

E-Tender: Government Tender publishing system

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This Project report has been submitted in fulfilment of the requirements for the Degree of

Bachelor of Science in Software Engineering

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#### **APPROVAL**

This project titled on "E-Tender", submitted by Toufiqul Islam Noyon (ID: 171-35-1822) to the Department of Software Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of Bachelor of Science in Software Engineering and approval as to its style and contents.

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I hereby declare that project titled "**E-Tender**" has been completed by me under the supervisor of Ms. Farzana Sadia, Assistant Professor, Department of Software Engineering, Daffodil International University for the purpose of achieving degree of Bachelor of Science from Daffodil International University. This is also declared by me that neither this project nor any part of this project has been used or submitted elsewhere for any kind of degree or awards.

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#### **ABSTRACT**

The project "E-Tender" is a web application. It's a tender publishing website for Bangladesh government. Previously Bangladesh government used newspaper, news headline and others websites for publishing about their tenders and tender holders would come physically to government office for applying their tender. Government used to do all these works manually like they would read all application one by one manually and they would do lottery among all tender applicant for those tender holders would need to come physically for lottery. Through my system government will be able to publish about their tender into my system easily and tender holders will be able to find about their tender easily through my site. They do not need to go anywhere for that. Government will be able to see all tender holders' applicant easily and will be able to select tender applicant among all applicant and will be able to select tender winner easily my system. Tender winner will get a tender winning email. I developed this project using python language and Django Framework. This project has tried to incorporate all the advanced features of Python to meet the project goals. User will be benefited many ways by using my system. Government will be able to publish their tender easily, they don't need to advertise about their tender anywhere else and tender applicant will be able to find their tender easily from here and will be able to easily apply for their preferred tender. This system will help government and tender applicant to upload and find their tender. Government will be able to access all tender information easily through this system like who applied for which tender and who is the winner of which tender and will be able to easily select their tender winner without facing any problem.

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#### Chapter 1

#### Introduction

#### 1.1 Project Overview

Bangladeshi government offers many tenders in every sector every year under every ministry. Then some people take those tenders. They need to come physically for applying or taking those projects. They need to wait for a long time apply for tender then they need to submit their tender money to the authority and our government has no system to monitor the data of those tenders like who apply for the tender, under which ministry, who is the winner of the tender. They need to store all the data through offline or they store all the data in a notebook. My system will help them to do their work easily and this a digital system and they will be able to manage all their data easily and who want to apply for tender they don't need to come physically for applying the tender. They will be able to apply for tender easily from anywhere.

#### 1.2 Project Purpose

The purpose of this project is to all the problems that I mentioned at first. Government will be able to monitor and manage all the information of tender and will be known that who took which tender or under which ministry. Tender holders will easily apply for their tenders without facing any problem from anywhere. They will be able to pay they tender money through mobile banking system easily from anywhere. It will save every person's time like government employee along with tender holder. My project will help to prevent all these problems.

#### **1.3 Project Problem Statement**

When government offers the tenders, they have no system to store that data. Have no tender monitoring system. Tender holders have to face many problems when they want to take tenders from government. Tender holder's needs to wait for long time for applying the tender. Government also needs to check all the application manually then they need to lottery among those applicants. As you know that there have no tenders monitoring system, that's why many corruptions happen in the works and many corruptions happen when government gives the tender through lottery. Government has no data about tender holders. Tender holder's need to go many individual sites or need to check newspaper for checking about tender. There has no single site for finding all the tenders together.

#### 1.4 Project Objective

Government will be able to publish easily their tender into my system. They don't need to publish about their tender in press or others individually ministry website. Tender holders who will take those tenders, will easily find every tender in my system together. They don't need to go every site one by one for searching tenders. Tender holder will easily can apply for tender without facing any problem. Every person's information of tender license holder will be store in my system, so government will be able to easily find their information. In my system every information of tender will be store like, which tender, under which ministry, what is the budget, what is the start time and end time. Tender holder will can easily pay their tender fee, through my system. Who want to take tender or want to apply for tender, they don't need to come physically for applying tender. People will apply for tender from anywhere after that government will decide that who will get the tender then government employee will add his name to the system as tender winner and then will mail him at his mail address. Ministry incharge will upload all tender related notice to the

system. Then tender holder will know about tender notice easily. Users will be able to change their profile information. Then he will submit his all valid information with this printed document and submit to the government and will get his tender budget.

#### 1.5 Project Scope

This system will be developed for government. Because there has no tender monitoring system. So, government will easily can manage every information of tender. To the government have every information of tender and tender holders. Tender holders will be able to pay easily their tender's fee. People will apply for tender from anywhere after that government will decide that who will get the tender then government employee will choose some best applicant name for single tender and add to the system. Then they system will choose the winner among those applicants and after that it will set to the system and a confirmation email will automatically will go to the tender winner email address. Then he will submit his all-valid information with this printed document and submit to the government and will get his tender budget.

#### Chapter 2

#### **Software Requirement Specification (SRS)**

#### 2.1 Functional Requirement

Functional requirements are that necessary for the system. This function is mandatory for the application. There has no application without functional requirements. Now I am going to describe about my system functional requirements.

## **2.1.1 Register function for Tender Holder**

FR-01	Register
-	
Description	This function is for only tender holders. They will register into the
	system with their email and password.
Stakeholders	Tender Holders

## 2.1.2 Login function for all user

FR-02	Login
Description	This function is for only super admin, government employee, tender
	holders and engineer. They will login to the system through valid
	information.
Stakeholders	Super Admin, Ministry in-charge, Tender Holders

## 2.1.3 Add Ministry function for super admin

FR-03	Add Ministry Information
Description	Super admin will access this function. Super admin will add ministry
	information to the system.
Stakeholders	Super Admin

## 2.1.4 View Ministry Information function is for super admin and ministry incharge.

FR-04	View Ministry Information
Description	Super admin & government employee will be able to see ministry information to the system.
Stakeholders	Super Admin, Ministry Incharge

## 2.1.5 Update Ministry Information function for super admin

FR-05	<b>Update Ministry Information</b>
Description	Super admin will access this function. Super admin will be able to
	update ministry information to the system.
Stakeholders	Super Admin

## 2.1.6 Delete Ministry Information function is for super admin

FR-06	Delete Ministry Information
Description	Super admin will access this function. Super admin will be able to delete ministry information to the system.
Stakeholders	Super Admin

## 2.1.7 Add Ministry In charge function for super admin and ministry in charge

FR-07	Add Ministry Information
Description	Super admin will add ministry in-charge to the system for doing further
	work.

Stakeholders	Super Admin

## 2.1.8 View Ministry In charge function for super admin

FR-08	View Ministry Incharge
Description	Super admin will be able to see government employee information in the system.
Stakeholders	Super Admin

2.1.9 Update Ministry Incharge function for super admin

FR-09	Update Ministry Incharge
Description	Super admin will update ministry in-charge information to the system.
Stakeholders	Super Admin

## 2.1.10 Delete Ministry Incharge function for super admin

FR-10	Delete Ministry Incharge
Description	Super admin will delete ministry in-charge information from the system.
Stakeholders	Super Admin

## 2.1.11 Approve Tender Holder function for super admin

FR-11	Approve Tender Holder
Description	After tender holder registration, super admin will approve tender holders then they will be able to access the system.
Stakeholders	Super Admin

## 2.1.12 Add Tender's Information function for ministry incharge

FR-12	Add Tender's Information
Description	Ministry in-charge will add all the or publish tender's information to
	the system.
Stakeholders	Ministry in-charge

## 2.1.13 View Tender Information function for ministry incharge and tender holder

FR-13	View Tender's Information
Description	Tender holder & Ministry in-charge will be able to see tender's information to the system.
Stakeholders	Ministry in-charge, tender holder

## 2.1.14 Update Tender's Information function for ministry incharge

FR-14	Update Tender's Information
Description	Ministry in-charge will update tender's information to the system.
Stakeholders	Ministry in-charge

## 2.1.15 Delete Tender's Information function for ministry incharge

FR-15	Delete Tender's Information
Description	Ministry in-charge will delete tender's information from the system.
_	
Stakeholders	Ministry in-charge

## 2.1.16 Add Tender Notice function for ministry incharge

FR-16	Add Tender Notice
Description	Ministry in-charge will add tender notice to the system.
Stakeholders	Ministry in-charge

## 2.1.17 Update Tender Notice function for ministry incharge

FR-17	Update Tender Notice
Description	Ministry in-charge will update tender notice to the system.
Stakeholders	Ministry in-charge

## 2.1.18 Delete Tender Notice function for ministry incharge

FR-18	Delete Tender Notice
Description	Ministry in-charge will delete tender notice from the system.
Stakeholders	Ministry in-charge

## 2.1.19 Update Payment Status function for ministry incharge

FR-19	Update Payment Status
Description	After getting the tender payment and safety money, Ministry in-charge
	will update the payment status to the system.
Stakeholders	Ministry in-charge

## 2.1.20 Apply Tender function for tender holder

FR-20	Apply Tender
Description	Tender holders will log in the system through their proper information,
	then they will apply for tenders with appropriate information.
Stakeholders	Tender Holders

## 2.1.21 View Tender Applicant function for tender holder and ministry incharge

FR-21	View Tender Applicant
Description	Ministry in-charge and tender holders will be able to see, who applied
	for tenders.
Stakeholders	Tender Holders, Ministry in-charge

## 2.1.22 Logout Function for all users

FR-22	Log Out
Description	Every actor will can easily log out from system whenever they want.
Stakeholders	Super Admin, Ministry in-charge, Tender Holders

#### 2.1.23 View Profile function for all users

FR-23	View Profile
Description	Every actor will be able to view their profile
Stakeholders	Super Admin, Ministry in-charge, Tender Holders

## 2.1.24 Change Password function for all user

FR-24	Change Password		
Description	Every actor will be able to change their password.		
Stakeholders	Super Admin, Ministry in-charge, Tender Holders		

## 2.1.25 Change Email function for all users

FR-25	Change Email		
Description	Every actor will be able to change their Email.		
Stakeholders	Super Admin, Ministry in-charge, Tender Holders		

## 2.1.26 Update profile function for all users

FR-26	Update Profile
Description	Every actor will be able to update their profile.
Stakeholders	Super Admin, Ministry in-charge, Tender Holders

#### 2.1.27 Delete Profile function for all users

FR-27	Delete Profile
Description	Every actor will be able to Delete their profile.
Stakeholders	Super Admin, Ministry in-charge, Tender Holders

### 2.2 Non-Functional Requirement

## 2.2.1 Performance Requirements function for ensuring performance of my project

NFR-01	Performance			
Description	While the actors will browse the system, the functions will show and			
	work within a second.			
Stakeholders	Super Admin, Ministry in-charge, Tender Holders			

# 2.2.2 Reliability and Availability function for ensuring reliability and availability of my project

NFR-02	Reliability and Availability		
Description	The system will be available 24x7 hours in a day.  This system won't be fall.		
Stakeholders	Super Admin, Ministry in-charge, Tender Holders		

# 2.2.3 Maintainability and supportability function for ensuring maintain and support of my project

NFR-03	Maintainability and Support-ability		
Description	The system helps to update information all the time.		
Stakeholders	Super Admin, Ministry in-charge, Tender Holders		

## 2.2.4 Security function for ensuring my project security

NFR-04	Security
Description	System will keep secure all information. Every actor has to enter

	authentic information in the system. Without authentic			
	information, no one can enter the system. In addition, all the system			
	always keeps secured.			
Stakeholders	Super Admin, Ministry in-charge, Tender Holders			

#### Chapter 3

#### System Analysis & Design

#### 3.1 Use Case Diagram

Use case diagram shows that how every user of this system interacts with this system and which functionality they will be able to access and who is the user of system.

#### 3.1.1 Super Admin Use Case Diagram

Super admin is main user among all the users of my system. This use case shows that which functionality super admin will can access.

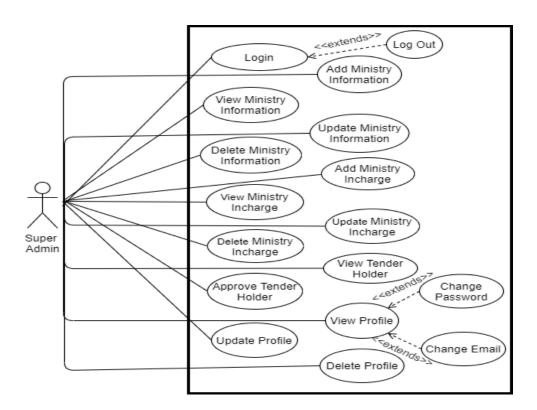


Figure 3. 1 Use Case Diagram for Super Admin

Figure 3.1 shows that Super admin will be able to add ministry incharge, ministry information, view, edit, delete information of ministry and ministry incharge from the

system. Super admin will approve tender holder to the system and he will can update his profile, change password and change email. These all-function super admin will be able to access.

#### 3.1.2 Ministry Incharge Use Case Diagram

Ministry incharge will play an important role in this system and which function he will can access that we can see in below diagram.

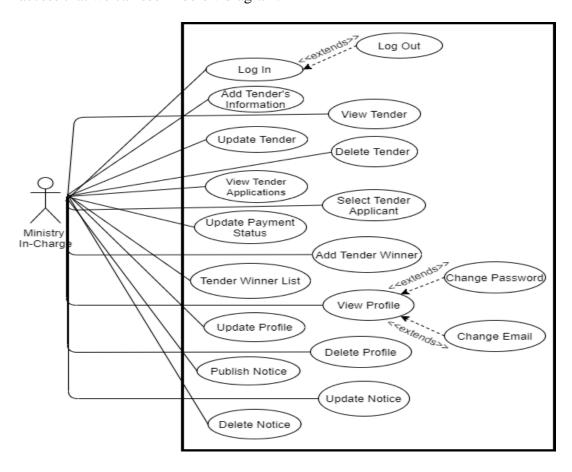


Figure 3. 2 Use Case Diagram for Ministry Incharge

Figure 3.2 shows that ministry incharge will be able to login to the system and will can add tender information, update, delete tender information. He will be able to view

tender applicant, select tender applicant, change payment status, add tender winner, view tender winner. He will can view his profile, update his profile, delete his profile. He also will can add tender notice, update, delete tender notice from the system.

Figure 3.2 shows that ministry incharge will be able to login to the system and will can add tender information, update, delete tender information. He will be able to view tender applicant, select tender applicant, change payment status, add tender winner, view tender winner. He will can view his profile, update his profile, delete his profile. He also will can add tender notice, update, delete tender notice from the system.

#### 3.1.3 Tender Holder Use Case Diagram

This use case is showing that which functionalities tender holder will be able to access.

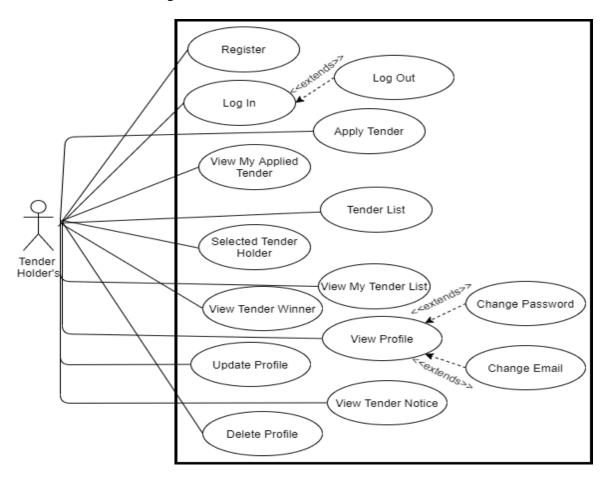


Figure 3. 3 Use Case Diagram for Super Admin

Figure 3.3 shows that tender holder will be able to register to the system, will can login to the system, apply for tender, will can see who is the tender winner, selected tender holders, his tender winner list. He will be able to see his profile, update his profile, will can change his password and email.

#### 3.2 use Case Description

Use case description is for describing about all the functions, like what is the use case goal, preconditions, what is the success end condition and failed end condition of this use case, who is the primary actor or secondary actor, what is the trigger of this use case. Description about use case means how use case will work, what alternative way can happen and quality requirements.

#### 3.2.1 Use Case Description for Super Admin

#### 3.2.1.1 Login use case description

Use Case	Login		
Goal	Super admin will login to his account.		
Precondition	Super admin has to enter valid username & password.		
<b>Success End Condition</b>	Super admin can successfully login.		
Failed End Condition	Super admin is unable to login.		
Primary Actor	Super admin, Ministry Incharge, Tender Holder		

Secondary Actor			
Trigger	Successfully logged in.		
Description/Main	1	Login information will be given to all users.	
Success Scenario	2	Using that username and password users will be able	
		to login into the system.	
Alternative Flow	N/A		
<b>Quality Requirements</b>	Users have to enter correct username & password.		

# 3.2.1.2 Add Ministry Information use case description

Use Case	Add Ministry Information
Goal	Super admin will add ministry information.
Precondition	Super admin has to login first through valid information.
<b>Success End Condition</b>	Super admin can successfully add ministry information.
Failed End Condition	Super admin is unable to add ministry information.
Primary Actor	Super admin
Secondary Actor	
Trigger	Ministry information's are added into the system.
Description/Main	1 Super admin will login to system.
Success Scenario	2 After that he will add ministry all information's.
Alternative Flow	N/A
<b>Quality Requirements</b>	Super admin has to add correct information.

# **3.2.1.3** View Ministry Information use case description

Use Case	View Ministry Information
Osc Casc	view willistry information
Goal	Super admin will be able to view ministry information.
Precondition	Super admin has to login first through valid information.
<b>Success End Condition</b>	Super admin is able to see ministry information perfectly.
Failed End Condition	Super admin is unable to see ministry information perfectly.
<b>Primary Actor</b>	Super admin
Secondary Actor	
Secondary recor	
Trigger	Able to see ministry information.
Description/Main	1 Super admin will login to system.
Success Scenario	2 After that he will add ministry all information's.
	Then he will be able to see ministry information.
	Then he will be able to see ministry information.
Alternative Flow	N/A
<b>Quality Requirements</b>	N/A

## 3.2.1.4 Update Ministry Information use case description

Use Case	Update Ministry Information
Goal	Super admin will be able to update ministry information.
Precondition	Super admin has to login first through valid information.
<b>Success End Condition</b>	Super admin is able to update ministry information perfectly.

Failed End Condition	Super admin is unable to update ministry information
	perfectly.
Primary Actor	Super admin
Secondary Actor	
Trigger	Able to update ministry information.
Description/Main	1 Super admin will login to system.
Success Scenario	2 After that he will view ministry information's.
	Then if needed, he will update ministry information.
Alternative Flow	N/A
Quality Requirements	N/A

## 3.2.1.5 Delete Ministry Information use case description

Use Case	Delete Ministry Information
Goal	Super admin will be able to delete ministry information.
Precondition	Super admin has to login first through valid information.
<b>Success End Condition</b>	Super admin is able to delete ministry information perfectly.
Failed End Condition	Super admin is unable to delete ministry information perfectly.
Primary Actor	Super admin
Secondary Actor	
Trigger	Able to delete ministry information.

Description/Main	1	Super admin will login to system.
Success Scenario	2	After that he will view ministry information's.
	3	Then if needed, he will delete ministry information.
Alternative Flow	N/A	
<b>Quality Requirements</b>	N/A	

#### 3.2.1.6 Add Ministry Incharge use case description

Use Case	Add Ministry In-Charge	
Goal	Super admin will add ministry In-Charge.	
Precondition	Super admin has to login first through valid information.	
<b>Success End Condition</b>	Super admin can successfully add ministry In-Charge.	
Failed End Condition	Super admin is unable to add ministry In-Charge.	
Primary Actor	Super admin	
Secondary Actor		
Trigger	Ministry In-Charge is added into the system.	
Description/Main	1 Super admin will login to system.	
Success Scenario	2 After that he will add ministry in-charge.	
Alternative Flow	N/A	
<b>Quality Requirements</b>	Super admin has to add correct information.	

## 3.2.1.7 View Ministry In charge use case description

Use Case	View Ministry In-Charge

Goal	Super admin will be able to view ministry in-charge.			
Precondition	Super	Super admin has to login first through valid information.		
<b>Success End Condition</b>	Super admin is able to see ministry in-charge perfectly.			
Failed End Condition	Super	Super admin is unable to see ministry in-charge perfectly.		
Primary Actor	Super	admin		
Secondary Actor				
Trigger	Able to	o see ministry in-charge.		
Description/Main	1	Super admin will login to system.		
Success Scenario	2	After that he will add ministry in-charge.		
	3	Then he will be able to see in-charge.		
Alternative Flow	N/A			
<b>Quality Requirements</b>	N/A			

## **3.2.1.8** Update Ministry In charge use case description

Use Case	Update Ministry In-Charge		
Goal	Super admin will be able to update ministry in-charge.		
Precondition	Super admin has to login first through valid information.		
<b>Success End Condition</b>	Super admin is able to update ministry in-charge information perfectly.		
Failed End Condition	Super admin is unable to update ministry in-charge information perfectly.		
Primary Actor	Super admin		

Secondary Actor		
Trigger	Able to	o update ministry in-charge.
Description/Main	1	Super admin will login to system.
Success Scenario	2	After that he will view ministry in-charge.
	3	Then if needed, he will update ministry in-charge.
Alternative Flow	N/A	
<b>Quality Requirements</b>	N/A	

## 3.2.1.9 Delete Ministry In charge use case description

Use Case	Delete Ministry In-Charge	
Goal	Super admin will be able to delete ministry in-charge.	
Precondition	Super admin has to login first through valid information.	
<b>Success End Condition</b>	Super admin is able to delete ministry in-charge perfectly.	
Failed End Condition	Super admin is unable to delete ministry in-charge perfectly.	
Primary Actor	Super admin	
Secondary Actor		
Trigger	Able to delete ministry in-charge.	
Description/Main	1 Super admin will login to system.	
Success Scenario	2 After that he will view ministry in-charge.	
	Then if needed, he will delete ministry in-charge.	
Alternative Flow	N/A	

<b>Quality Requirements</b>	N/A

#### 3.2.1.10 Approve Tender Holder use case description

Use Case	Approve Tender Holder.		
Goal	Super a	Super admin will be able to approve tender holder.	
Precondition	Super a	Super admin has to login first through valid information.	
<b>Success End Condition</b>	Super a	Super admin is able to approve tender holder successfully.	
Failed End Condition	Super admin is unable to approve tender holder.		
Primary Actor	Super admin		
Secondary Actor			
Trigger	Able to approve tender holder.		
Description/Main	1	Super admin will login to system.	
Success Scenario	2	After that he will view all tender holder registration	
		status.	
	3	If information is okay then he will approve the	
		tender holder.	
Alternative Flow	N/A		
<b>Quality Requirements</b>	Valid tender holder will have to approve.		

#### 3.2.1.11 View Profile use case description

Use Case	View Profile.
Goal	Every user will be able to see his profile.

Precondition	Every user has to login first through valid information.	
<b>Success End Condition</b>	Every user is able to see his profile perfectly.	
Failed End Condition	Every user is unable to see his profile perfectly.	
Primary Actor	Super admin, Ministry Incharge, Tender Holder	
Secondary Actor		
Trigger	Able to access their profile.	
Description/Main	1 Every user will login to system.	
Success Scenario	2 After that they will see profile option.	
	Click on profile option then, they will able to see their profile.	
Alternative Flow	N/A	
<b>Quality Requirements</b>	N/A	

#### 3.2.1.12 Change Password use case description

Use Case	Change Password
Goal	Every user will be able to change his password.
Precondition	Every user has to login first through valid information.
<b>Success End Condition</b>	Every user is able to change his password perfectly.
<b>Failed End Condition</b>	Every user is unable to change his password perfectly.
Primary Actor	Super admin, Ministry Incharge, Tender Holder
Secondary Actor	
Trigger	Click on change password button.

Description/Main	1	Every user will login to system.
Success Scenario	2	After that they will go to his profile.
	3	Then they will see change password option.
	4	Click on the button & provide your updated
		password and click on submit.
Alternative Flow	N/A	•
<b>Quality Requirements</b>	N/A	

# 3.2.1.13 Change Email use case description

Use Case	Change Email	
Goal	Every	user will be able to change his email.
Precondition	Every	user has to login first through valid information.
<b>Success End Condition</b>	Every	user is able to change his email perfectly.
Failed End Condition	Every user is unable to change his email perfectly.	
Primary Actor	Super admin, Ministry Incharge, Tender Holder	
Secondary Actor		
Trigger	Click on change email button.	
Description/Main	1	Every user will login to system.
Success Scenario	2	After that they will go to his profile.
	3	Then they will see change email option.
	4	Click on the button & provide your updated email and click on submit.

Alternative Flow	N/A
<b>Quality Requirements</b>	N/A

#### 3.2.1.14 Update Profile use case description

Use Case	Update Profile.	
Goal	Every user will be able to update his profile.	
Precondition	Every user has to login first through valid information.	
<b>Success End Condition</b>	Every user is able to update his profile perfectly.	
Failed End Condition	Every user is unable to update his profile perfectly.	
Primary Actor	Super admin, Ministry Incharge, Tender Holder	
Secondary Actor		
Trigger	Able to update his profile.	
Description/Main	1 Every user will login to system.	
Success Scenario	2 After that they will see profile option.	
	Click on profile option then, they will able to see	
	their profile.	
Alternative Flow	N/A	
<b>Quality Requirements</b>	N/A	

#### 3.2.1.15 Delete Profile use case description

Use Case	Delete Profile.
Goal	Every user will be able to delete his profile.

Precondition	Every user has to login first through valid information.	
<b>Success End Condition</b>	Every user is able to delete his profile perfectly.	
Failed End Condition	Every user is unable to delete his profile perfectly.	
Primary Actor	Super admin, Ministry Incharge, Tender Holder	
Secondary Actor		
Trigger	Able to delete his profile.	
Description/Main	1 Every user will login to system.	
Success Scenario	2 After that they will see profile option.	
	3 He will see the delete button then they will delete	
	their profile if needed.	
Alternative Flow	N/A	
<b>Quality Requirements</b>	N/A	

# 3.2.1.16 Logout use case description

Use Case	Logout
Goal	Every user will be able to logout from the system.
Precondition	Every user has to login first through valid information.
<b>Success End Condition</b>	Every user is able to logout from the system.
Failed End Condition	Every user is unable to logout from the system.
Primary Actor	Super admin, Ministry Incharge, Tender Holder
Secondary Actor	

Trigger	He has to click on logout button.	
Description/Main	1	Every user will login to system.
Success Scenario	2	After that they will see logout option.
	3	Click on logout option then, they will able to logout
		from the system.
Alternative Flow	N/A	
<b>Quality Requirements</b>	N/A	

# **3.2.2** User Case Description for Ministry In charge

#### 3.2.2.1 Login use case description

Use Case	Login		
Goal	Ministry in-charge will login to his account.		
Precondition	Ministry in-charge has to enter valid username & password		
<b>Success End Condition</b>	Ministry in-charge can successfully login.		
Failed End Condition	Ministry in-charge is unable to login.		
Primary Actor	Ministry in-charge		
Secondary Actor			
Trigger	Successfully logged in.		
Description/Main	1	Super admin will add ministry in-charge, that	
Success Scenario		time super admin will create a username and	
		password.	

	2	He will provide that information to the ministry in-charge then, using those information ministry
		in-charge will login to the system.
	3	After login to the system, ministry in-charge will
		be able to change his username and password.
Alternative Flow	N/A	
<b>Quality Requirements</b>	Ministry in-charge has to enter correct username &	
	password.	

## 3.2.2.2 Add tender use case description

Use Case	Add Tender
Goal	Ministry in-charge will be able to publish tender to the system.
Precondition	Ministry in-charge has to login first through valid information.
Success End	Ministry in-charge can successfully publish tender to the
Condition	system.
Failed End	Ministry in-charge is unable to publish tender to the system.
Condition	
<b>Primary Actor</b>	Ministry in-charge
Secondary Actor	
Trigger	Have to click on add tender button then, have to provide valid
	information.

Description/Main	1	Ministry will login to system.
Success Scenario	Then he will go to the tender option then, he will see the add tender option.	
	3	After that he will add tender to the system.
Alternative Flow	N/A	
Quality	Min	istry in-charge has to add correct information.
Requirements		

## 3.2.2.3 View tender use case description

Use Case	View Tender
Goal	Ministry in-charge will be able to view tender.
Precondition	Ministry in-charge has to login first through valid
	information.
Success End Condition	Ministry in-charge can successfully view all tenders.
Failed End Condition	Ministry in-charge is unable to view all tenders
Primary Actor	Ministry in-charge
Secondary Actor	
Trigger	Have to click on tender button then he will able to see all
	tenders.

Description/Main	1	Ministry will login to system.
Success Scenario	2	Then he will go to the tender option.
	3	Then he will see all tenders.
Alternative Flow	N/A	
<b>Quality Requirements</b>	Ministry	in-charge has to add correct information.

## 3.2.2.4 Update tender use case description

Use Case	Update Tender		
Goal	Ministry in-charge will be able to update tender.		
Precondition	Ministry in-charge has to login first through valid		
	information.		
<b>Success End Condition</b>	Ministry in-charge can successfully update tenders to the		
	system.		
Failed End Condition	Ministry in-charge is unable to update tenders to the		
	system.		
Primary Actor	Ministry in-charge		
Secondary Actor			
Trigger	Have to click on add tender button.		
	1 Ministry will login to system.		

Description/Main	2	Then he will view the tenders. Then he will see
Success Scenario		update button
	3	After that if he needs, he will update tender.
Alternative Flow	N/A	
<b>Quality Requirements</b>	N/A	

# 3.2.2.5 Delete tender use case description

Use Case	Delete Tender		
Goal	Ministry in-charge will be able to delete tender.		
Precondition	Ministry	in-charge has to login first through valid	
	informati	ion.	
<b>Success End Condition</b>	Ministry	in-charge can successfully delete tender from the	
	system.		
Failed End Condition	Ministry in-charge is unable to delete tender from the		
	system.		
Primary Actor	Ministry in-charge		
Secondary Actor			
Trigger	Have to click on delete tender button.		
	1	Ministry in-charge will login to system.	

Description/Main	2	Then he will view the tenders. Then he will see
Success Scenario		delete button.
	3	After that if he needs, he will delete tender.
Alternative Flow	N/A	<u> </u>
<b>Quality Requirements</b>	N/A	

# 3.2.2.6 View tender use case description

Use Case	View Tender Applicant		
Goal	Ministry in-charge will be able to view tender applicant.		
Precondition	Ministry	in-charge has to login first through valid	
	informati	ion.	
<b>Success End Condition</b>	Ministry	in-charge can successfully view tender applicant	
	into the system.		
<b>Failed End Condition</b>	Ministry in-charge is unable to view tender applicant into		
	the system.		
Primary Actor	Ministry in-charge		
Secondary Actor			
Trigger	Have to click on delete tender button.		
	1	Ministry in-charge will login to system.	

Description/Main	2	Then he will view the tender option.
Success Scenario		
Success Scenario	3	After that he will see all the applicant who
		applied for tender.
Alternative Flow	N/A	
<b>Quality Requirements</b>	N/A	

# 3.2.2.7 Select Tender Applicant use case description

Use Case	Select Te	ender Applicant	
Goal	Ministry in-charge will be able to select tender applicant.		
Precondition	Ministry	in-charge has to login first through valid	
	informati	ion.	
<b>Success End Condition</b>	Ministry	in-charge will be able to select tender applicant	
	from all the applicant.		
Failed End Condition	Ministry in-charge is unable to select tender applicant into		
	the system	m.	
Primary Actor	Ministry in-charge		
Secondary Actor			
Trigger	Have to click on delete tender button.		
	1	Ministry in-charge will login to system.	

Description/Main	2	After that he will see all the applicant who
Success Scenario		applied for tender.
	3	From all the applicant he will select some best
		applicant.
Alternative Flow	N/A	
<b>Quality Requirements</b>	N/A	

# **3.2.2.8** Update Payment Status use case description

Use Case	Update Payment Status			
Goal	Ministry in-charge will be able to update payment status.			
Precondition	Minist	try in-charge has to login first through valid		
	inform	nation.		
<b>Success End Condition</b>	Ministry in-charge will be able to update payment status.			
Failed End Condition	Ministry in-charge is unable to update payment status.			
Primary Actor	Minist	ry in-charge		
Secondary Actor				
Trigger	Have to click on update payment button.			
	1	Ministry in-charge will login to system.		

Description/Main	2	Then he will view all the applicant.
Success Scenario	3	After that he will see the update payment option.
	4	Then he will update their payment status.
Alternative Flow	N/A	
Quality Requirements	N/A	

#### 3.2.2.9 Add Tender Winner use case description

Use Case	Add Tender Winner	
Goal	Ministry in-charge will be able to add tender winner.	
Precondition	Ministry in-charge has to login first through valid	
	information.	
<b>Success End Condition</b>	Ministry in-charge will be able to add tender winner.	
<b>Failed End Condition</b>	Ministry in-charge is unable to add tender winner.	
Primary Actor	Ministry in-charge	
Secondary Actor		
Trigger	Have to click on winner tender button.	
Description/Main	1 Ministry in-charge will login to system.	
Success Scenario	Then he will view all the tender applicant.	

	3	Then he will select some applicant from all the applicant.
	4	After that among selected applicant he will select individual tender winner by click on winner tender button.
Alternative Flow	N/A	
<b>Quality Requirements</b>	N/A	

# 3.2.2.10 Tender Winner List use case description

Use Case	Tender Winner List
Goal	Ministry in-charge will be able to see all tender winner.
Precondition	Ministry in-charge has to login first through valid information.
Success End Condition	Ministry in-charge will be able to see tender winner.
Failed End	Ministry in-charge is unable to see tender winner.
Condition	
Primary Actor	Ministry in-charge
Secondary Actor	

Trigger	Have to click on tender winner.	
Description/Main	1	Ministry in-charge will login to system.
Success Scenario	2	Then he will see tender option.
	3	After that he will see tender winner option.
	4	Then clicking on tender winner button, he will able to see all tender winner.
Alternative Flow	N/A	<u></u>
Quality	N/A	
Requirements		

## 3.2.2.11 Add Tender Notice use case description

Use Case	Add Tender Notice		
Goal	Ministry in-charge will be able to add tender notice to the		
	system.		
Precondition	Ministry in-charge has to login first through valid		
	information.		
<b>Success End Condition</b>	Ministry in-charge will be able to add tender notice.		
Failed End Condition	Ministry in-charge is unable to add tender notice.		
Primary Actor	Ministry in-charge		

Secondary Actor		
Trigger	Have	to click on add tender notice.
Description/Main	1	Ministry in-charge will login to system.
Success Scenario	2	Then he will see tender notice option.
	3	After that he will see add tender notice option.
	4	Then clicking on add tender notice button, then he will be able to add all tender notice.
Alternative Flow	N/A	'
<b>Quality Requirements</b>	N/A	

# **3.2.2.12** Update Tender Notice use case description

Use Case	Update Tender Notice
Goal	Ministry in-charge will be able to update tender notice.
Precondition	Ministry in-charge has to login first through valid information.
Success End Condition	Ministry in-charge can successfully update tender notice to the system.

Failed End Condition	Miı	Ministry in-charge is unable to update tender notice to the	
	sys	tem.	
Primary Actor	Min	Ministry in-charge	
Secondary Actor			
Trigger	Have to click on update tender notice button.		
Description/Main	1	Ministry in charge will login to the system.	
Success Scenario	2	Then he will view the tender's notice. Then he will see update button.	
	3	After that if he needs, he will update tender notice.	
Alternative Flow	N/A		
<b>Quality Requirements</b>	N/A		

## 3.2.2.13 Delete Tender Notice use case description

Use Case	Delete Tender Notice			
Goal	Min	Ministry in-charge will be able to delete tender notice.		
Precondition	Min	Ministry in-charge has to login first through valid information.		
Success End	Min	istry in-charge can successfully delete tender notice from		
Condition	the s	ystem.		
Failed End	Min	istry in-charge is unable to delete tender notice from the		
Condition	syste	em.		
Primary Actor	Min	istry in-charge		
Secondary Actor				
Trigger	Have	e to click on delete tender notice button.		
Description/Main	1	Ministry in-charge will login to system.		
Success Scenario	2	Then he will view the tender's notice. Then he will see delete button.		
	3	After that if he needs, he will delete tender notice.		
Alternative Flow	N/A			
Quality	N/A			
Requirements				

## **3.2.3** Use Case Description for Tender Holder

## 3.2.3.1 Register use case description

Use Case	Register		
Obe Cabe	Register		
G 1		1 1 11 211 11 4 2 4 4 3	
Goal	Tender holder will be able to register to the system.		
Precondition	Ten	nder holder has to enter the system and click on create	
	ho1	der account.	
	11010	uci account.	
Cuesca E 1 C - 1'4'	ъл.	sistem in about a ship to market and C. H. et al.	
<b>Success End Condition</b>	MIII	nistry in-charge is able to register successfully to the	
	syst	tem.	
Failed End Condition	Mir	nistry in-charge is unable to register successfully to the	
		, and a second of the second o	
	syst	tem.	
Primary Actor	Ten	nder Holder	
Secondary Actor			
V			
Trigger	Не	has to click on create holder account button.	
	The has to effect off effects florider account button.		
Description/Main	1	First of all, tender holder will enter the system.	
Description/Main	1	i not on an, tender norder will enter the system.	
Success Scenario		Then be will see and 1.11	
	2	Then he will see create holder account option.	
	3	Then he will click on the button and will enter all	
		valid information. Then he will be able to register to	
		the system.	
Alternative Flow	N/A	A	
	<u> </u>		

<b>Quality Requirements</b>	Tender holder has to enter all valid information.

# 3.2.3.2 Apply Tender use case description

Use Case	Apply Tender		
Goal	Tender holder will be able to apply for tender.		
Precondition	Tender holder has to approved by super admin first.		
<b>Success End Condition</b>	Tender holder will be able to apply for tender.		
Failed End Condition	Tender holder is unable to apply for tender.		
Primary Actor	Tender Holder		
Secondary Actor			
Trigger	Click on apply tender button.		
Description/Main	1 Tender holder will login to the system.		
Success Scenario	2 Tender holder will login to the system.		
	3 If super admin approves the tender holder, he will see apply tender option.		
	Then he will click on apply tender button and will apply for tender.		
Alternative Flow	N/A		

<b>Quality Requirements</b>	Tender holder has to enter correct information for applying		
	tender.		

## 3.2.3.3 Tender List use case description

Use Case	Tender List
G 1	77. 1 1 11. 211. 11
Goal	Tender holder will be able to see his tender list, which tender
	he applied for.
Precondition	Tender holder has to apply for tender first.
Success End	Tender holder will be able to see his applied tender list.
Condition	
Condition	
Failed End Condition	Tender holder is unable to see his applied tender list.
ranca Ena Condition	Tender holder is unable to see his applied tender list.
Primary Actor	Tender Holder
	Tonder Tronder
Secondary Actor	
Trigger	Click on tender list button.
Description/Main	1 Tender holder will login to the system.
Success Scenario	2 Then he has to approved by super admin.
	3 After that he will able to apply for tender and will apply
	fortondon
	for tender.

	4	Then he will click on tender list button and will able to see his tender list. Which tender he applied for.
Alternative Flow	N/A	
111011101101	1 1/12	
<b>Quality Requirements</b>	N/A	1

## 3.2.3.4 View Tender Applicant use case description

Use Case	View Tender Applicant	
Goal	Ministry in-charge will be able to view tender applicant.	
Precondition	Ministry in-charge has to login first through valid	
	info	ormation.
<b>Success End Condition</b>	Ministry in-charge can successfully view tender	
	app	licant into the system.
Failed End Condition	Ministry in-charge is unable to view tender applicant into	
	the system.	
Primary Actor	Ter	nder Holder
Secondary Actor		
Trigger	Have to click on view tender button.	
	1	Ministry in-charge will login to system.

<b>Description/Main Success</b>	2	Then he will view the tender option.
Scenario		
Scenario	3	After that he will see all the applicant who applied
		for tender.
Alternative Flow	N/A	A
<b>Quality Requirements</b>	N/A	A

# 3.2.3.5 Tender Winner List use case description

Use Case	Tender Winner List
Goal	Ministry in-charge will be able to see all tender winner.
Precondition	Ministry in-charge has to login first through valid information. Ministry in-charge has to login first through valid information.
Success End Condition	Ministry in-charge will be able to see tender winner.
Failed End Condition	Ministry in-charge is unable to see tender winner.
Primary Actor	Tender Holder
Secondary Actor	
Trigger	Have to click on tender winner.

Description/Main	1	Ministry in-charge will login to
Success Scenario		system.
	2	Then he will see tender option.
	3	After that he will see tender
		winner option.
	4	Then clicking on tender winner
		button, he will able to see all
		tender winner.
Alternative Flow	N/A	
<b>Quality Requirements</b>	N/A	

#### 3.3 Activity Diagram

Activity Diagram shows that how an activity work step by step. It describes every use case step by step and how it works.

#### 3.3.1 Activity Diagram for Super Admin

# 3.3.1.1 Login Activity Diagram for Super Admin, Ministry In charge, Tender Holder

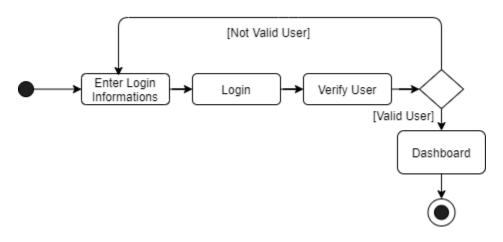


Figure 3. 4 Log In Activity Diagram

Figure 3.4 represents the activity of login use case. Super admin, Ministry Incrage, Tender Holder will login into the system through this way and system will validate the user.

#### 3.3.1.2 Add Ministry Activity Diagram

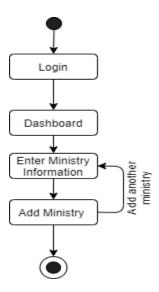


Figure 3. 5 Add Ministry Activity Diagram

Figure 3.5 represents the activity of add ministry diagram. Super admin will add ministry information to the system through this way.

#### 3.3.1.3 View Ministry Activity Diagram

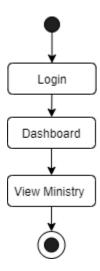


Figure 3. 6 View Ministry Activity Diagram

Figure 3.6 represents that the activity of view ministry use case. Super admin will be able to view ministry information this way.

#### 3.3.1.4 Update Ministry Activity Diagram

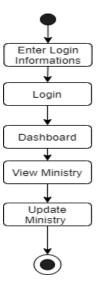


Figure 3. 7 Update Ministry Activity Diagram

Figure 3.7 represents that the activity of update ministry use case. Super admin will be able to update ministry this way.

#### **3.3.1.5** Delete Ministry Activity Diagram

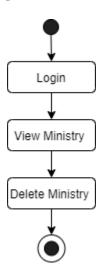


Figure 3. 8 Delete Ministry Activity Diagram

Figure 3.8 represents that the activity of delete ministry use case. Super admin will be able to delete ministry this way.

#### 3.3.1.6 Add Ministry Incharge Activity Diagram

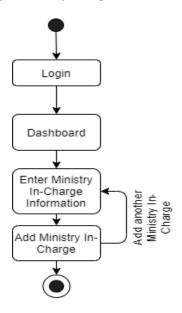


Figure 3. 9 Add Ministry Incharge Activity Diagram

Figure 3.9 represents that the activity of add ministry incharge use case. Super admin will be able to add ministry incharge to the system this way.

#### 3.3.1.7 View Ministry Incharge Activity Diagram

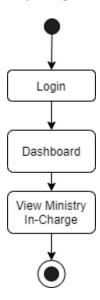


Figure 3. 10 View Ministry Incharge Activity Diagram

Figure 3.10 represents that the activity of view ministry incharge use case. Super admin will be able to view ministry incharge this way.

#### 3.3.1.8 Update Ministry Incharge Activity Diagram

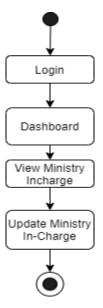


Figure 3. 11 Update Ministry Incharge Activity Diagram

Figure 3.11 represents that the activity of update ministry incharge use case. Super admin will be able to update ministry incharge this way.

#### 3.3.1.9 Delete Ministry Incharge Activity Diagram

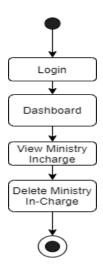


Figure 3. 12 Delete Ministry Incharge Activity Diagram

Figure 3.12 represents that the activity of delete ministry incharge use case. Super admin will be able to delete ministry incharge this way.

#### 3.3.1.10 View Tender Holder Activity Diagram

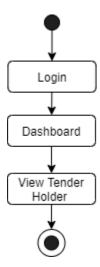


Figure 3. 13 View Tender Holder Activity Diagram

Figure 3.13 represents that the activity of view tender holder use case. Super admin will be able to view tender holder this way.

#### 3.3.1.11 Approve Tender Holder Activity Diagram

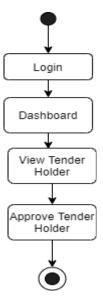


Figure 3. 14 Approve Tender Holder Activity Diagram

Figure 3.14 represents that the activity of approve tender holder use case. Super admin will be able to approve tender holder this way.

# 3.3.1.12 View Profile Activity Diagram for Super Admin, Ministry Incharge, Tender Holder

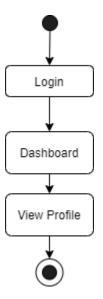


Figure 3. 15 View Profile Activity Diagram

Figure 3.15 represents that the activity of view profile use case. Super admin, Ministry Incrage, Tender Holder will be able to view profile this way.

# 3.3.1.13 Change Password Activity Diagram Super Admin, Ministry Incharge,

#### **Tender Holder**

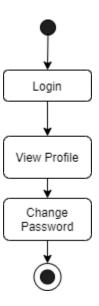


Figure 3. 16 Change Password Activity Diagram

Figure 3.16 represents that the activity of change password use case. Super admin Ministry Incrage, Tender Holder will be able to change password this way.

# 3.3.1.14 Change Email Activity Diagram Super Admin, Ministry Incharge, Tender Holder

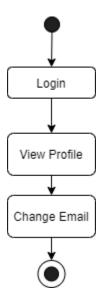


Figure 3. 17 Change Email Activity Diagram

Figure 3.17 represents that the activity of change email use case. Super admin Ministry Incrage, Tender Holder will be able to change email this way.

# 3.3.1.15 Update Profile Activity Diagram Super Admin, Ministry Incharge, Tender Holder

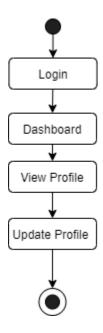


Figure 3. 18 Update Profile Activity Diagram

Figure 3.18 represents that the activity of update profile use case. Super admin Ministry Incrage, Tender Holder will be able to update profile this way.

# 3.3.1.16 Delete Profile Activity Diagram Super Admin, Ministry Incharge, Tender Holder

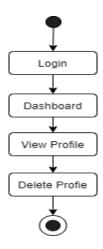


Figure 3. 19 Delete Profile Activity Diagram

Figure 3.19 represents that the activity of delete profile use case. Super admin Ministry Incrage, Tender Holder will be able to delete profile this way.

#### 3.3.1.17 Logout Activity Diagram Super Admin, Ministry Incharge, Tender Holder

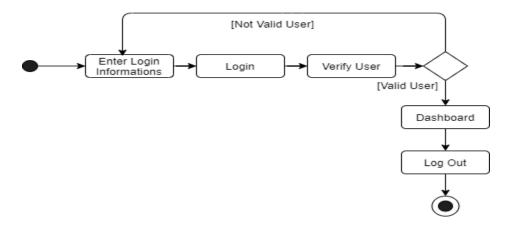


Figure 3. 20 Logout Activity Diagram

Figure 3.20 represents that the activity of logout use case. Super admin Ministry Incrage, Tender Holder will be able to logout this way.

### 3.3.2 Activity Diagram for Ministry Incharge

#### 3.3.2.1 Add Tender Activity Diagram

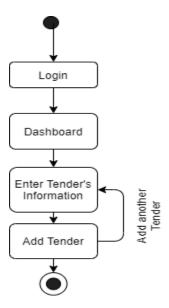


Figure 3. 21 Add Tender Activity Diagram

Figure 3.21 represents that the activity of add tender use case. Ministry Incharge will be able to add tender this way.

# 3.3.2.2 View Tender Activity Diagram

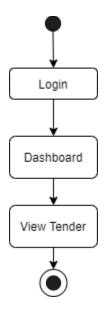


Figure 3. 22 View Tender Activity Diagram

Figure 3.22 represents that the activity of view tender use case. Ministry Incharge will be able to view tender this way.

# 3.3.2.3 Update Tender Activity Diagram

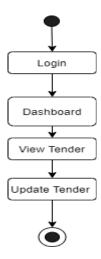


Figure 3. 23 Update Tender Activity Diagram

Figure 3.23 represents that the activity of update tender use case. Ministry Incharge will be able to update tender this way.

# 3.3.2.4 Delete Tender Activity Diagram

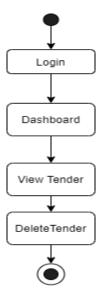


Figure 3. 24 Delete Tender Activity Diagram

Figure 3.24 represents that the activity of delete tender use case. Ministry Incharge will be able to delete tender this way.

#### 3.3.2.5 View Tender Applicant Activity Diagram

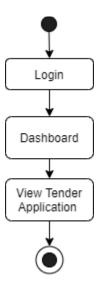


Figure 3. 25 View Tender Application Activity Diagram

Figure 3.25 represents that the activity of view tender use case. Ministry Incharge will be able to view tender this way.

# 3.3.2.6 Select Tender Applicant Activity Diagram

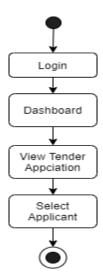


Figure 3. 26 Select Tender Applicant Activity Diagram

Figure 3.26 represents that the activity of select tender applicant use case. Ministry Incharge will be able to select tender applicant this way.

#### 3.3.2.7 Update Payment Status Activity Diagram

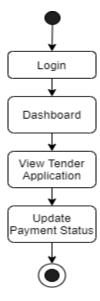


Figure 3. 27 Update Payment Status Activity Diagram

Figure 3.27 represents that the activity of update payment status use case. Ministry Incharge will be able to update payment status this way.

#### 3.3.2.8 Add Tender Winner Activity Diagram

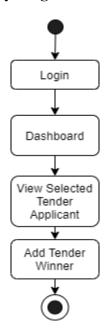


Figure 3. 28 Add Tender Winner Activity Diagram

Figure 3.28 represents that the activity of add tender winner use case. Ministry Incharge will be able to add tender winner this way.

# 3.3.2.9 View Tender Winner Activity Diagram

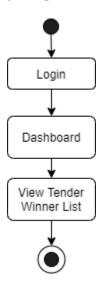


Figure 3. 29 View Tender Winner List Activity Diagram

Figure 3.29 represents that the activity of view tender winner use case. Ministry Incharge will be able to view tender winner this way.

# 3.3.3 Activity Diagram for Tender Holder

#### 3.3.3.1 Register Activity Diagram

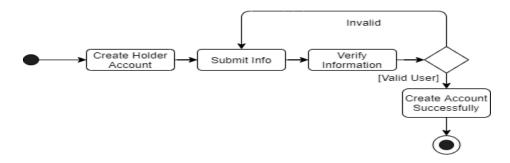
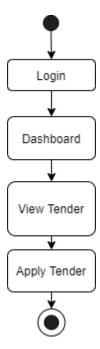


Figure 3. 30 Register Account Activity Diagram

Figure 3.30 represents that the activity of registration use case. Tender holder will be able to register in the system this way.

#### 3.3.3.2 Apply Tender Activity Diagram



#### Figure 3. 31 Apply Tender Activity Diagram

Figure 3.31 represents that the activity of apply tender use case. Tender holder will be able to apply tender into the system this way.

#### 3.3.3.3 View My Applied Tender Activity Diagram

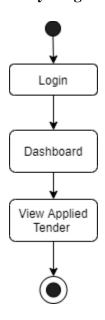


Figure 3. 32 View My Applied Tender Activity Diagram

Figure 3.32 represents that the activity of view my applied tender use case. Tender holder will be able to view my applied tender this way.

# 3.3.3.4 View My Tender List Activity Diagram

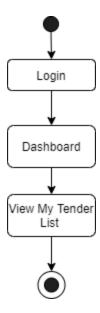


Figure 3. 33 View My Tender List Activity Diagram

Figure 3.33 represents that the activity of view my tender list use case. Tender holder will be able to view my tender list this way.

### 3.3.3.5 View Selected Tender Applicant Activity Diagram

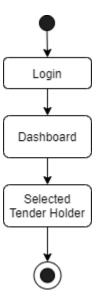


Figure 3. 34 View Selected Tender Applicant Activity Diagram

Figure 3.34 represents that the activity of View Selected Tender use case. Tender holder will be able to View Selected Tender this way.

#### 3.3.3.6 View Tender Winner Activity Diagram

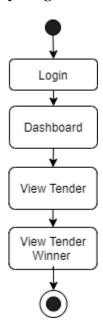


Figure 3. 35 View Tender Winner Activity Diagram

Figure 3.35 represents that the activity of View Tender Winner use case. Tender holder will be able to View Tender Winner this way.

# 3.4 Sequence Diagram

Sequence diagram describes that how object interaction and exchange message with each other. Below I have showed my system object interaction and how they exchange message with each other's.

# 3.4.1 Sequence Diagram for Super Admin

# 3.4.1.1 Login Sequence Diagram

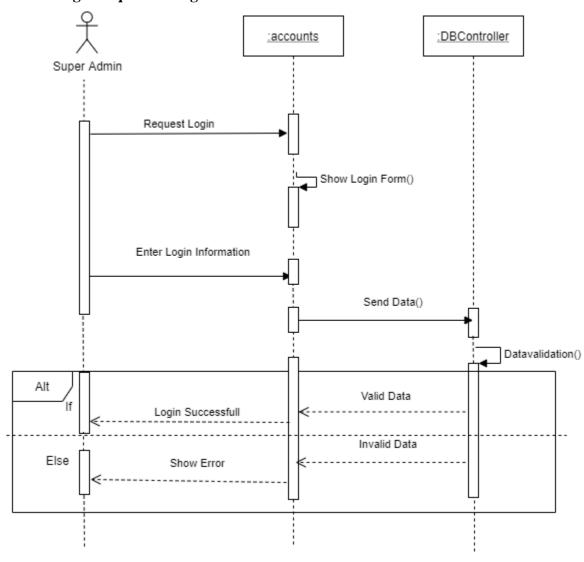


Figure 3. 36 Super Admin login Sequence Diagram

Figure 3.36 show sequence diagram of login for super admin and how objects interact between object and user.

# 3.4.1.2 Add Ministry Sequence Diagram

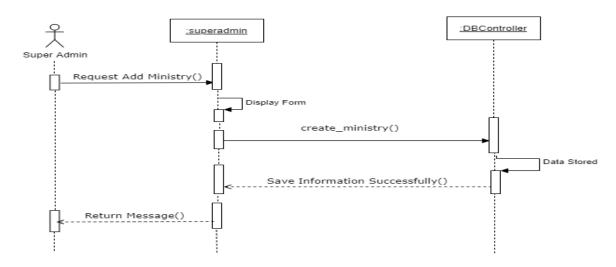


Figure 3. 37 Super Admin Add Ministry Sequence Diagram

Figure 3.37 show sequence diagram of add ministry for super admin and how objects interact between object and user.

#### 3.4.1.3 View Ministry Sequence Diagram

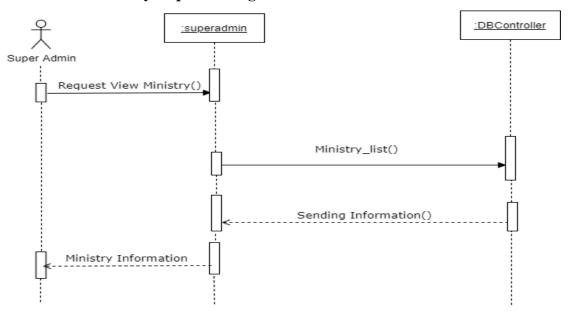


Figure 3.38 show sequence diagram of view ministry for super admin and how objects interact between object and user.

#### 3.4.1.4 Update Ministry Sequence Diagram

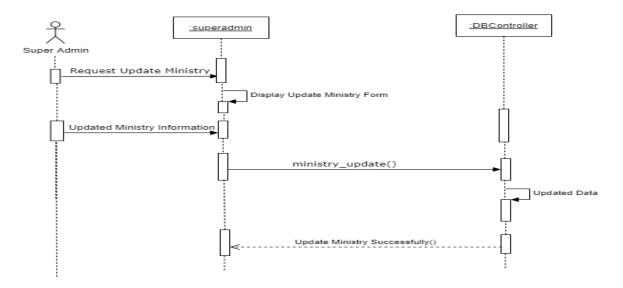


Figure 3. 39 Super Admin Update Ministry Sequence Diagram

Figure 3.39 show sequence diagram of update ministry for super admin and how objects interact between object and user.

# 3.4.1.5 Delete Ministry Sequence Diagram

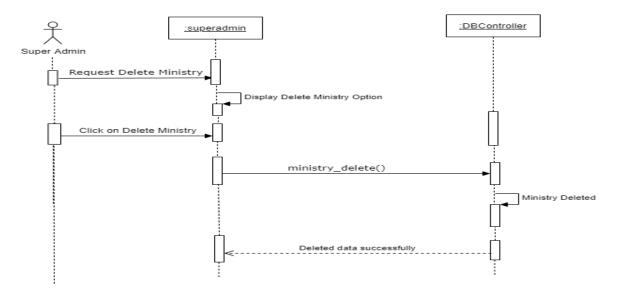


Figure 3. 40 Super Admin Delete Ministry Sequence Diagram

Figure 3.40 show sequence diagram of delete ministry for super admin and how objects interact between object and user.

#### 3.4.1.6 Add Ministry Incharge Sequence Diagram

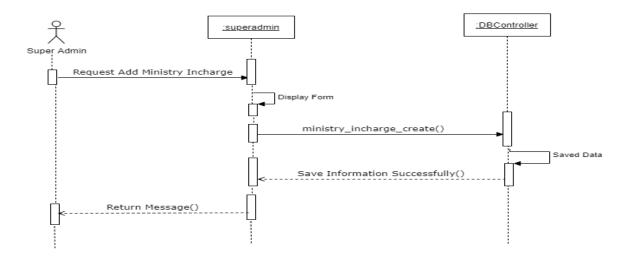


Figure 3. 41 Super Admin Add Ministry Incharge Sequence Diagram

Figure 3.41 show sequence diagram of add ministry incharge for super admin and how objects interact between object and user.

#### 3.4.1.7 View Ministry Incharge Sequence Diagram

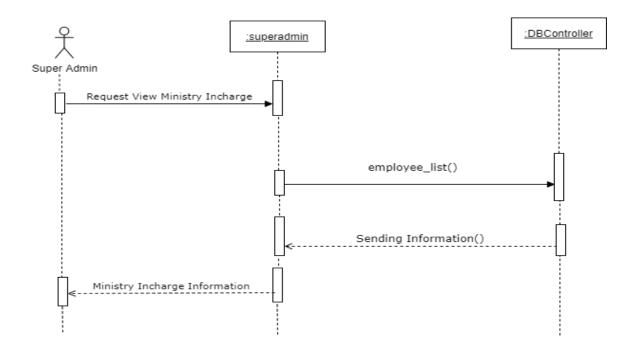


Figure 3. 42 Super Admin View Ministry Incharge Sequence Diagram

Figure 3.42 show sequence diagram of view ministry incharge for super admin and how objects interact between object and user.

# 3.4.1.8 Update Ministry Incharge Sequence Diagram

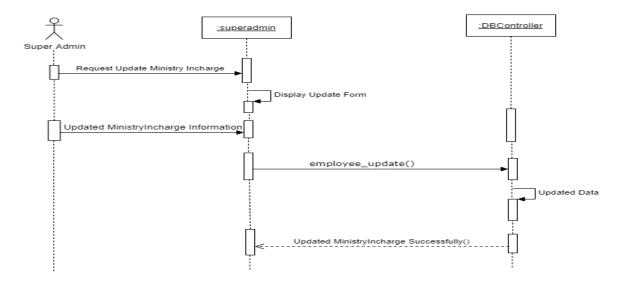


Figure 3. 43 Super Admin Update Ministry Incharge Sequence Diagram

Figure 3.43 show sequence diagram of update ministry incharge for super admin and how objects interact between object and user.

#### 3.4.1.9 Delete Ministry Incharge Sequence Diagram

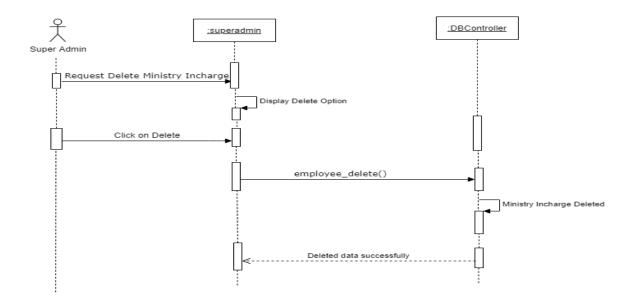


Figure 3. 44 Super Admin Delete Ministry Incharge Sequence Diagram

Figure 3.44 show sequence diagram of delete ministry incharge for super admin and how objects interact between object and user.

### 3.4.1.10 View Tender Holder Sequence Diagram

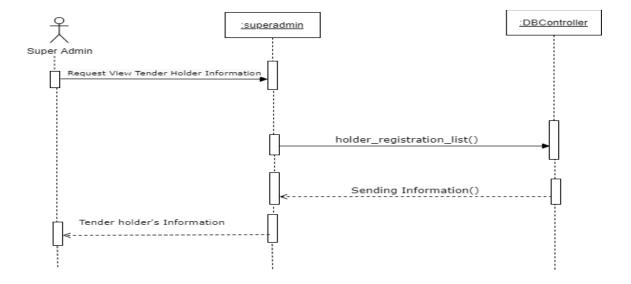


Figure 3.45 show sequence diagram of view tender holder for super admin and how objects interact between object and user.

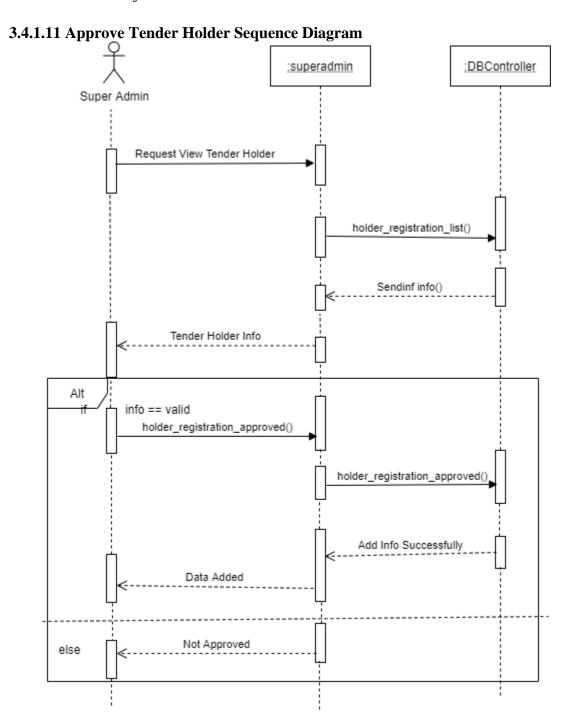


Figure 3. 46 Super Admin Approve Tender Holder Sequence Diagram

Figure 3.46 show sequence diagram of approve tender holder for super admin and how objects interact between object and user.

#### 3.4.1.12 View Profile Sequence Diagram

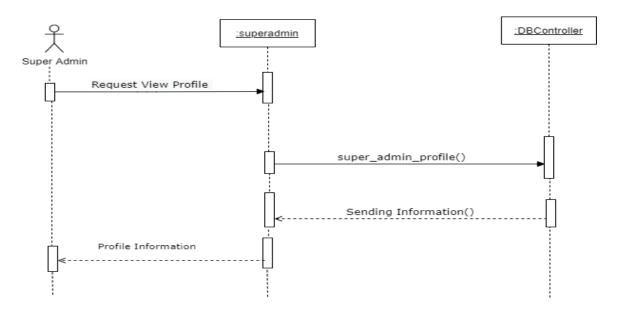


Figure 3. 47 Super Admin View Profile Sequence Diagram

Figure 3.47 show sequence diagram of view profile for super admin and how objects interact between object and user.

# 3.4.1.13 Update Profile Sequence Diagram

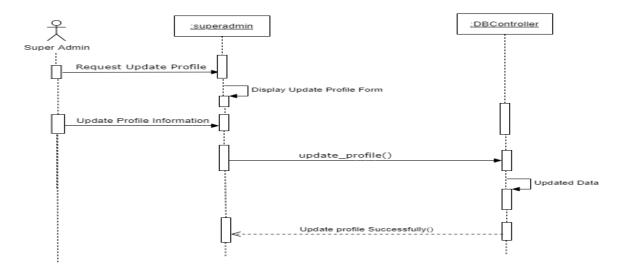


Figure 3. 48 Super Admin Update Profile Sequence Diagram

Figure 3.48 show sequence diagram of update profile for super admin and how objects interact between object and user.

#### 3.4.1.14 Delete Profile Sequence Diagram

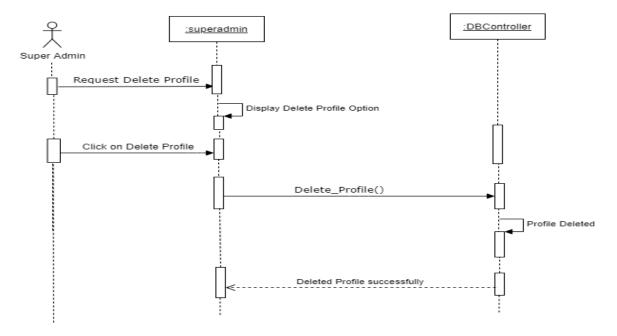


Figure 3. 49 Super Admin Delete Profile Sequence Diagram

Figure 3.49 show sequence diagram of delete profile for admin and how objects interact between object and user.

#### **3.4.1.15** Change Password Sequence Diagram

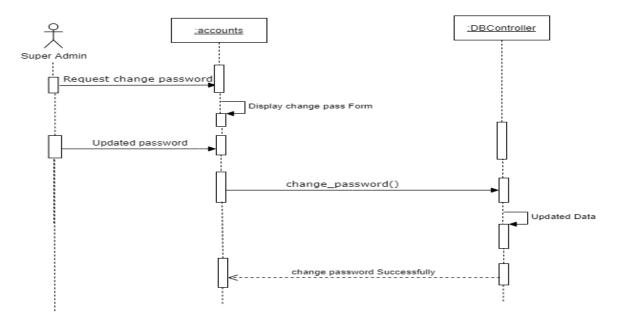


Figure 3. 50 Super Admin Change Password Sequence Diagram

Figure 3.50 show sequence diagram of change password for super admin and how objects interact between object and user.

# **3.4.1.16** Change Email Sequence Diagram

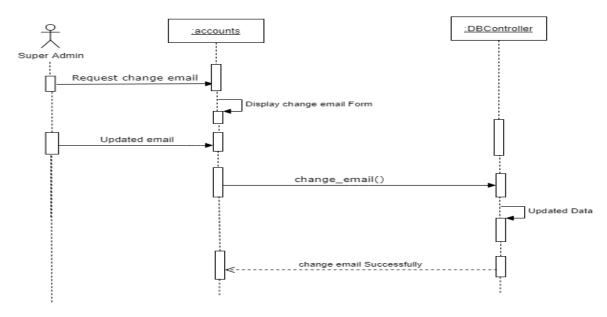


Figure 3. 51 Super Admin Change Email Sequence Diagram

Figure 3.51 show sequence diagram of change email for super admin and how objects interact between object and user.

# 3.4.2 Sequence Diagram for Ministry Incharge

# 3.4.2.1 Login Sequence Diagram

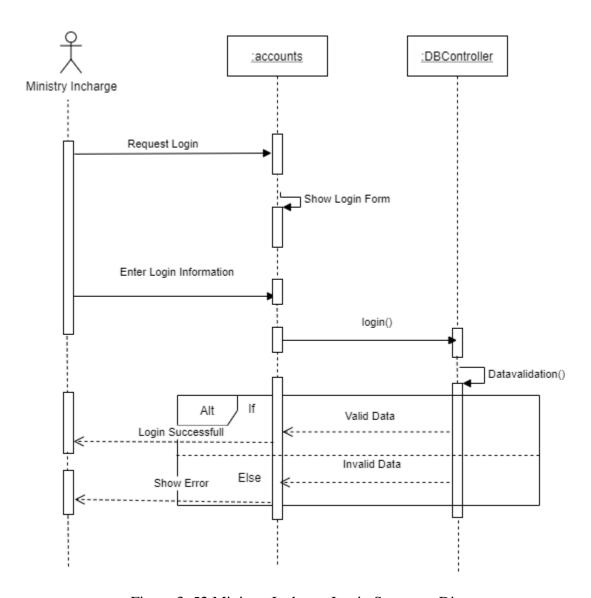


Figure 3. 52 Ministry Incharge Login Sequence Diagram

Figure 3.52 show sequence diagram of login for ministry incharge and how objects interact between object and user.

# 3.4.2.2 Add Tender Sequence Diagram

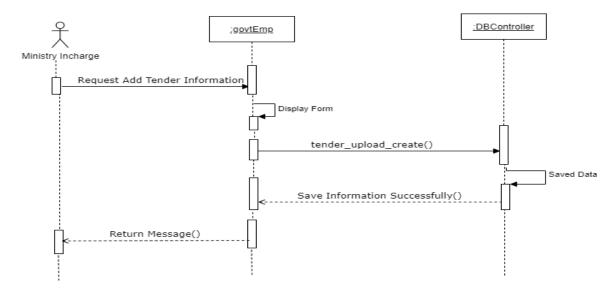


Figure 3. 53 Ministry Incharge Add Tender Sequence Diagram

Figure 3.53 show sequence diagram of add tender for ministry incharge and how objects interact between object and user.

#### 3.4.2.3 View Tender Sequence Diagram

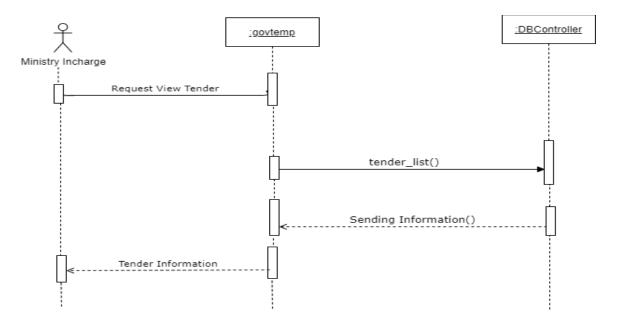


Figure 3. 54 Ministry In charge View Tender Sequence Diagram

Figure 3.54 show sequence diagram of view tender for ministry incharge and how objects interact between object and user.

#### 3.4.2.4 Update Tender Sequence Diagram

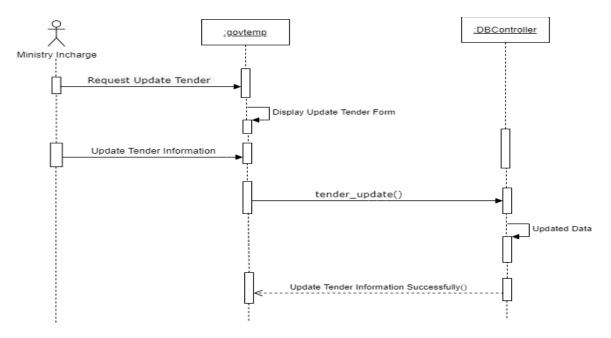


Figure 3. 55 Ministry Incharge Update Tender Sequence Diagram

Figure 3.55 show sequence diagram of update tender for ministry incharge and how objects interact between object and user.

# 3.4.2.5 Delete Tender Sequence Diagram

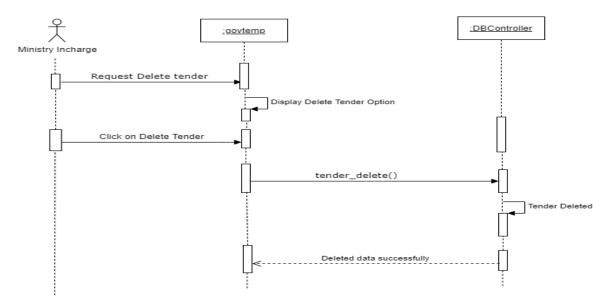


Figure 3. 56 Ministry Incharge Delete Tender Sequence Diagram

Figure 3.56 show sequence diagram of delete tender for ministry incharge and how objects interact between object and user.

#### 3.4.2.6 View Tender Application Sequence Diagram

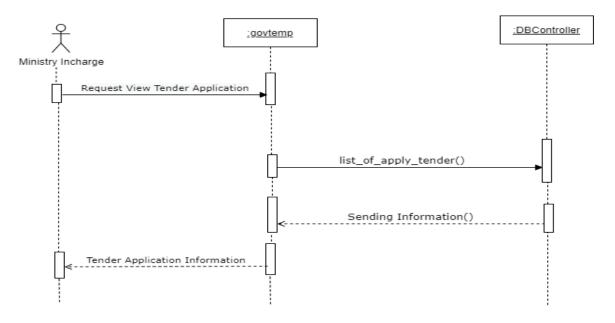


Figure 3. 57 Ministry Incharge view Tender Application Sequence Diagram

Figure 3.57 show sequence diagram of view tender application for ministry incharge and how objects interact between object and user.

#### 3.4.2.7 Select Tender Applicant Sequence Diagram

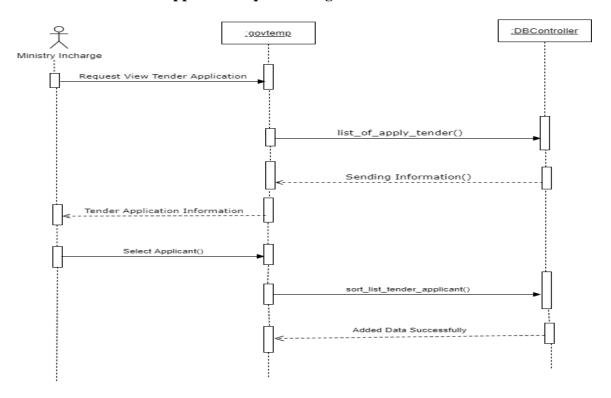


Figure 3. 58 Ministry Incharge Select Tender Applicant Sequence Diagram

Figure 3.58 show sequence diagram of select tender applicant for ministry incharge and how objects interact between object and user.

#### 3.4.2.8 Add Tender Winner Sequence Diagram

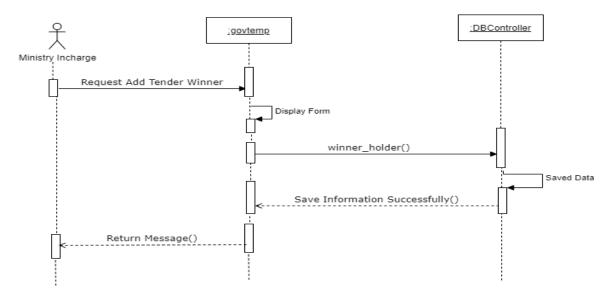


Figure 3. 59 Ministry Incharge Add Tender Winner Sequence Diagram

Figure 3.59 show sequence diagram of add tender winner for ministry incharge and how objects interact between object and user.

# 3.4.2.9 Tender Winner List Sequence Diagram

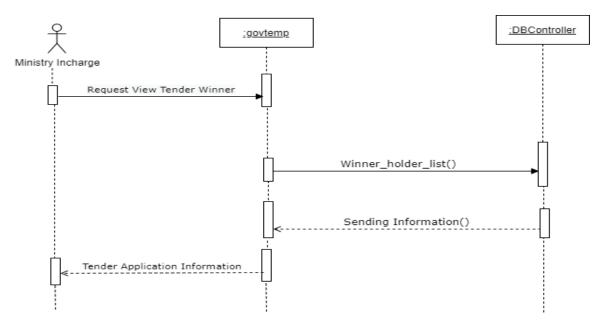


Figure 3.60 show sequence diagram of view tender winner for ministry incharge and how objects interact between object and user.

#### **3.4.2.10** Publish Notice Sequence Diagram

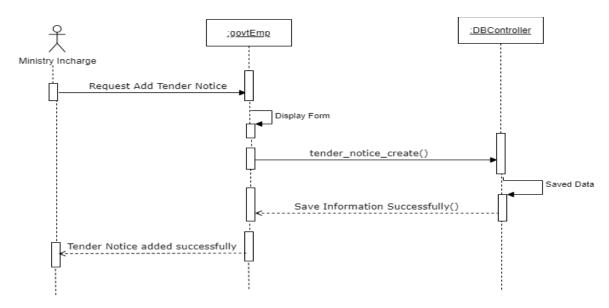


Figure 3. 61 Ministry Incharge Add Tender Notice Sequence Diagram

Figure 3.61 show sequence diagram of add tender notice for ministry incharge and how objects interact between object and user.

# 3.4.2.11 Update Notice Sequence Diagram

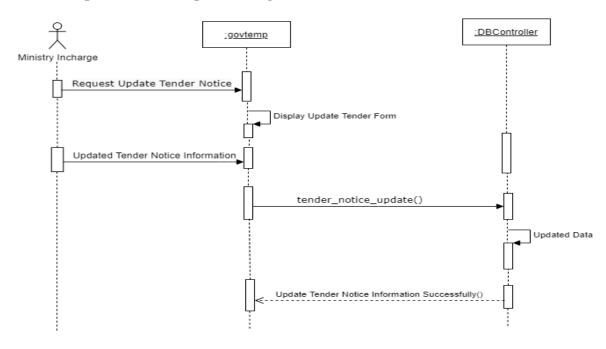


Figure 3. 62 Ministry Incharge Update Tender Notice Sequence Diagram

Figure 3.62 show sequence diagram of update tender notice for ministry incharge and how objects interact between object and user.

## 3.4.2.12 Delete Tender Notice Sequence Diagram

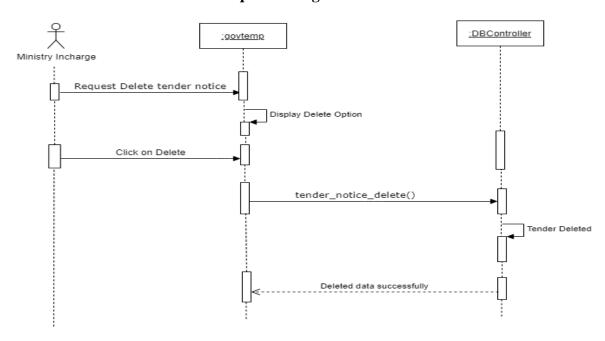


Figure 3. 63 Ministry Incharge Delete Tender Notice Sequence Diagram

Figure 3.63 show sequence diagram of delete tender notice for ministry incharge and how objects interact between object and user.

## 3.4.2.13 View Profile Sequence Diagram

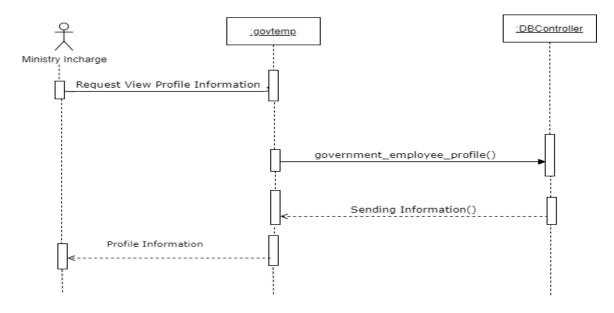


Figure 3. 64 Ministry Incharge View Profile Sequence Diagram

Figure 3.64 show sequence diagram of view profile for ministry incharge and how objects interact between object and user.

## 3.4.2.14 Update Profile Sequence Diagram

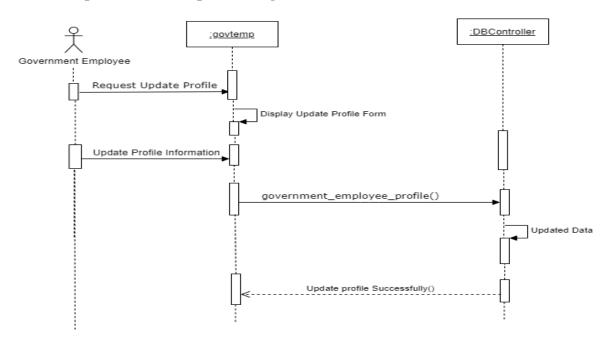


Figure 3. 65 Ministry Incharge Update Profile Sequence Diagram

Figure 3.65 show sequence diagram of update profile for ministry incharge and how objects interact between object and user.

## **3.4.2.15** Change Email Sequence Diagram

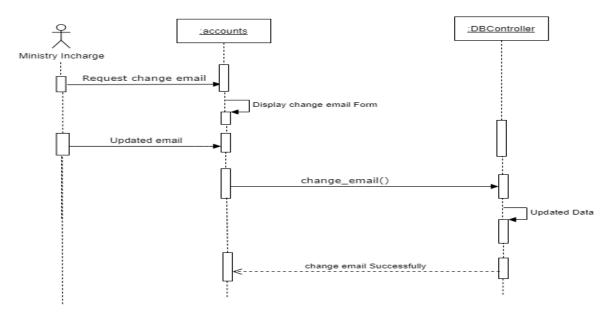


Figure 3. 66 Ministry Incharge Change Email Sequence Diagram

Figure 3.66 show sequence diagram of change email for ministry incharge and how objects interact between object and user.

## **3.4.2.16** Change Password Sequence Diagram

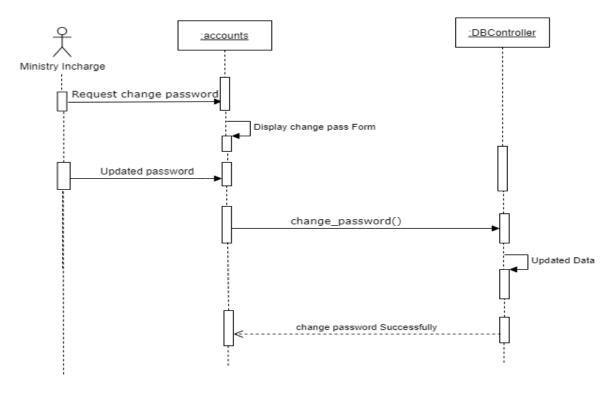


Figure 3. 67 Ministry Incharge Change Password Sequence Diagram

Figure 3.67 show sequence diagram of change password for ministry incharge and how objects interact between object and user.

## 3.4.2.17 Logout Sequence Diagram

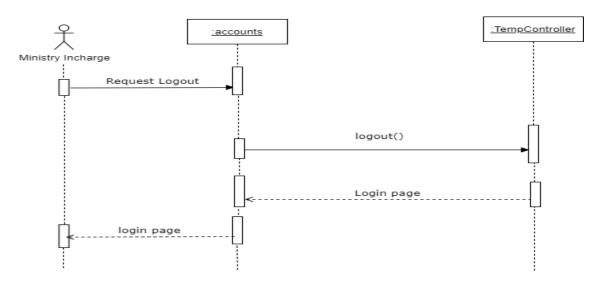


Figure 3. 68 Ministry Incharge Logout Sequence Diagram

Figure 3.68 show sequence diagram of logout for ministry incharge and how objects interact between object and user.

## **3.4.3** Sequence Diagram for Tender Holder

### 3.4.3.1 Register Sequence Diagram

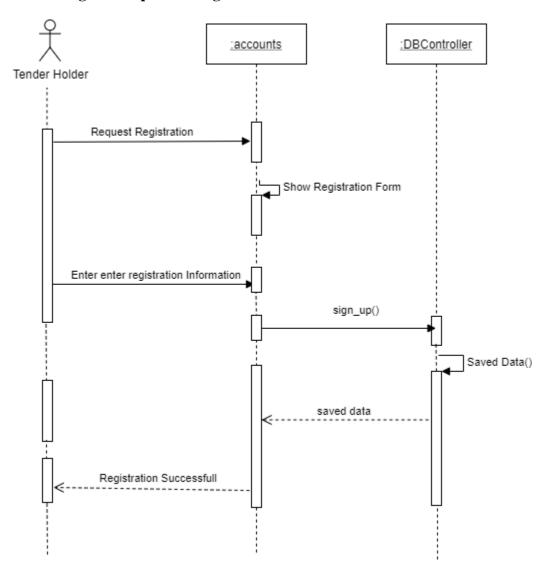


Figure 3. 69 Tender Holder Register Sequence Diagram

Figure 3.69 show sequence diagram of registration for tender holder and how objects interact between object and user.

## 3.4.3.2 Login Sequence Diagram

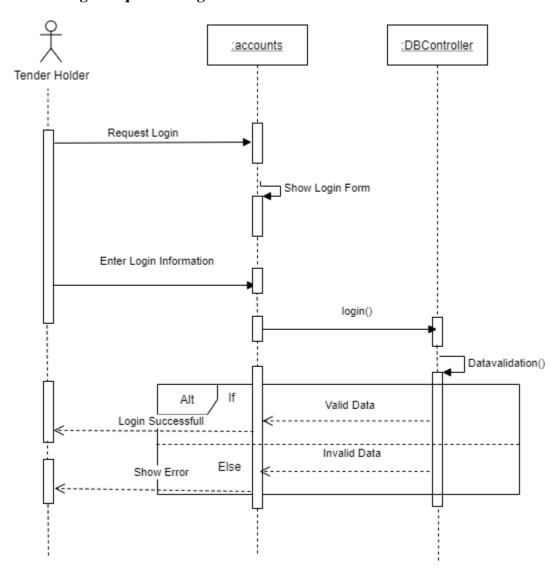


Figure 3. 70 Tender Holder Login Sequence Diagram

Figure 3.70 show sequence diagram of login for tender holder and how objects interact between object and user.

## 3.4.3.3 Apply Tender Sequence Diagram

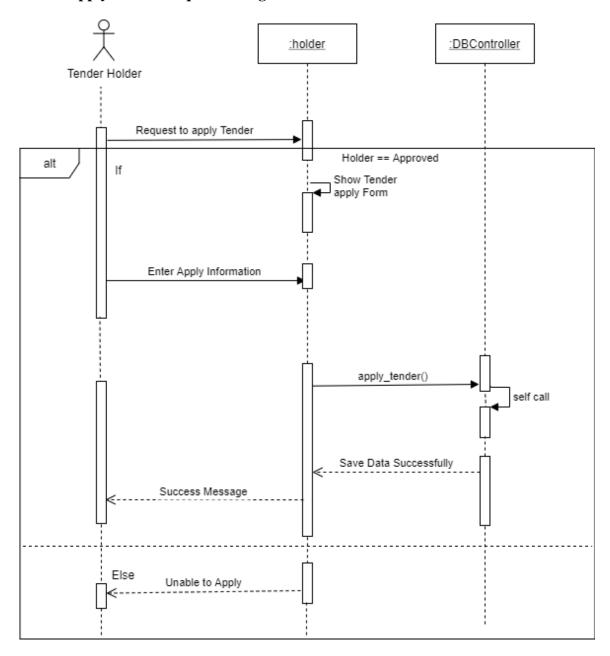


Figure 3. 71 Tender Holder Apply Tender Sequence Diagram

Figure 3.71 show sequence diagram of apply tender for tender holder and how objects interact between object and user.

## 3.4.3.4 My Applied Tender Application Sequence Diagram

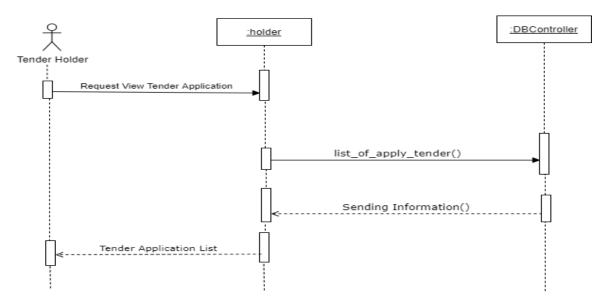


Figure 3. 72 Tender Holder My Applied Tender Application Sequence Diagram

Figure 3.72 show sequence diagram of my applied tender for tender holder and how objects interact between object and user.

## 3.4.3.5 Tender List Sequence Diagram

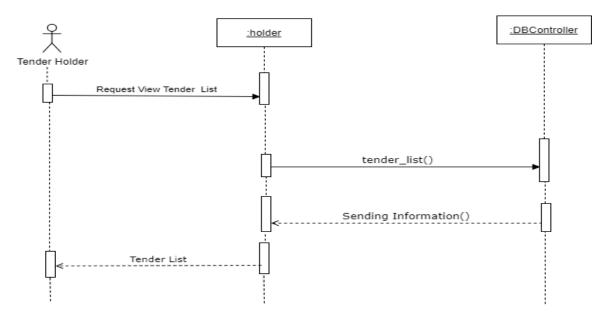


Figure 3. 73 Tender Holder View Tender List Sequence Diagram

Figure 3.73 show sequence diagram of view tender for tender holder and how objects interact between object and user.

## 3.4.3.6 Selected Tender Holder Sequence Diagram

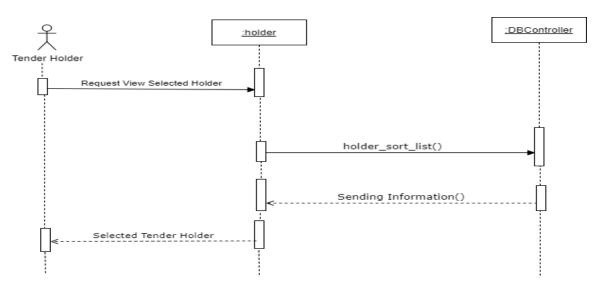


Figure 3. 74 Tender Holder Selected Tender Holder Sequence Diagram

Figure 3.74 show sequence diagram of selected tender holder for tender holder and how objects interact between object and user.

## 3.4.3.7 View Tender Winner Sequence Diagram

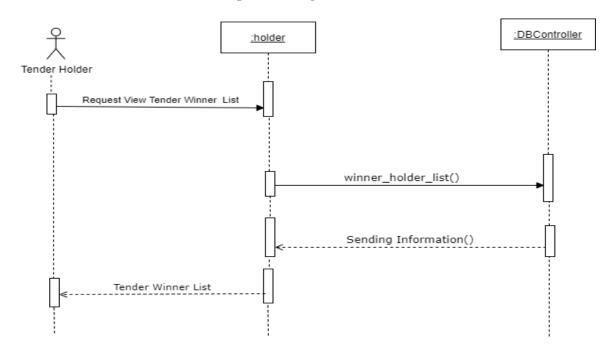


Figure 3. 75 Tender Holder View Tender Winner Sequence Diagram

Figure 3.75 show sequence diagram of view tender winner for tender holder and how objects interact between object and user.

## 3.4.3.8 View Profile Sequence Diagram

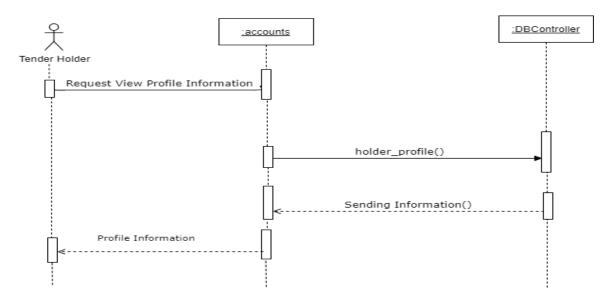


Figure 3. 76 Tender Holder View Profile Sequence Diagram

Figure 3.76 show sequence diagram of view profile for tender holder and how objects interact between object and user.

### 3.4.3.9 Update Profile Sequence Diagram

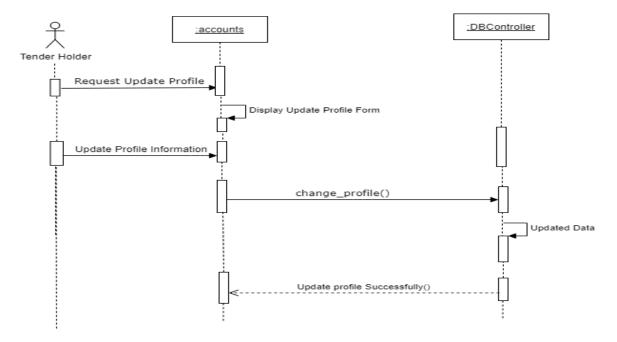


Figure 3. 77 Tender Holder Update Profile Sequence Diagram

Figure 3.77 show sequence diagram of update profile for tender holder and how objects interact between object and user.

## 3.4.3.10 Delete Profile Sequence Diagram

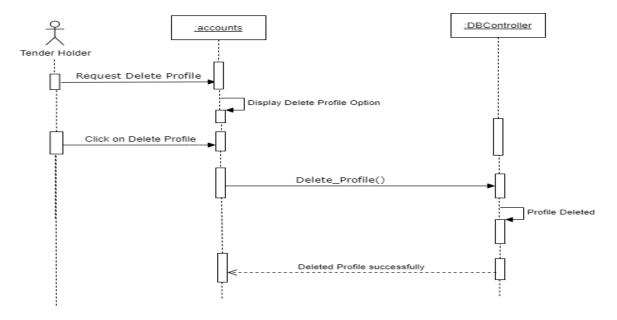


Figure 3. 78 Tender Holder Delete Profile Sequence Diagram

Figure 3.78 show sequence diagram of delete profile for tender holder and how objects interact between object and user.

## 3.4.3.11 Change Email Sequence Diagram

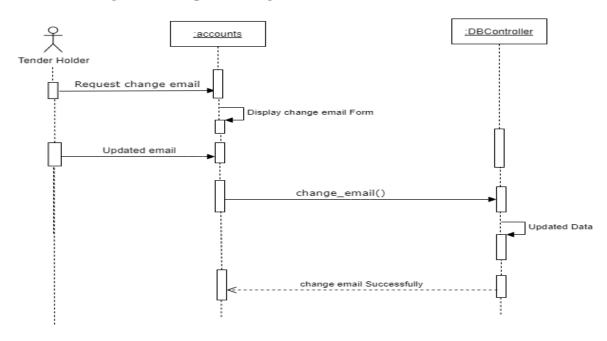


Figure 3. 79 Tender Holder Change Email Sequence Diagram

Figure 3.79 show sequence diagram of change email for tender holder and how objects interact between object and user.

## 3.4.3.12 Change Password Sequence Diagram

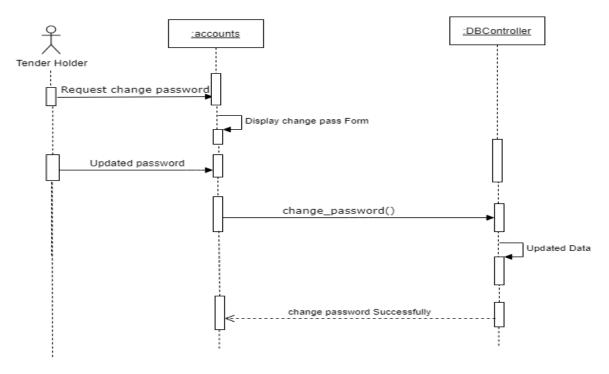


Figure 3. 80 Tender Holder Change Password Sequence Diagram

Figure 3.80 show sequence diagram of change password for tender holder and how objects interact between object and user.

### 3.4.3.13 View Notice Sequence Diagram

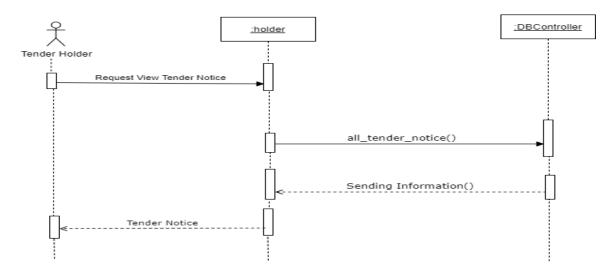


Figure 3.81 show sequence diagram of view tender notice for tender holder and how objects interact between object and user.

## 3.4.3.14 Logout Sequence Diagram

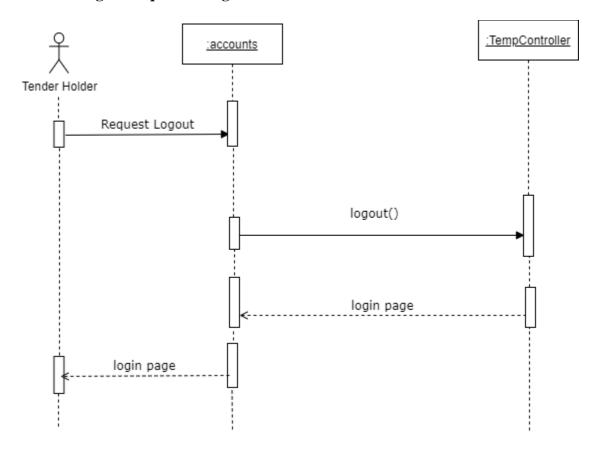


Figure 3. 82 Tender Holder Logout Sequence Diagram

Figure 3.82 show sequence diagram of logout for tender holder and how objects interact between object and user.

## 3.5 Entity Relationship Diagram

Entity relationship diagram describes the relations of entity set of my system database.

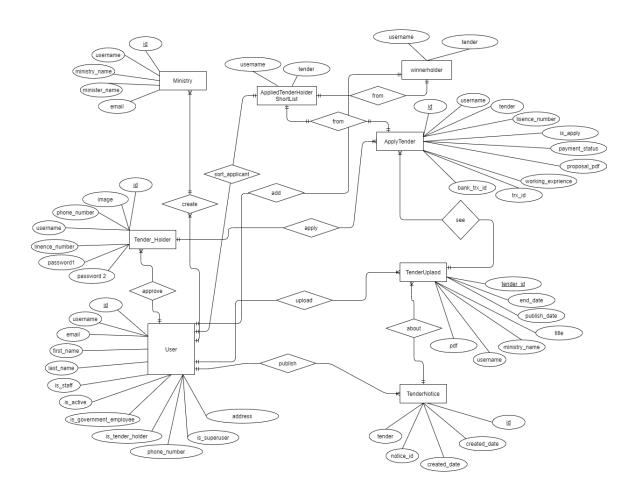


Figure 3. 83 Entity Relationship Diagram of E-Tender

Figure 3.83 describes the relations of entity set of my system database.

### 3.6 Class Diagram

Class diagram is use for showing structure of a system, system classes, attributes and functions of a system. It is a static structure diagram.

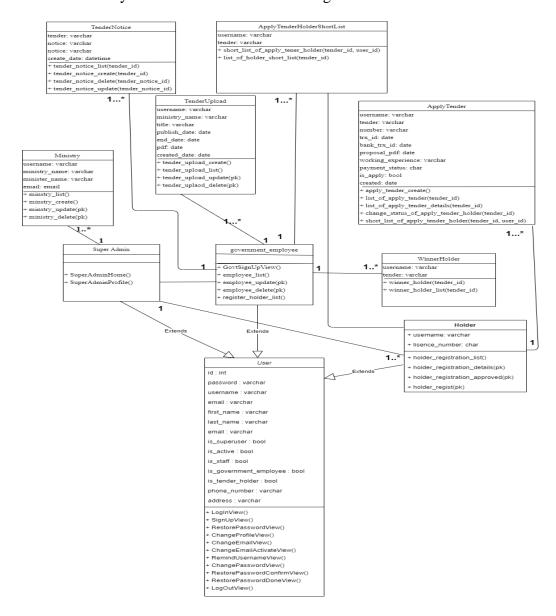


Figure 3. 84 Class Diagram of E-Tender

Figure 3.84 describes the structure of my system and all classes, attributes, functions of my system that I have used into my system. It also shows association, inheritance, dependency of my system.

## 3.7 Data Flow Diagram

## 3.7.1 Context Level Data Flow Diagram

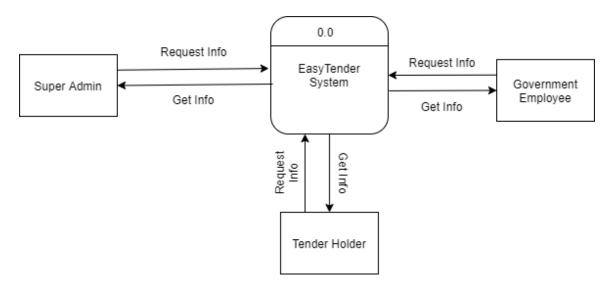


Figure 3. 85 Context Level Data Flow Diagram

Figure 3.85 is showing my system's context level diagram and how data flow in context level.

## 3.7.2 Level 0 Data Flow Diagram

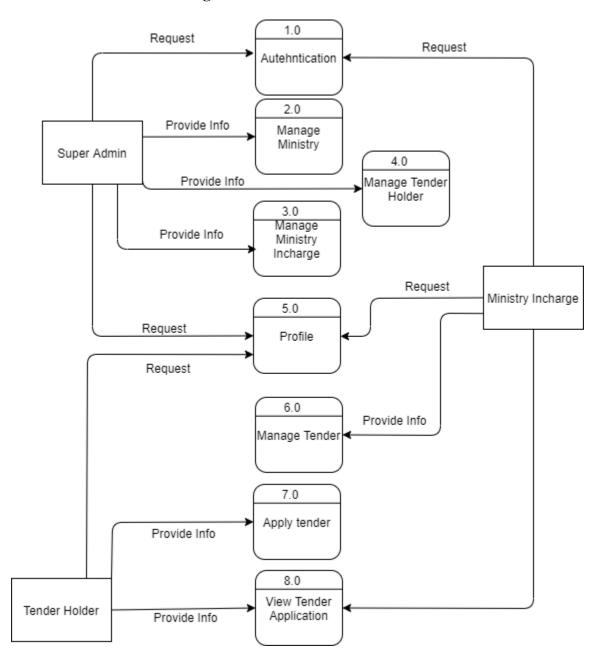
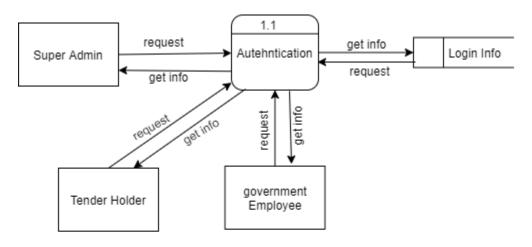


Figure 3. 86 Level 0 Data Flow Diagram

Figure 3.86 is showing my system's level 0 diagram and how data flow in level 0 data flow diagram.

## 3.7.3 Level 1 Data Flow Diagram



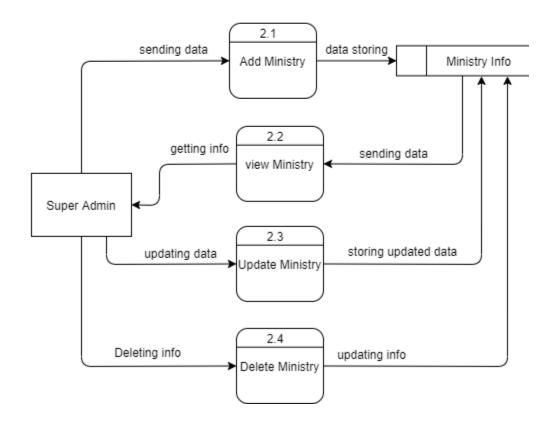


Figure 3. 87 Level 1 Data Flow Diagram

Figure 3.87 is showing my system's level 1 diagram and how data flow in level 1 data flow diagram.

## 3.7.4 Level 1 Data Flow Diagram

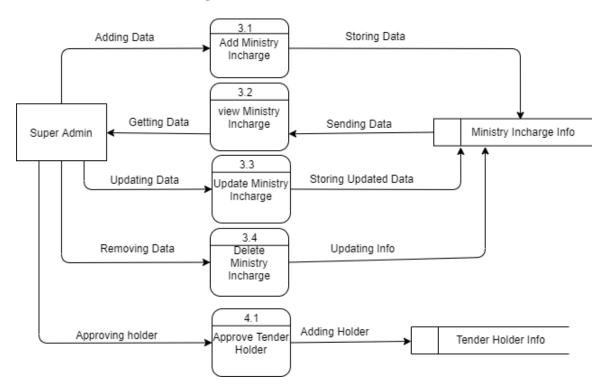


Figure 3. 88Level 1 Data Flow Diagram

Figure 3.88 is showing my system's level 1 diagram and how data flow in level 1 data flow diagram.

### 3.7.5 Level 1 Data Flow Diagram

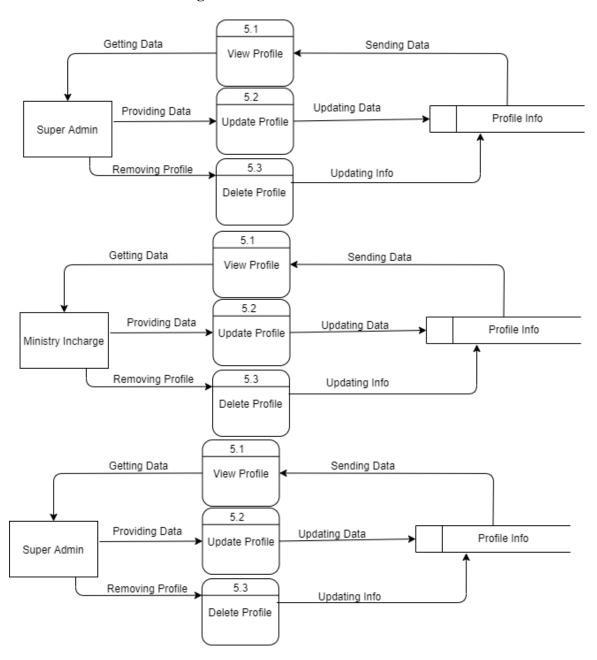


Figure 3. 89 Level 1 Data Flow Diagram

Figure 3.89 is showing my system's level 1 diagram and how data flow in level 1 data flow diagram.

## 3.7.6 Level 1 Data Flow Diagram

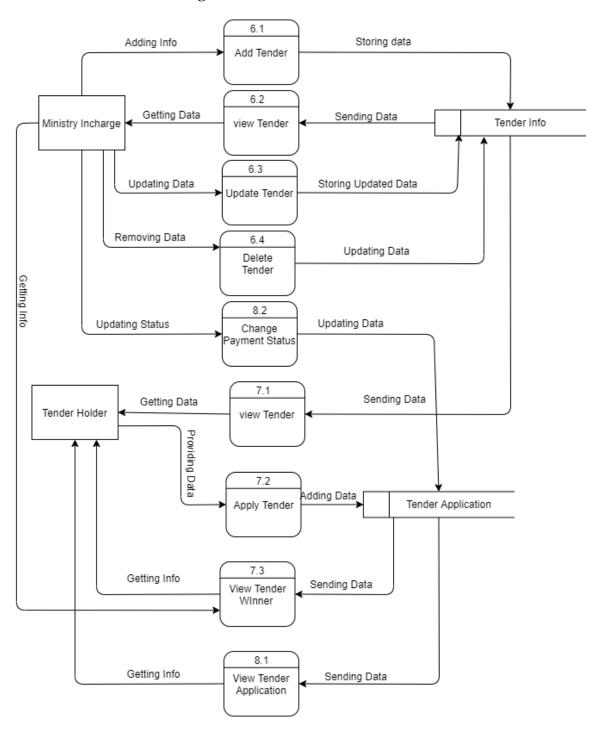


Figure 3. 90 Level 1 Data Flow Diagram

Figure 3.90 is showing my system's level 1 diagram and how data flow in level 1 data flow diagram.

## **Chapter 4**

## **System Design Specification**

## 4.1 Developing Tools and Technologies

## **4.1.1 Front-end Technology**

I used HTML, CSS, JavaScript for designing my system.

## 4.1.2 Back-end Technology

I used python language and Django framework for developing my system E-Tender and for database I have used SQLite3

# Chapter 5

# **System Test**

## **5.1 Test Cases**

I have used black box testing method for testing my system. This is a testing method that we test our system without view code by using valid invalid input.

# **5.1.1 Register Account**

Test Case ID.1	Module name: Register	
Test Priority: High	Test Date:21.05.2021	
Test Title: Register account with valid	Test executed by: Toufiqul Islam Noyon	
information.		
Description: Test Register Page	Test executed date: 21.05.2021	
Precondition:	Users must have to enter valid	
	information with valid email.	
Test steps:	1	Go to register page
	2	Provide valid information
	3	Click register button
Expected Results:	User should able to register their account.	
Actual Result:	User register their account successfully.	
Status (Pass/Fail):	Pass	
Post-condition:	Successfully register in the system.	

Table 5. 1 Testing Case (Register Account)

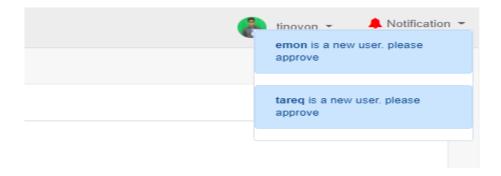


Figure 5. 1 Registration test case success result.

Figure 5.1 shows that the registration test case result. When a tender holder will be able to registration successfully to the system, super admin will be able to see the notification about that holder.

## **5.1.2 Login**

Test Case ID.2	Module name: Login
Test Priority: High	Test Date:21.05.2021
Test Title: Login Verification though valid email & password	Test executed by: Toufiqul Islam Noyon
Description: Test Register Page	Test executed date: 21.05.2021
Precondition:	Users must have to provide valid email and password.

Test steps:	1	Go to login page
	2	Provide valid email &
		password
	3	Click login button
Test Data:	Email: noyon@gmail.com	
	Password	:171-35-1822
Expected Results:	User will	be able to login
Actual Result:	User logged in successfully	
Status (Pass/Fail):	Pass	
Post-condition:	Successfu	Illy Logged in.

Table 5. 2 Testing Case (Login)



Figure 5. 2 Login test case success result.

Figure 5.2 shows that the login test case result. When a user will be able to login successfully to the system, user will be able to see his dashboard.

## **5.1.3** Approve Tender Holder

Test Case ID.3	Module name: Approve Tender Holder	
Test Priority: High	Test Date:21.05.2021	
Test Title: Login Verification though	Test executed by: Toufiqul Islam Noyon	
valid email & password		
Description: Testing Approve Holder	Test executed date: 21.05.2021	
Precondition:	Tender applicant has to register to the system through their valid information.	
Test steps:	1	Super admin has to login first
	2	Login with valid email &
		password
	3	Go to the approve tender
		holder option. You will see all
		holder list, approve them.
Expected Results:	Super admin will be able to approve	
	tender ho	olders successfully.

Actual Result:	Super admin succeeded to approve tender	
	holders.	
Status (Pass/Fail):	Pass	
Post-condition:	Successfully approve tender holders.	

Table 5. 3 Testing Case (Approve Tender Holder)

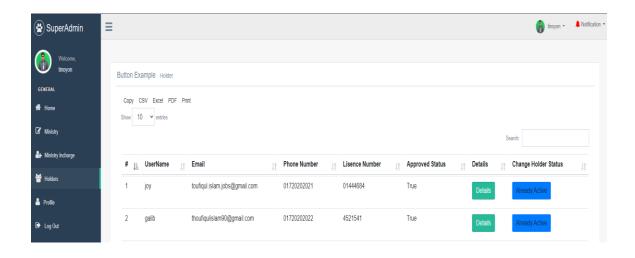


Figure 5. 3 Approve tender holder test case success result.

Figure 5.3 shows that the approve tender holder test case result. When super admin will be able to approve tender holder successfully to the system, approve status will show data true.

# **5.1.4 Apply Tender**

Test Case ID.4	Module name: Apply Tender	
Test Priority: High	Test Date:21.05.2021	
Test Title: Login Verification though valid email & password	Test executed by: Toufiqul Islam Noyon	
Description: Testing Apply Tender	Test executed date: 21.05.2021	
Precondition:	Tender applicant must have to provide valid information that will want the system.	
Test steps:	1	Go to login page
	2	Login with valid email & password as tender holder.
	3	Go to the tender and click apply tender button. Provide valid information that wants and click on apply tender button.
Expected Results:	User will be able to apply for tender successfully.	
Actual Result:	User applied for tender successfully.	

Status (Pass/Fail):	Pass
Post-condition:	Successfully applied for tender.

Table 5. 4 Testing Case (Apply Tender)

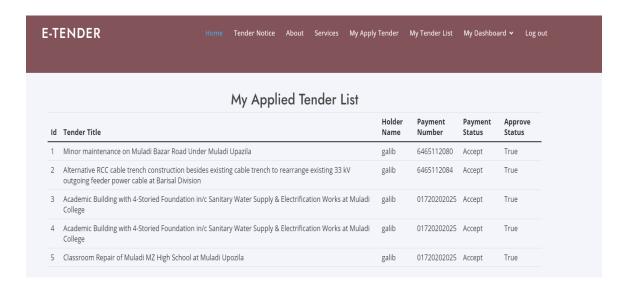


Figure 5. 4 Apply tender test case success result.

Figure 5.4 shows that the apply tender test case result. When tender holder will be able to apply for tender successfully to the system, he will be able to see which tender he applied for.

## Chapter 6

### **User Interface**

## **6.1** User Interface for super admin

## 6.1.1 Login Page

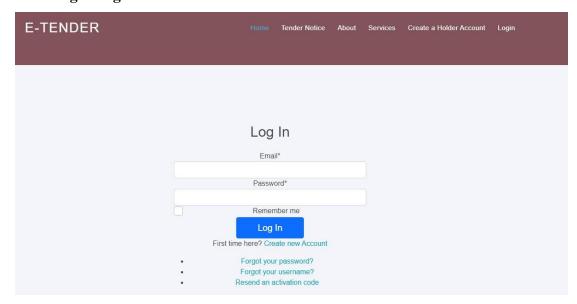


Figure 6. 1 User Interface (Login)

Figure 6.1 is showing login page of my project. Every user will be able to login into my system through this page.

### 6.1.2 Index Page

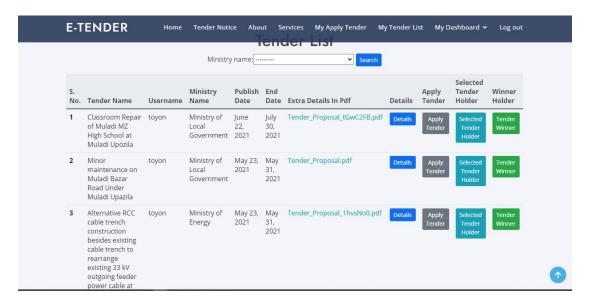


Figure 6. 2 User Interface (Index Page)

Figure 6.2 is showing index page of my project. Users will see this page when they enter into my system.

### **6.1.3 Super admin home**

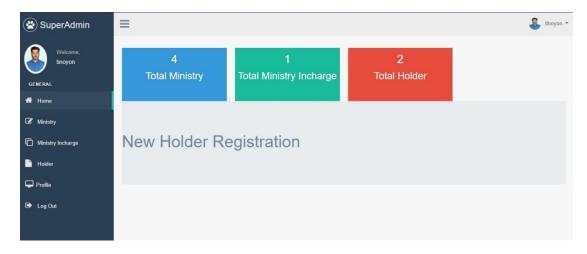


Figure 6. 3 User Interface (Super Admin Home)

Figure 6.3 is showing super admin home page. When super admin will login to his portal, he will see this page at first.

## **6.1.4 Super admin create ministry**



Figure 6. 4User Interface (Super Admin Create Ministry)

Figure 6.4 is showing that the create ministry page for super admin. Super admin will be able to add new ministry when he will go into this page.

## 6.1.5 Super admin view, update delete ministry

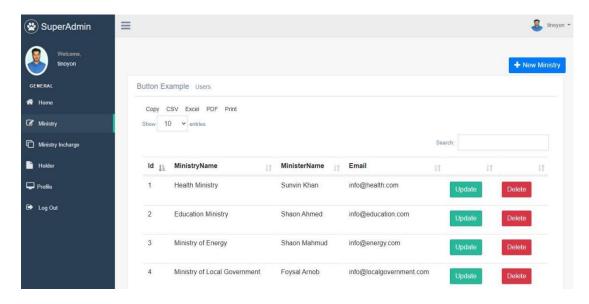


Figure 6. 5 User Interface (Super Admin View, Update, Delete Ministry)

Figure 6.5 is showing the page where super admin can view, update and delete ministry information.

### 6.1.6 Super admin add ministry incharge

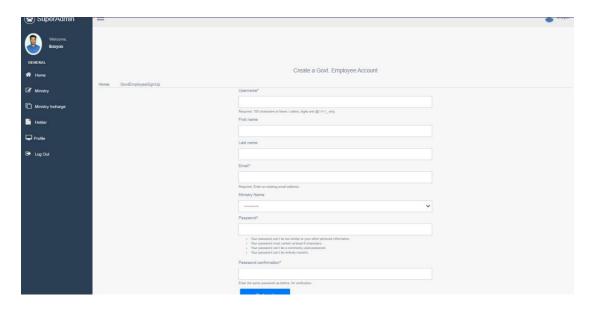


Figure 6. 6 User Interface (Super Admin Add Ministry Incharge)

This figure 6.6 is showing that the page where super admin will add ministry incharge.

### 6.1.7 Super admin view, update, delete ministry incharge

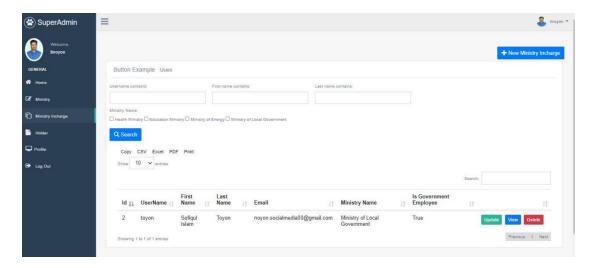


Figure 6. 7 User Interface (Super Admin View, Update, Delete Ministry Incharge)

This figure 6.7 is showing the page, where super admin will be able to view, update, delete ministry incharge information.

#### 6.1.8 Super admin View and approve tender holder

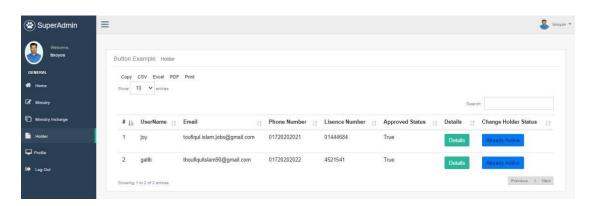


Figure 6. 8 User Interface (Super Admin View & Approve Tender Holder)

This figure 6.8 is showing the page, where super admin will see all tender holder and will approve them.

## 6.1.9 Super admin View profile

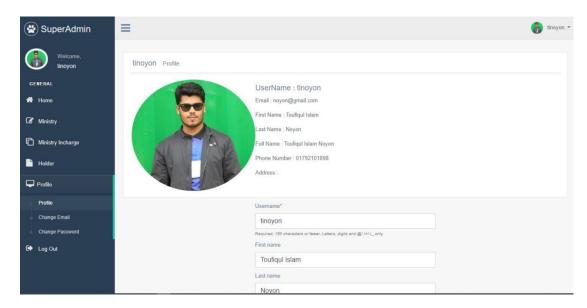


Figure 6. 9 User Interface (Super Admin View Profile)

This figure 6.9 is showing super admin home page.

### **6.2** User Interface for Ministry Incharge

## **6.2.1** Ministry Incharge Home page



Figure 6. 10 User Interface (Ministry Incharge Home)

## 6.2.2 Ministry Incharge View, update, delete tender page

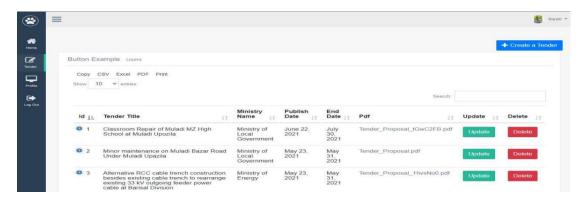


Figure 6. 11 User Interface (Ministry Incharge View, Update, Delete Tender)

## **6.2.3** Ministry Incharge View tender applicant

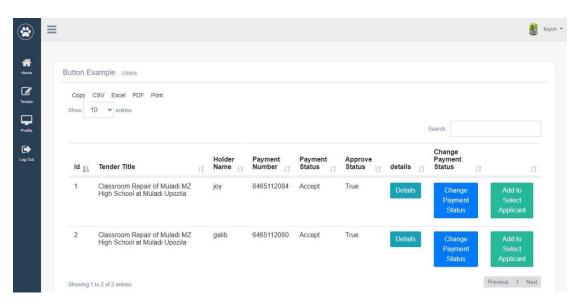


Figure 6. 12 User Interface (Ministry Incharge View Tender Applicant)

## 6.2.4 Ministry Incharge selected tender applicant and add tender winner

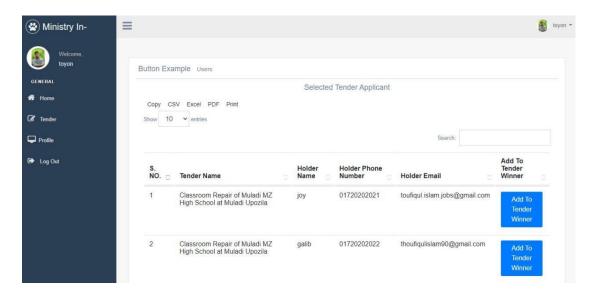


Figure 6. 13 User Interface (Ministry Incharge Selected Tender Applicant and add tender winner)

### 6.2.5 Ministry Incharge Profile



Figure 6. 14 User Interface (Ministry Incharge Profile)

### **6.3** User Interface for Tender Holder

#### 6.3.1 Tender Holder home and view tender

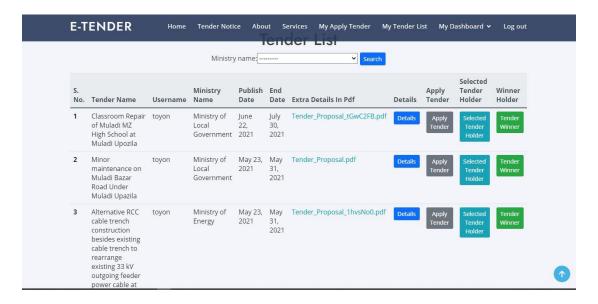


Figure 6. 15 User Interface (Tender Holder Home & View Tender)

This figure 6.15 is showing that when tender holder login into his portal he will see this page and tender list.

### **6.3.2** Tender Holder apply tender

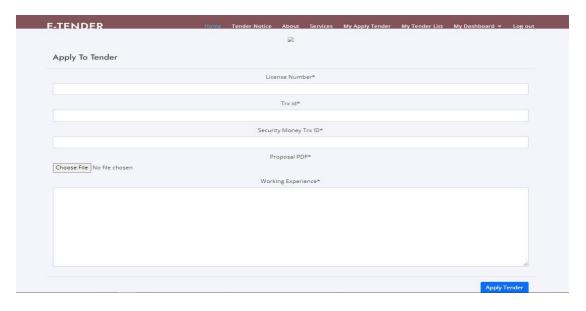


Figure 6. 16 User Interface (Tender Holder Apply Tender)

This figure 6.16 is showing the page, where tender holder will be able to apply for tender.

## 6.3.3 Tender Holder My Applied Tender

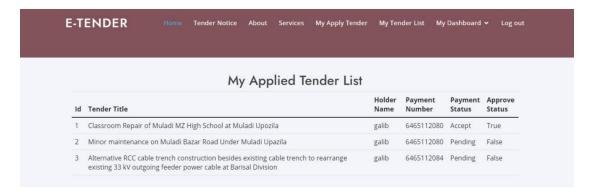


Figure 6. 17 User Interface (Tender Holder My Applied Tender)

This figure 6.17 is showing that which tender a holder applied for.

### 6.3.4 Log Out page

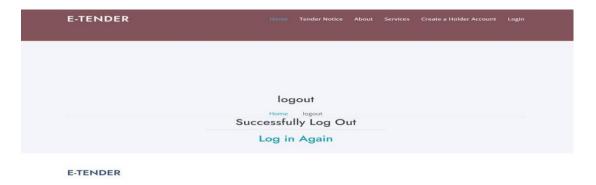


Figure 6. 18 User Interface (Logout Page)

Chapter 7

7.1 Conclusion

This system is different from other system as using my system Bangladeshi government

will be able to publish their tender easily and tender holder will be able to easily find about

tender and will be able to apply for tender easily. Tender holders do not need to come

physically for applying tender to government office. Ministry incharge will be able to

easily find all tender applicants and will be able to select best applicant among all

applicants. Ministry incharge will be able to select a tender winner easily by checking their

details through my system. Government does not need to arrange anything for select tender

winner and tender holder also do not need to come physically for seeing who is the winner.

Tender winner automatically will get a tender winning email. This system will make these

works very easy.

7.2 GitHub Link

Source code link of project "E-Tender"

GitHub Link: https://github.com/Toufiqul-Islam-Noyon/ETender

7.3 Limitation

Have no payment method option to the system that will give the tender holder pay

their tender fee through using system payment option.

**Only one version:** Now the system is available only web version. But everyone wants an

application version for doing their work more easily. I have not built any Android & ISO

version of this system yet.

7.4 Future Scope

I have worked very hard to develop this project to fulfil all the satisfaction but however in

this project has more areas to make it more flexible like: security issues, payment system

method option, Work rating option. These features should be added to make the system complete for government & tender holder. I will develop an Android & IOS apps of this system. So that the user can do their work more easily.

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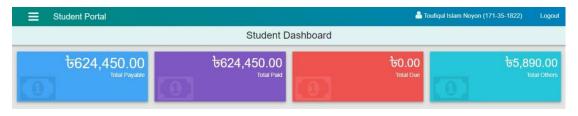
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## **Chapter 8**

### **Account Clearance**





### **Plagiarism Report**

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