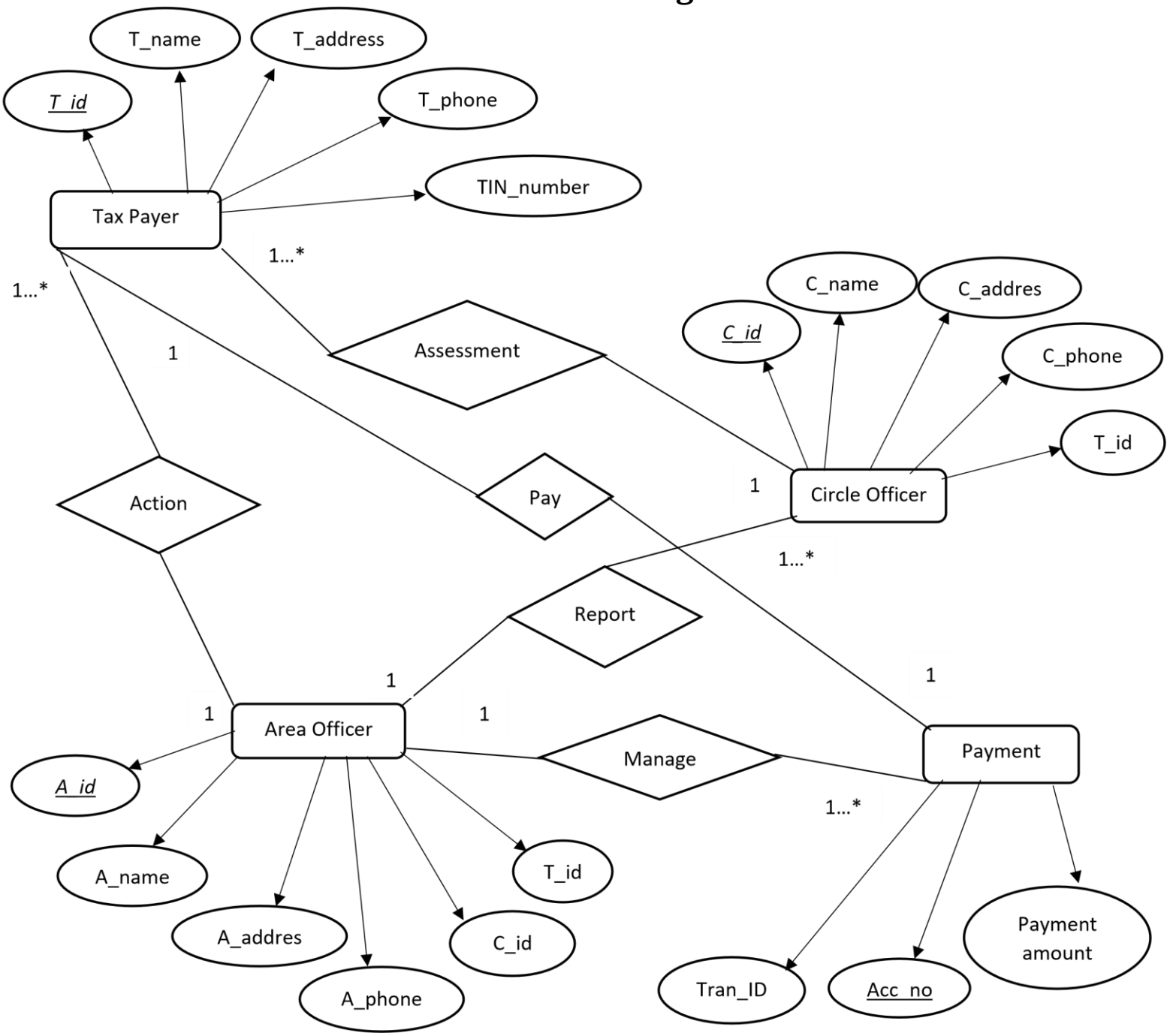
Sequence Diagram (Area Officer)


Area Officer
Assessment Details
Payment Details
Report & Action
Database
Assessment
Payment Details
Report & Action

9. Class Diagram

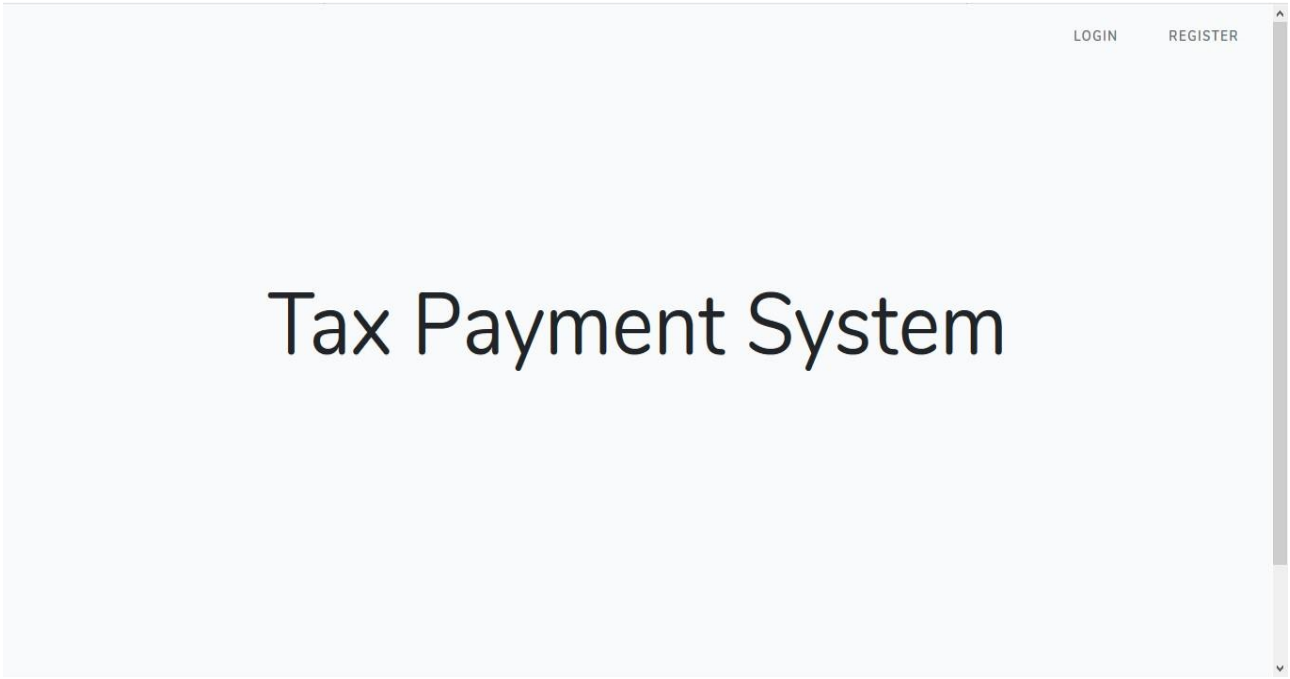


10. ERD Diagram

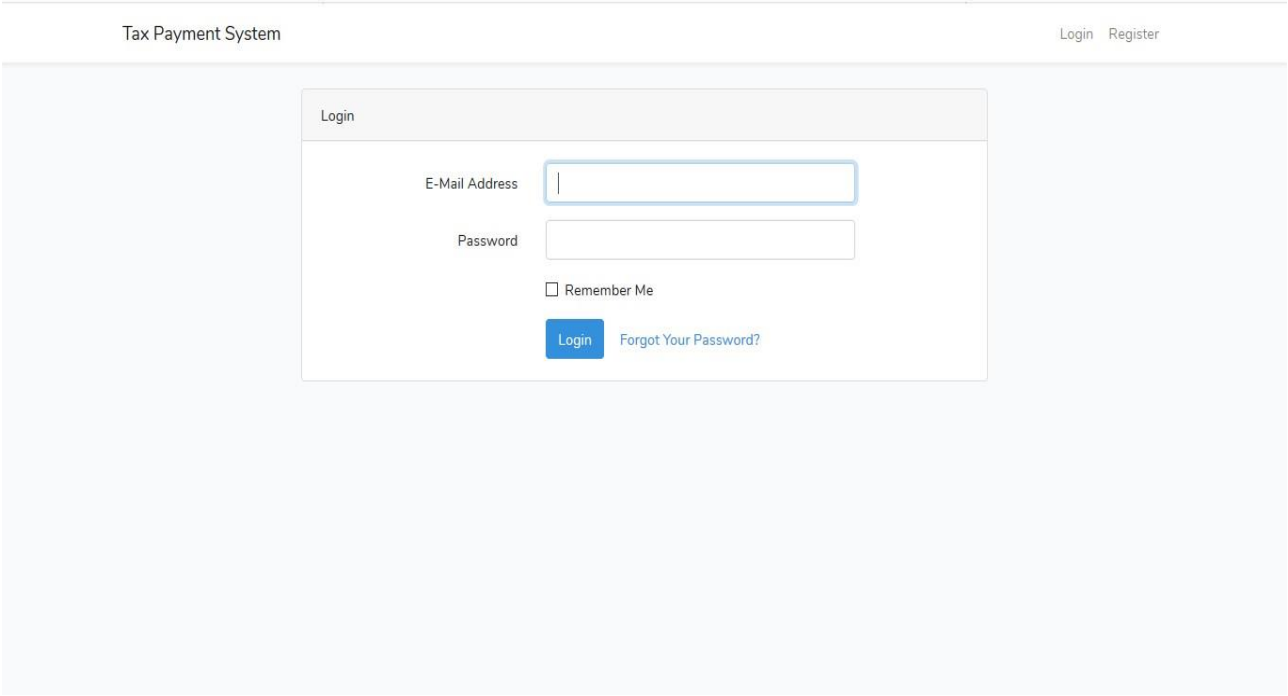


11. UI/UX

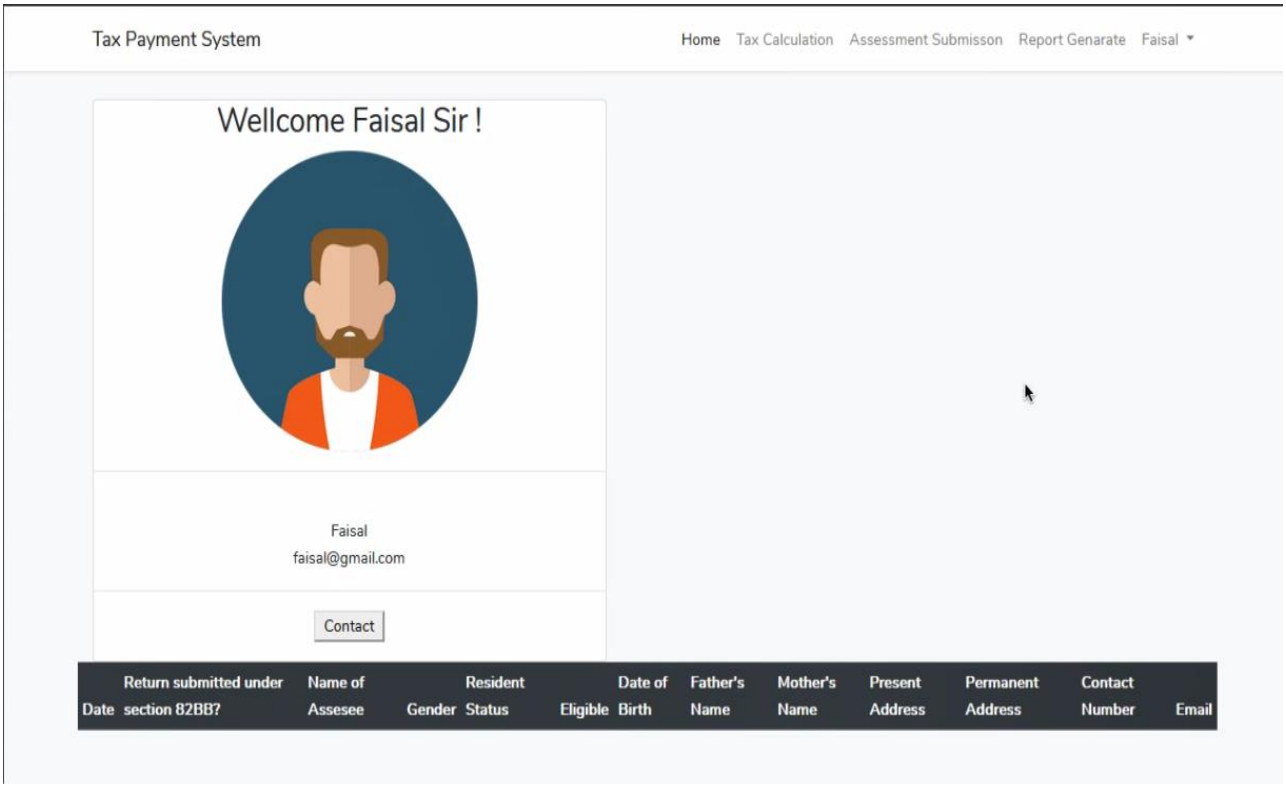
1.Starting Page



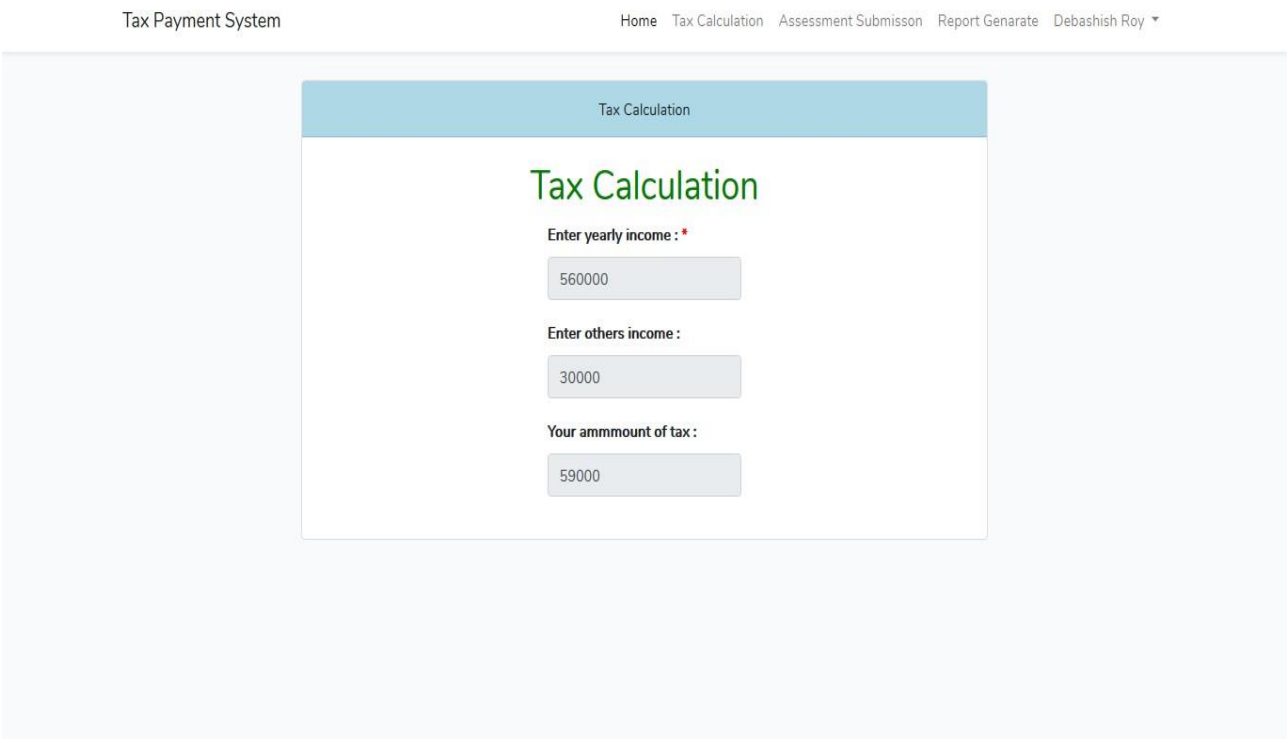
2.Login from



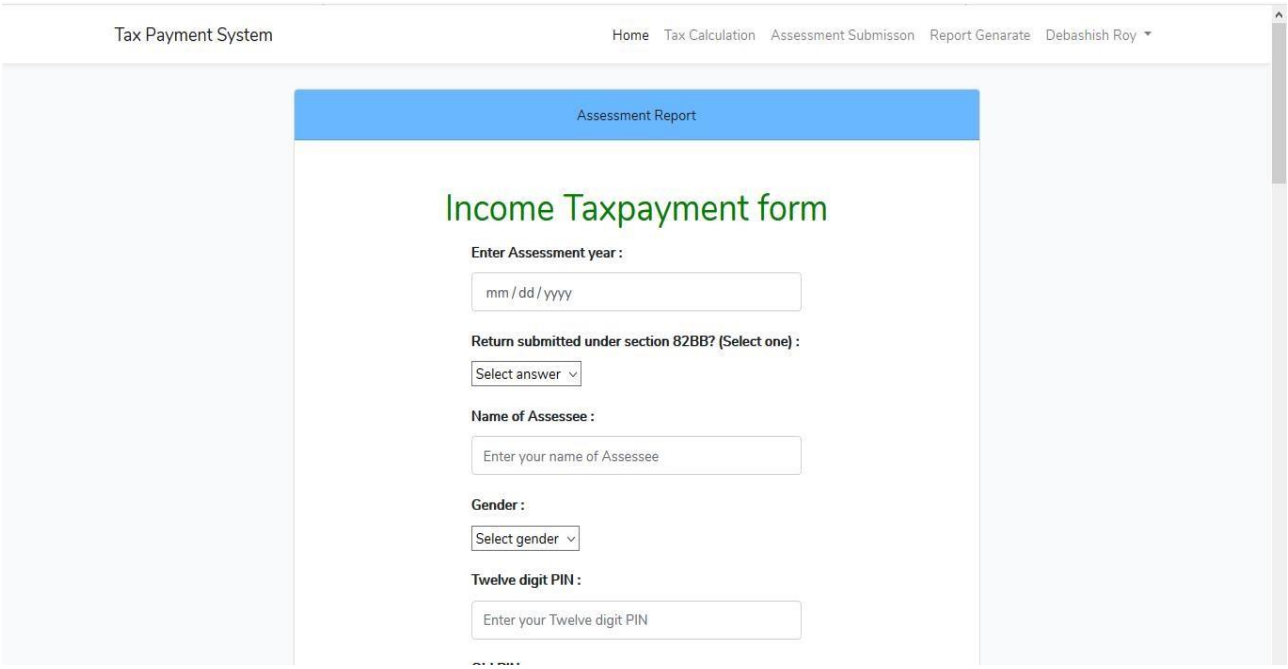
3.Taxpayer home page



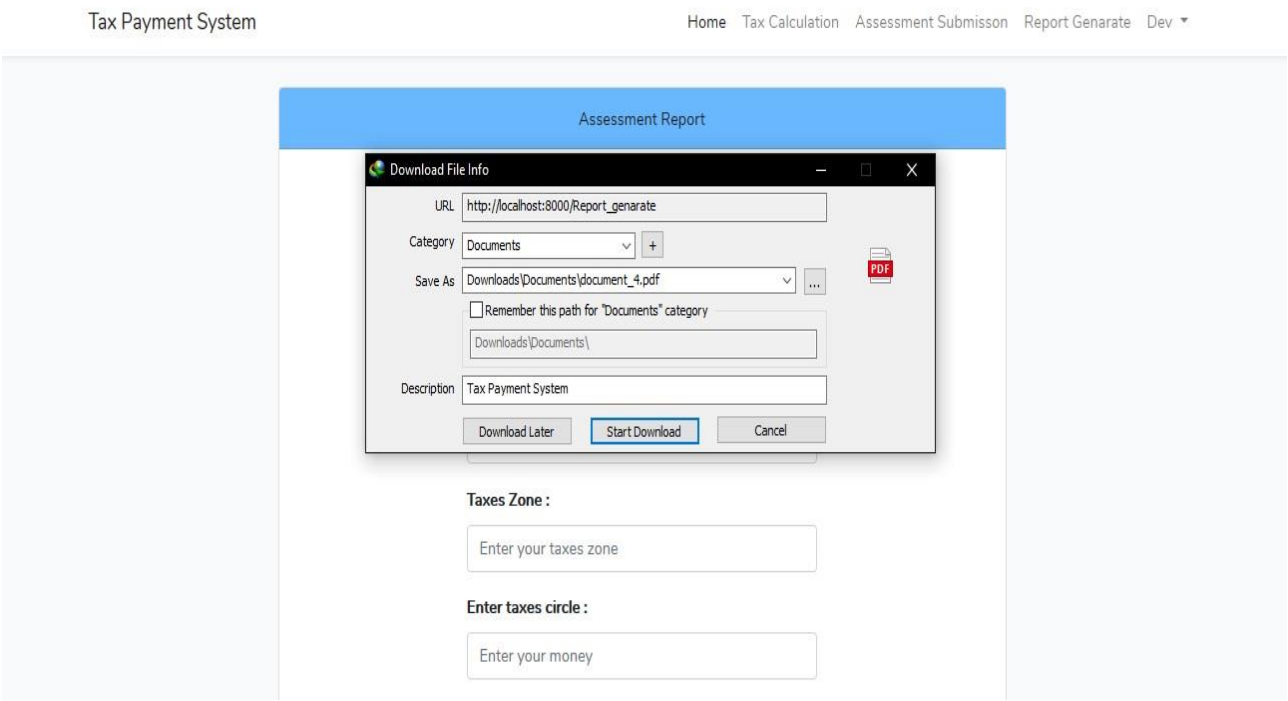
4.Tax Calculation from



5.Taxpayment from



6.Assessment Report

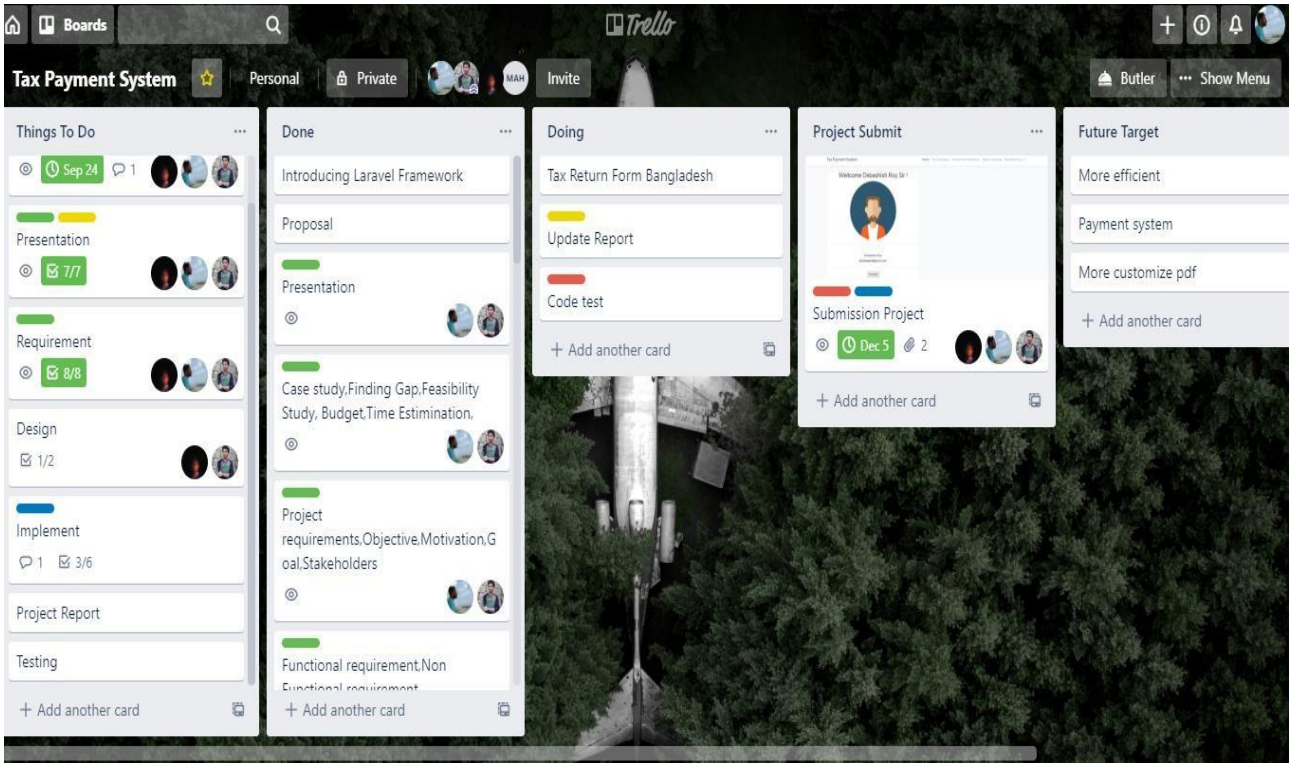


7.Admin Dashboard

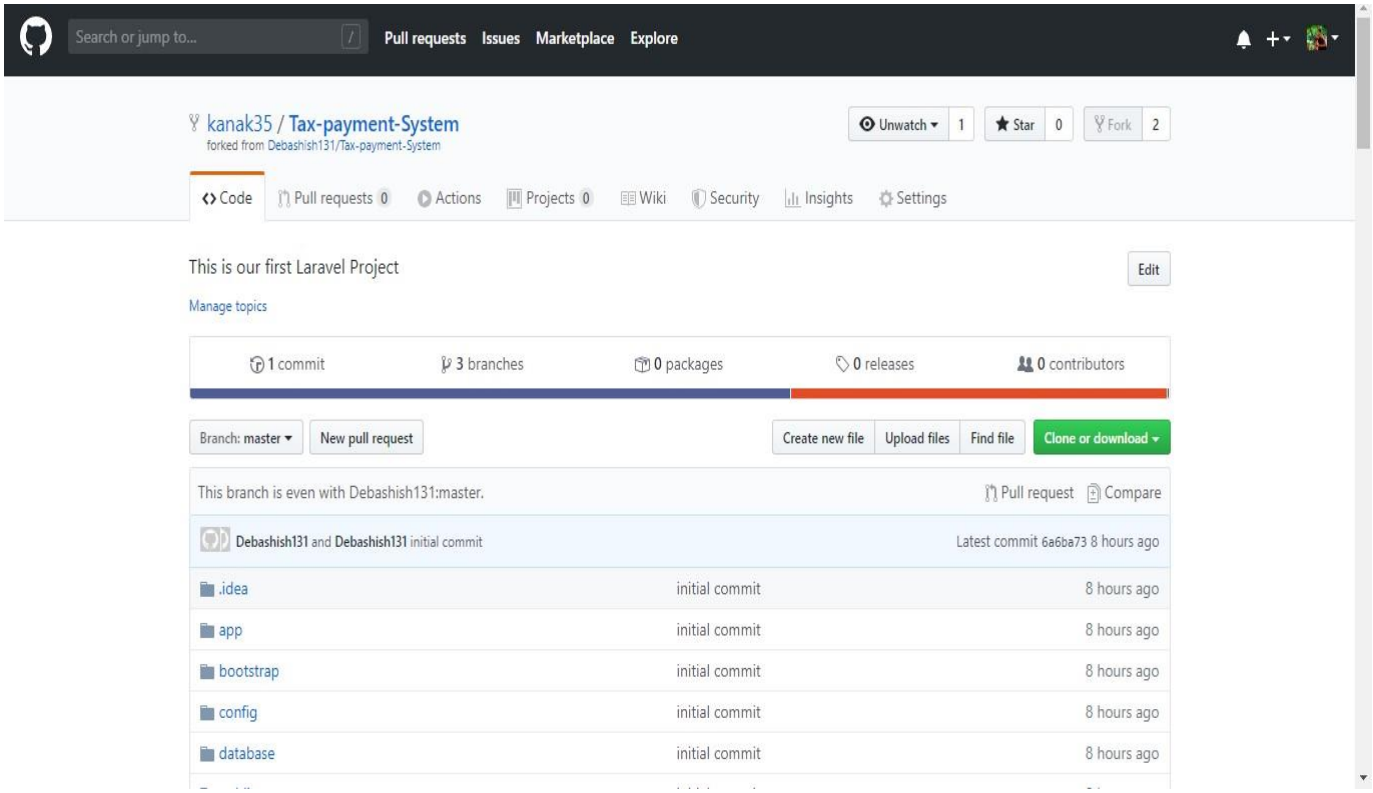
Tax payer Details

Date	Return submitted under section 82BB?	Name of Assesee	Gender	Resident Status	Eligible	Date of Birth	Father's Name	Mother's Name	Present Address	Permanent
2019-12-10	Yes	Dev	Male	Resident	age65	1996-12-10	Samrat Roy	Dipti Roy	Mohammadpur,Dhaka	Sarkerpara,T
2019-12-16	Yes	Kanak kumar Sarker	Male	Resident	age65	1996-12-01	dilip kumar sarker	beauty rani sarker	Mohammadpur,Dhaka	gaibandha
2019-12-03	Yes	Sharukh Sharirar	Male	Resident	age65	1996-01-01	Yousuf Ali	Shuli Akter	Bashbari,Dhaka	Jopurhat
2019-12-10	Yes	pranto	Male	Resident	age65	1996-01-12	g,mbo	g	gkds	mgoq

12.Trello



13.Github



14.Mailtrap