

# PROJECT

## TIME TABLE MANAGEMENT(TTM)

Developed by  
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**Project Title :** Time Table Management(TTM)

**Developed by**

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**Subject :** Project

**Sem :** 5<sup>th</sup> DCE



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## Certificate

This is to certify that the project report Time Table Managment(TTM) being submitted by Amit Raval, Vivek Singh, Hiren Shekhada in partial fulfillment for the award of the Diploma in Computer Engineering Sem : 5 to the Gujarat Technological University is record of bonafide work carried out by him under my guidance and supervision.

Head of Department  
Computer Engineering

Guided By: P.J.Joshi

## ACKNOWLEDGEMENTS

This is our first experience of project, thanks to the support staff & colleagues with gratitude. We wish to acknowledge all of them. However, we wish to make special mention of the following.

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We must make special mention of vice HOD Ms. Hemali Rupareliya. We would also thankful to our other staff member Mr. Shobhen Gohel, Mr. Nitin Birari, Ms. Krupa Thumar& Ms. Nikita Shukla for giving us advice ,all lab maintenance staff for providing us assistance in various h/w & s/w problem encountered during course of our project.

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## **TTM(Time Table Management)**

### **Abstract**

The importance of scheduling of classroom and practical session is very important in any educational institute. Hence, we have come up with the idea of maintaining the time table for the institute. This application is based on Time Table Management. In this application there will be 3 kinds of users, Admin, Faculty, and Student. The admin shall have full rights to control or maintain time table. Faculty have a permission to give a right to the student as per requirement. Student can access their own info regarding to their necessity. The main purpose of this application is to automatic generate the time-table, give notification to the student, faculty. Faculty can also give some required information to the student just like event information, attendance etc. Faculty can also update info such as attendance, event info etc. Student can login and got the information regarding attendance, notification of event Current class according to the time table etc.

### **Group Members**

- 1) Rawal Amit Dineshbhai
- 2) Singh Vivek Lalbahadur
- 3) Shekhada Hiren Ashokbhai

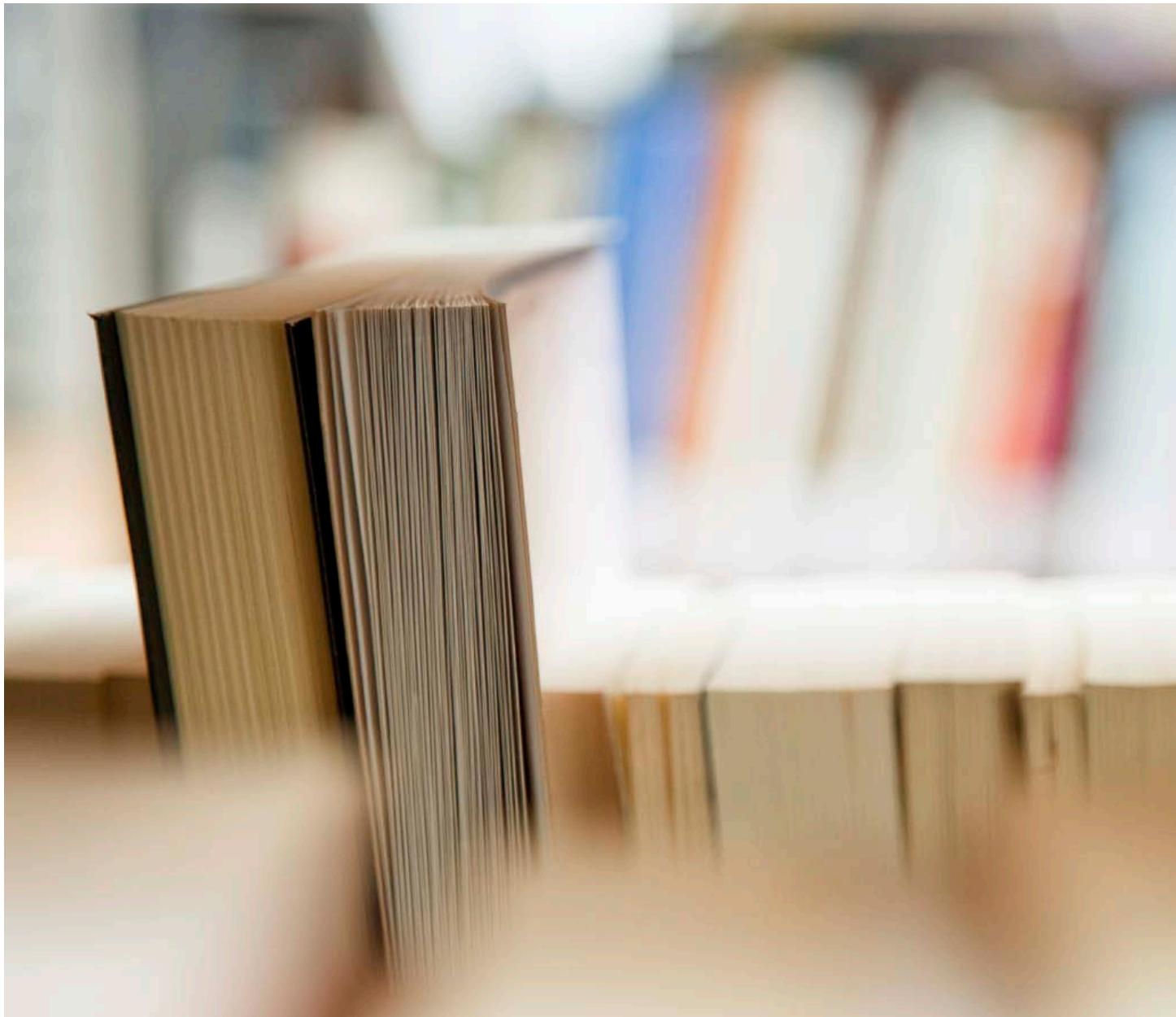
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# Chapter 1

## INTRODUCTION

## 1.1 CHARACTERISTICS OF TTM

The time table management system is a very old process. In every schools and colleges, the generation of the time table is required. Till now, Some time table management system is available but some cost is charged for using them. The existing systems are not user friendly because they require lots of data to generate.

➤ **The Characteristics of this TTM is given below:**

- The TTM is user friendly based application, every user can easily control and use it.
- All the user are manually done in most of the colleges because no one wants to spend the money on such process.
- Faculty, student as well as user can easily handle or use it.
- It is free of cost, so everyone can use this application.

## 1.2 OVERVIEW OF PROPOSED SYSTEM WITH ADVANTAGES

Automatic Timetable Generator is a Java based software used to generate timetable automatically. Currently timetable is managed manually. It will help to manage all the periods automatically and also will be helpful for faculty to get timetable in their phone. It will also manage timetable when any teacher is absent, late coming or early going. Maximum and minimum work load for a Faculty for a day, week and month will be specified for the efficient generation of timetable.

### ADVANTAGES

- Faculty did not need to worry for time clashes.
- Authority now does not need to perform permutation and combination.
- Authority can concentrate on other things rather than wasting their time on preparing Time-Table.

### 1.3 SCOPE

It is the important part of project which generate Timetable automatically. In this module it develops module. Generation done by considering maximum and minimum workload for a Faculty (without less and without exceeding). This will be generated by admin and viewed by Principal and Faculty who's are the users of the system.

#### ADMIN

- View Timetable.
- Generate Time Table.
- View substitute's response.
- Modify Time Table.
- Send Notification.
- Manage Subject Allocation.

#### FACULTY

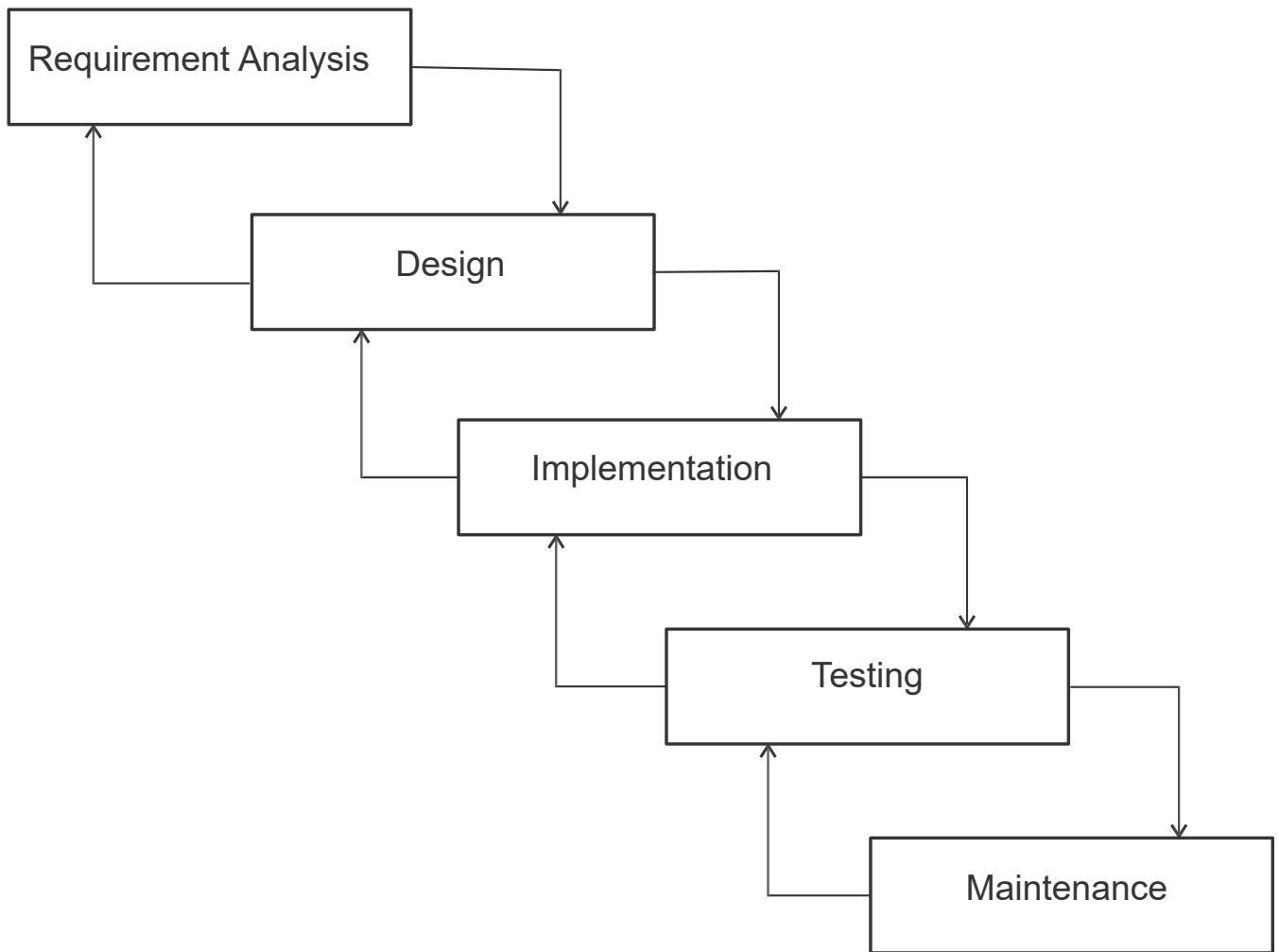
- Register with all information.
- View Timetable.
- View Substitute response.
- Give subject name according to their choice.
- Give notifications to the Student.

#### STUDENT

- Register with all information.
- View the Time-Table.

## 1.4 Process Model

### Iterative Waterfall Model



[figure 1.1 Iterative Waterfall Model]

### Description

- It is a cyclic development process model.
- It starts with Planning and ends with Deployment, in between it has Iteration.
- At each iteration, modifications are made.

### Advantages

- Re-designing is easier.
- Modifications can be estimated.



# Chapter 2

## System Requirements Specification

## 2.0 SYSTEM REQUIREMENTS SPECIFICATION

### 2.1 USER CHARACTERISTICS

There are Three types of users in this system.

- Principle
- Faculty
- Student

#### **Admin**

- Admin will require a unique id and password.
- Admin will require all types of rights to insert, delete, modify and etc...
- Admin Generate Time Table.
- Admin Alocate class,lab,faculty.
- Admin will require rights to insert, delete, modify and etc...
- Admin Send/manage notification.

#### **Faculty**

- Faculty will require a unique id and password.
- Faculty will require to view all types of Time-Table.
- Master Time-Table, Faculty master, Class Time-Table etc...

#### **Student**

- Student will have required a unique id and password.
- Student will only require to view Personal Time-Table.
- Student will only show the information regarding to their Department.

## 2.2 FUNCTIONAL REQUIREMENTS

There functional and non-functional requirement of this system is described below.

### **Functional Requirements :-**

The Functional Requirement are given below

- In TTM there are three user **Admin, Faculty, Student**& all they have Required their unique id and password to login.
- Admin and faculty both have required permission to send Notification for the student.
- Only Admin have permission to require to generate time table.
- Student have only two options required view table and get notification.

#### **Admin**

- |         |  |
|---------|--|
| Purpose | : For Login.   |
| Input   | : User Id or Password for Login Otherwise insert detail for Signup.  |
| Process | : System will check the entry given by user.   |
| Output  | : If old user : Login Successfully/User Id or Password Incorrect<br>If new user : Welcome! Successfully Sign up. |
| <br>    |  |
| Purpose | : To Generate the Time-Table.  |
| Input   | : Enter the No of Faculty, No of Classroom, No of Lab , No of Semester in which Branch.                          |
| Process | : System Will Generate the Time Table as per Given Input.  |
| Output  | : Automatically the Time-Table Will Display after Generating.  |
| <br>    |  |
| Purpose | : View the Time-Table.   |
| Input   | : Click on the view button according to your related.  |
| Process | : System will check the Input that which type of Time-Table would you like to see.                               |
| Output  | : System will show you Time-Table according to your Requirement.   |

Purpose : Modify the Time-Table.  
 Input : Re- arrange the input given by before the faculty with their Permission.  
 Process : The Schedule will change according to input given by Faculty.  
 Output : Then Time-Table Will Display After Changes.

Purpose : Send Notification for the Student.  
 Input : If faculty wants to send any Message or Notification for the student and other faculty members, then he could easily send notification.  
 Process : Then the System will automatically Filter the Student those who want to send the notification.  
 Output : System will automatically send the notification to the student.

Purpose : Get Notification from Principle.  
 Input : Accept the notification.  
 Process : Work on the basis of notification given by Principle.  
 Output : View the notification which send by Principle.

### **Faculty**

Purpose : For Login.  
 Input : User Id or Password for Login Otherwise insert detail for Signup.  
 Process : System will check the entry given by user.  
 Output : If old user: - Login Successfully/User Id or Password Incorrect  
           If new user: - Welcome! Successfully Sign up.

Purpose : View the Time-Table.  
 Input : Click on the view button according to your related.  
 Process : System will check the Input that which type of Time-Table would you like to see.  
 Output : System will show you Time-Table according to your Requirement.

Purpose : Send Notification for the Student.

Input : If faculty wants to send any Message or Notification for the student and other faculty members, then he could easily send notification.

Process : Then the System will automatically Filter the Student those who want to send the notification.

Output : System will automatically send the notification to the student.

### **Student**

Purpose : For Login.

Input : User Id or Password for Login Otherwise insert detail for Signup.

Process : System will check the entry given by user.

Output : If old user: - Login Successfully/User Id or Password Incorrect  
If new user: - Welcome! Successfully Sign up.

Purpose : View the Time-Table.

Input : Click on the view button according to your related.

Process : System will check the Input that which type of Time-Table would you like to see.

Output : System will show you Time-Table according to your Requirement.

Purpose : Get Notification

Input : Login to with their id to get notification.

Process : Get notification from Faculty member if Faculty member sends.

Output : View the notification regarding to their branch and semester.

## 2.3 Non-Functional Requirements :-

The Non-Functional Requirements are given below

- System will require all types of input like No of Faculty, No of Class/Lab, No of Subject with Semester wise, Faculty Load etc...
- System will require Storage to store database.
- The application which are built, if the user can give appropriate input then no chance to error generate at the time of start.
- The software should require to update time to time.

## Hardware Requirement

OS : Android kitkat 4.0 and Above

Ram : 512 MB

Disk Space : 50 MB



# Chapter 3

System Analysis Modeling – User-based

## 3.0 SYSTEM ANALYSIS MODELING - USER BASED

### 3.1 FEASIBILITY STUDY

#### Application Analysis

In Modern world technology is very fast. No one have time to implement Time-Table. So We make an app to automatically generate the Time-Table as per requirement of the user.

By making analysis with the requirement of the application it would be possible to make a report of identified area of problem. By making a detailed analysis in this area a detailed document or report is prepared in this phased which details like project plan or scheduled of the project, the cost estimated for developing and executing the systems, target dates for each phase of delivery of system developed and so on.

#### Technical Feasibility

The application is based on Generating Time-Table, in this application the system is to be developed using familiar software and hardware environment tools.

In TTM there is no chance to Technical error, if the Input given is correctly or related to application.

#### Time Feasibility

The TTM is very familiar to use and there have also less time to generate Time-Table.

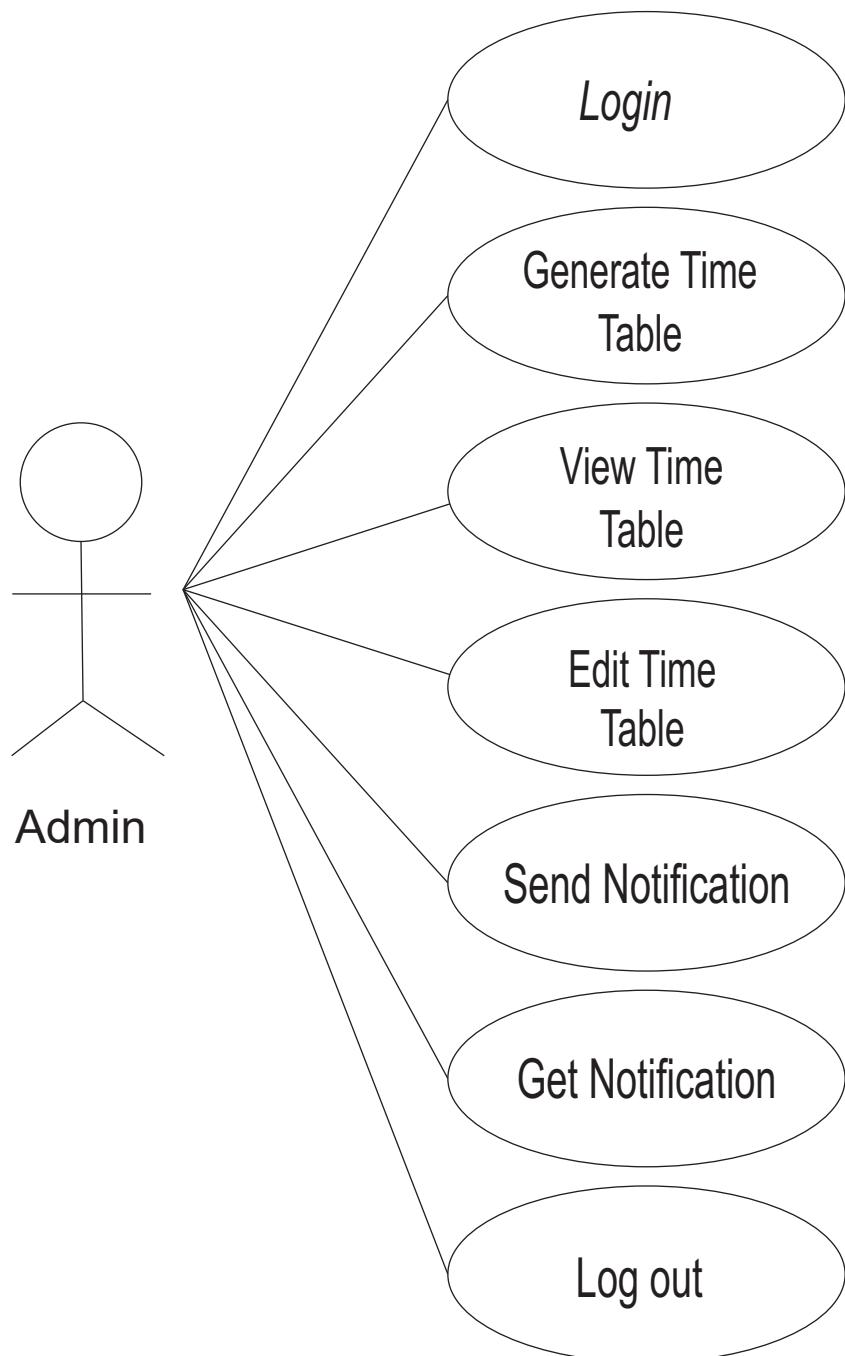
Student can also view the Time –table as one click.

#### Cost Feasibility

The TTM is free of cost for everyone, so there is no any chance of Financial problem for the user.

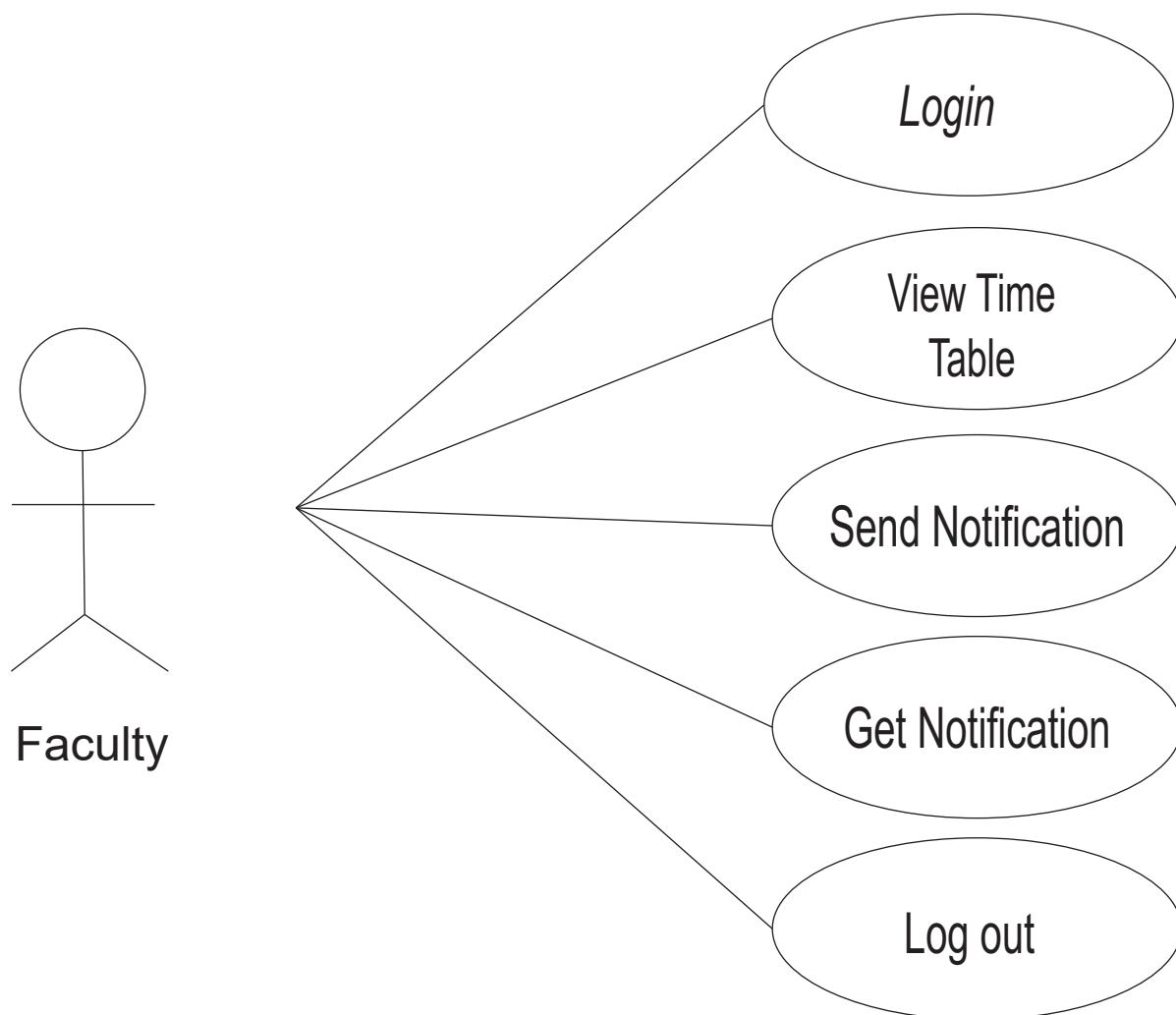
## 3.2 USER-BASED MODELING

### 3.2.1 Use-case For Admin



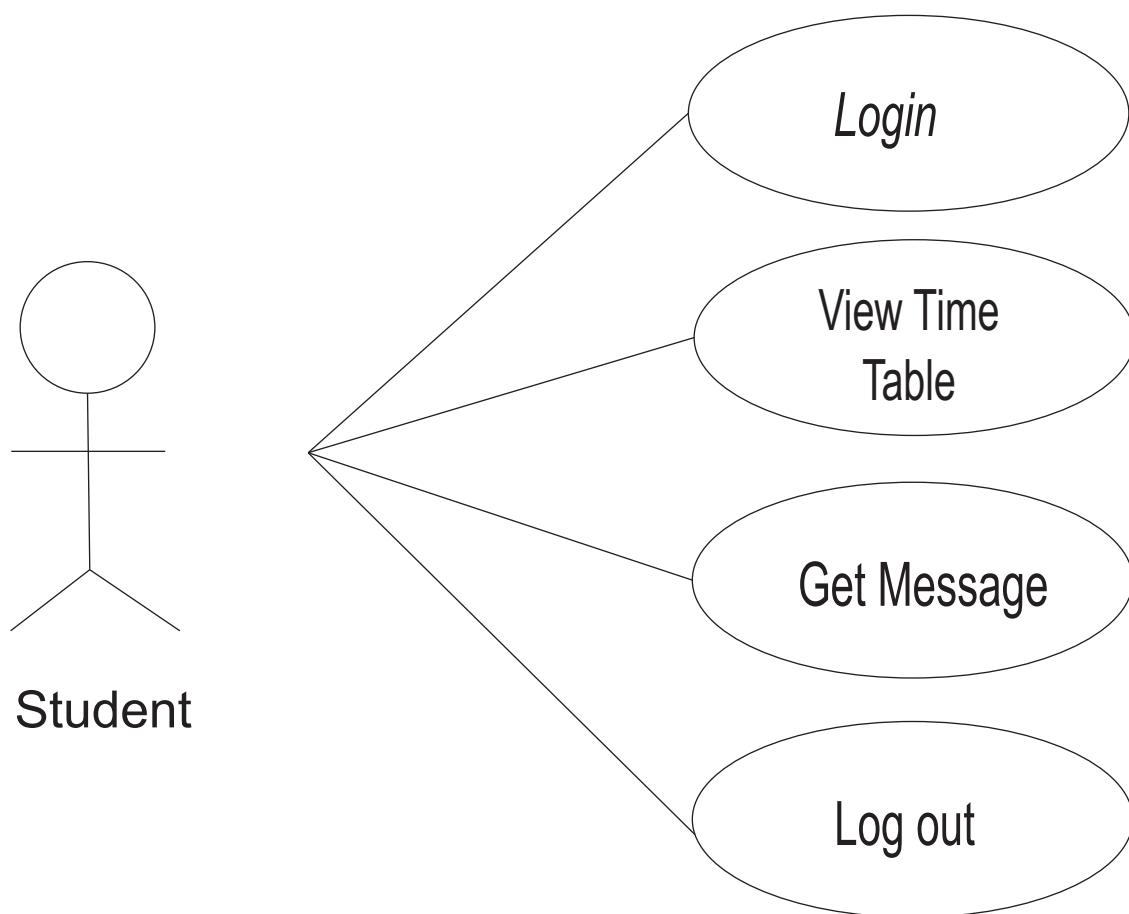
[Figure 3.1 Admin usecase]

### 3.2.2 Use-case for Faculty

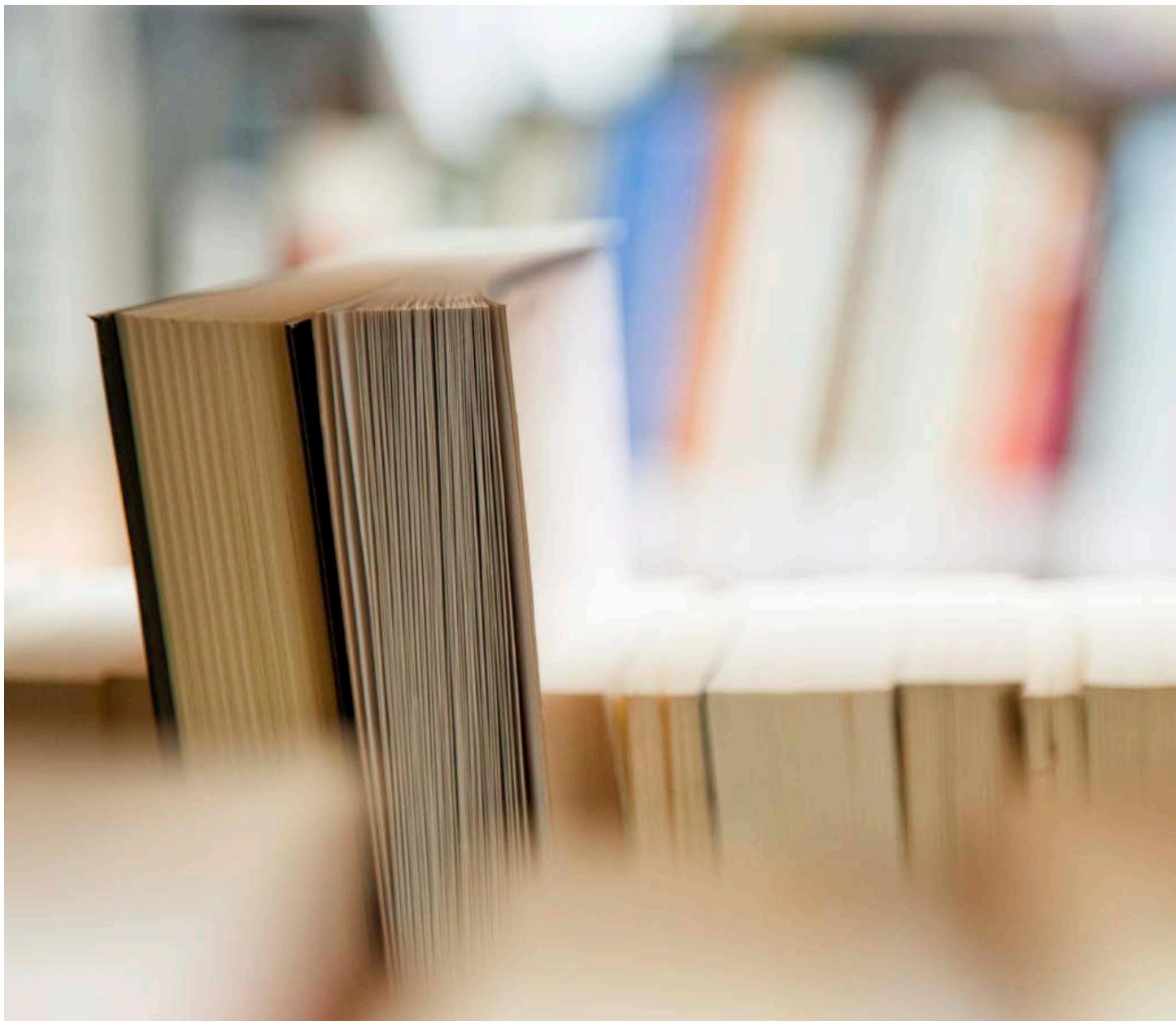


[Figure 3.2 Faculty usecase]

### 3.2.3 Use-case for Student



[Figure 3.3 Student Usecase]



# Chapter 4

System Analysis and Design – Data-based

## 4.0 SYSTEM ANALYSIS AND DESIGN – DATA BASED

### 4.1 DATA MODELING

#### 4.1.1 Data Dictionary

##### 4.1.1.1 Time\_Table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	table_id	varchar(5)	latin1_swedish_ci		No	None			Change  Drop  Primary  Unique  Index  Spatial  More
2	sub_id	varchar(5)	latin1_swedish_ci		No	None			Change  Drop  Primary  Unique  Index  Spatial  More
3	faculty_id	varchar(5)	latin1_swedish_ci		No	None			Change  Drop  Primary  Unique  Index  Spatial  More
4	slot_id	varchar(5)	latin1_swedish_ci		No	None			Change  Drop  Primary  Unique  Index  Spatial  More
5	sem	int(5)			No	None			Change  Drop  Primary  Unique  Index  Spatial  More
6	class	varchar(5)	latin1_swedish_ci		No	None			Change  Drop  Primary  Unique  Index  Spatial  More
7	day	varchar(20)	latin1_swedish_ci		No	None			Change  Drop  Primary  Unique  Index  Spatial  More

##### 4.1.1.2 Time\_Slot

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	slot_id	varchar(5)	latin1_swedish_ci		No	None			Change  Drop  Primary  Unique  Index  Spatial  Fulltext  More
2	hour	varchar(20)	latin1_swedish_ci		Yes	NULL			Change  Drop  Primary  Unique  Index  Spatial  Fulltext  More
3	time	varchar(20)	latin1_swedish_ci		Yes	NULL			Change  Drop  Primary  Unique  Index  Spatial  Fulltext  More
4	class/div	varchar(10)	latin1_swedish_ci		No	None			Change  Drop  Primary  Unique  Index  Spatial  Fulltext  More

##### 4.1.1.3 Sub\_Allocation

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	sub_id	varchar(5)	latin1_swedish_ci		No	None			Change  Drop  Primary  Unique  Index  Spatial  More
2	faculty_id	varchar(5)	latin1_swedish_ci		No	None			Change  Drop  Primary  Unique  Index  Spatial  More

##### 4.1.1.4 Student

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	enrollment	varchar(20)	latin1_swedish_ci		No	None			Change  Drop  Primary  Unique  Index  Spatial  More
2	name	varchar(50)	latin1_swedish_ci		Yes	NULL			Change  Drop  Primary  Unique  Index  Spatial  More
3	sem	int(5)			No	None			Change  Drop  Primary  Unique  Index  Spatial  More
4	div	varchar(5)	latin1_swedish_ci		No	None			Change  Drop  Primary  Unique  Index  Spatial  More
5	department	varchar(20)	latin1_swedish_ci		No	None			Change  Drop  Primary  Unique  Index  Spatial  More

#### 4.1.1.5 Faculty

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	faculty_id	varchar(5)	latin1_swedish_ci		No	None			Change  Drop  Primary  Unique  Index  Spatial  More
2	name	varchar(50)	latin1_swedish_ci		No	None			Change  Drop  Primary  Unique  Index  Spatial  More
3	subject	varchar(30)	latin1_swedish_ci		No	None			Change  Drop  Primary  Unique  Index  Spatial  More
4	designation	varchar(20)	latin1_swedish_ci		No	None			Change  Drop  Primary  Unique  Index  Spatial  More
5	experience	varchar(30)	latin1_swedish_ci		No	None			Change  Drop  Primary  Unique  Index  Spatial  More

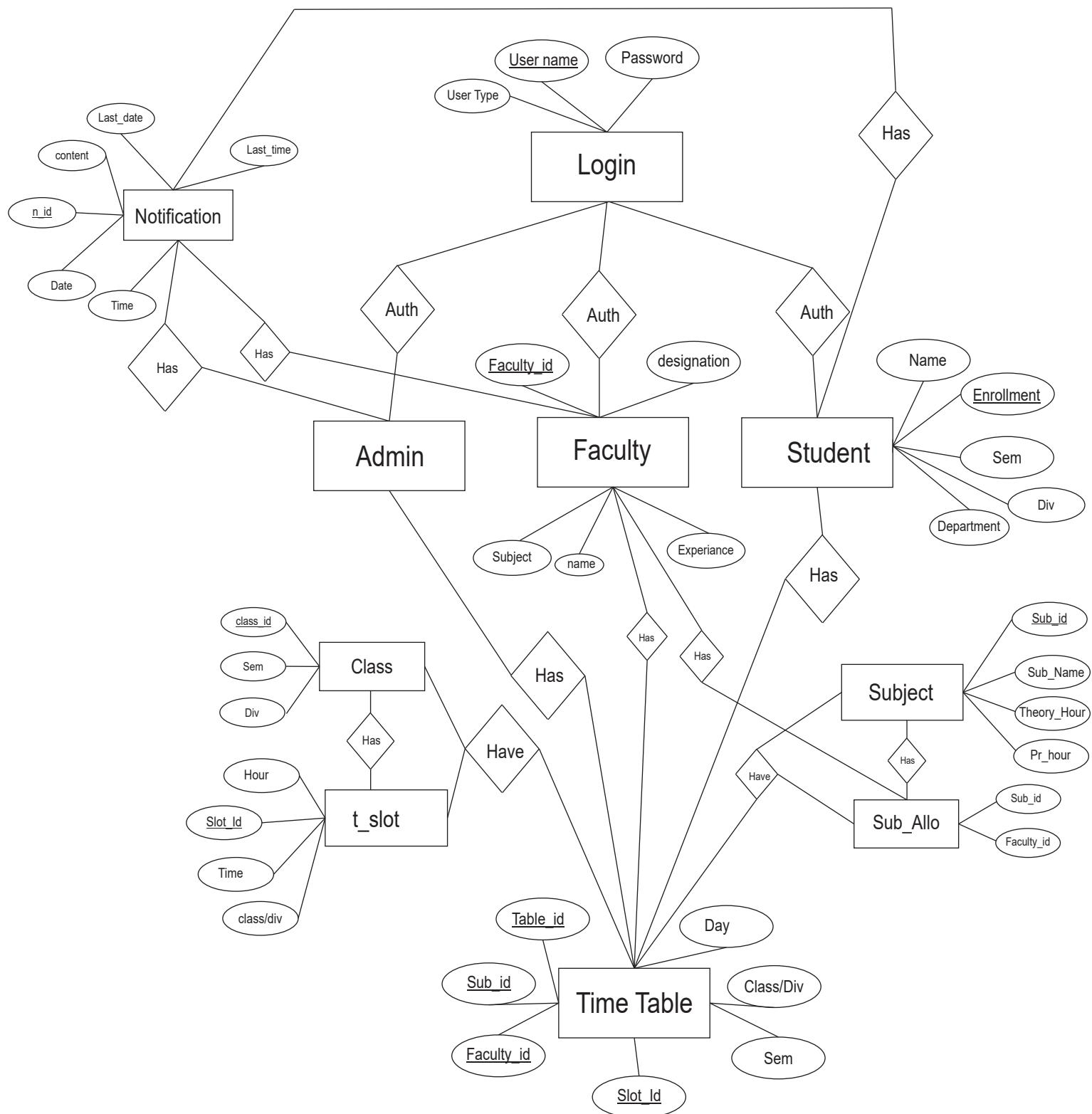
#### 4.1.1.6 Class

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	class_id	varchar(5)	latin1_swedish_ci		No	None			Change  Drop  Primary  Unique  Index  Spatial  More
2	sem	int(1)			No	None			Change  Drop  Primary  Unique  Index  Spatial  More
3	div	varchar(5)	latin1_swedish_ci		No	None			Change  Drop  Primary  Unique  Index  Spatial  More

#### 4.1.1.7 Login\_TTM

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	user_name	varchar(50)	latin1_swedish_ci		No	None			Change  Drop  Primary  Unique  Index  Spatial  More
2	password	varchar(50)	armSCII8_bin		Yes	NULL			Change  Drop  Primary  Unique  Index  Spatial  More
3	user_type	int(1)			No	None			Change  Drop  Primary  Unique  Index  Spatial  More

#### 4.1.2 E R (Entity-Relationship) Diagram

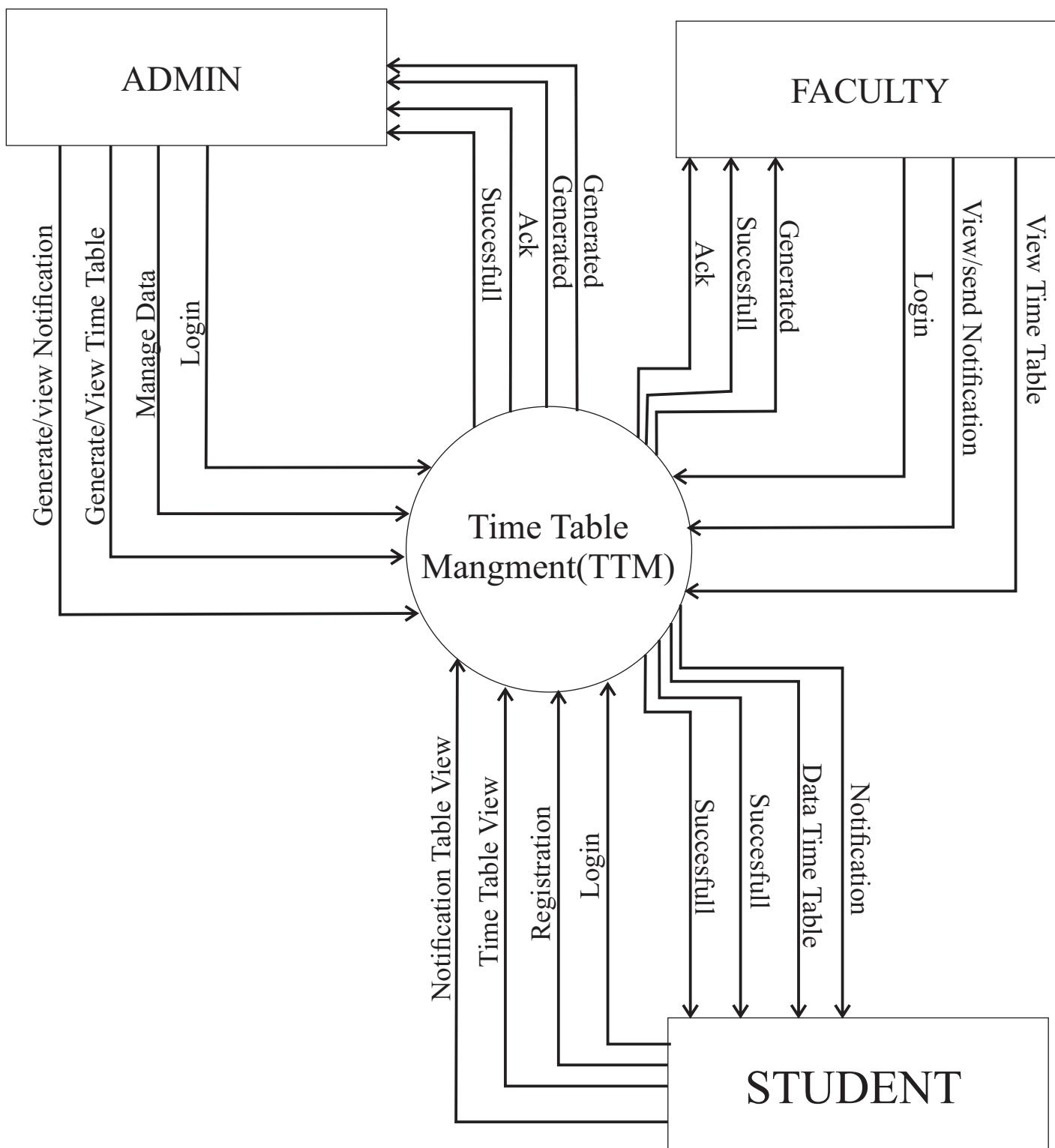


[Figure 4.1 E R Diagram]

## 4.2 BEHAVIORAL MODELLING

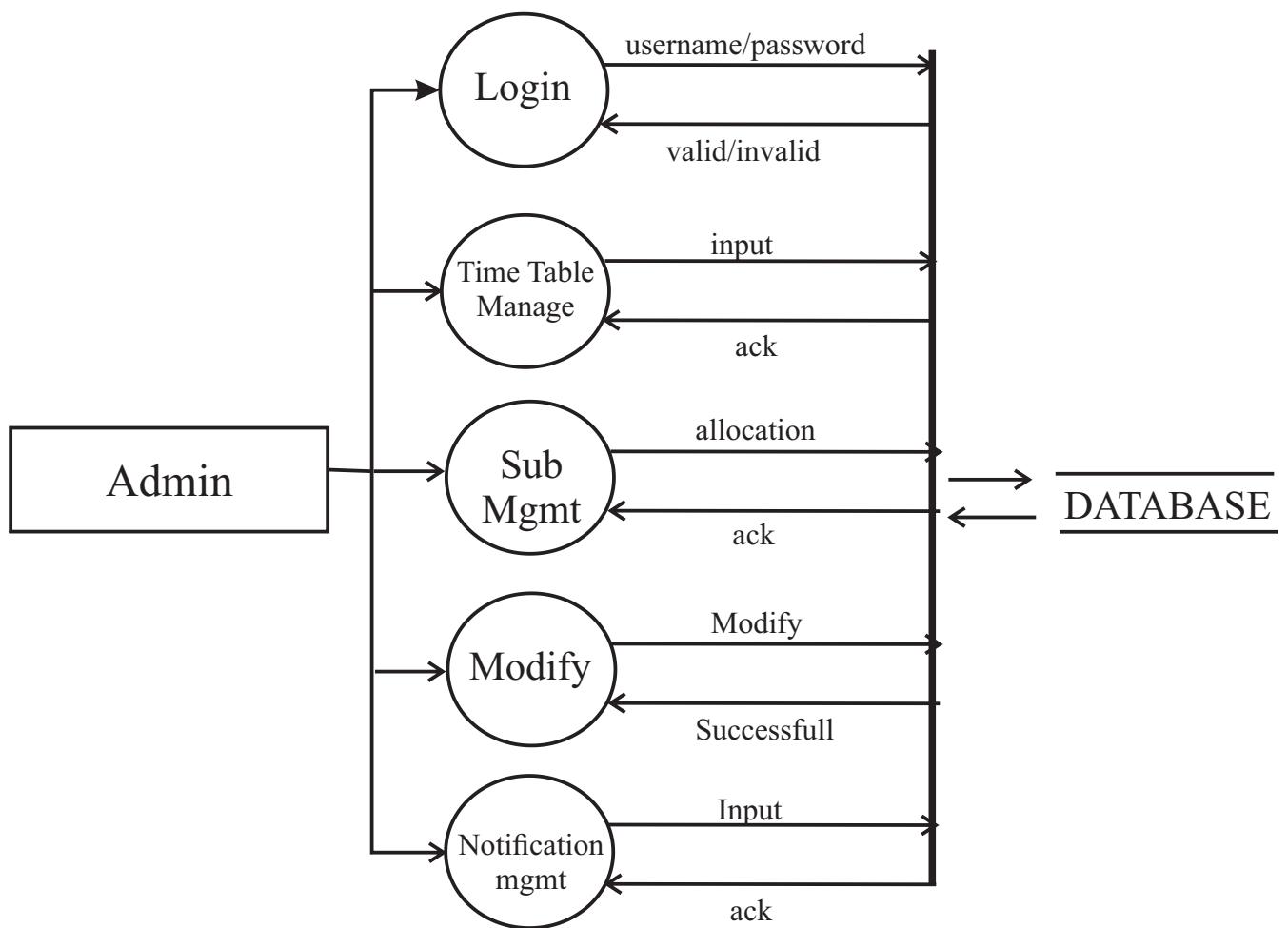
### 4.2.1 Data Flow Diagram

#### 4.2.1.1 Context Diagram



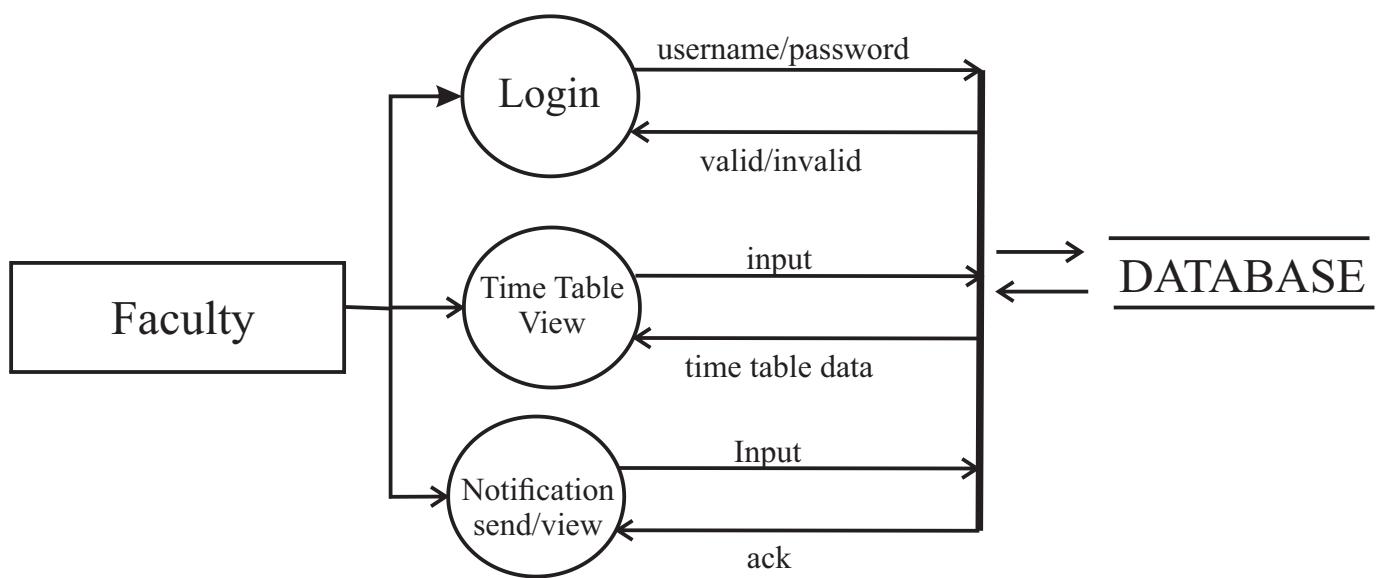
[Figure 4.2 Level 0 diagram]

#### 4.2.1.2 Admin Level 1 Diagram



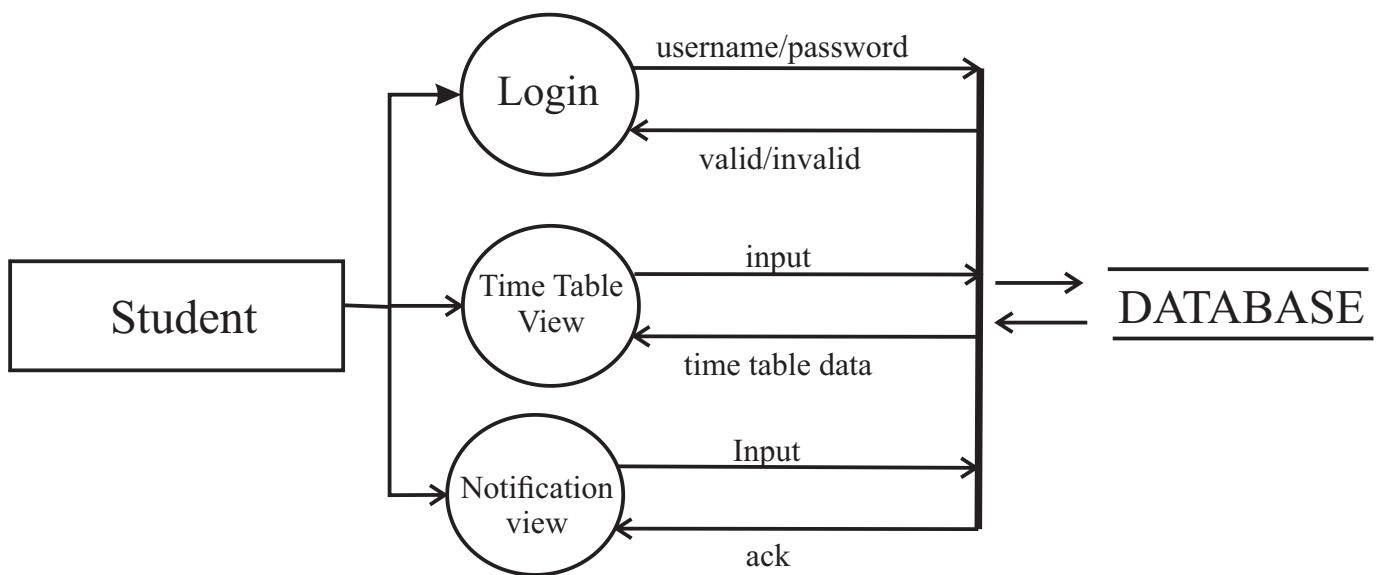
[Figure 4.3 Admin Level 1 diagram]

#### 4.2.1.3 Faculty level 1 Diagram



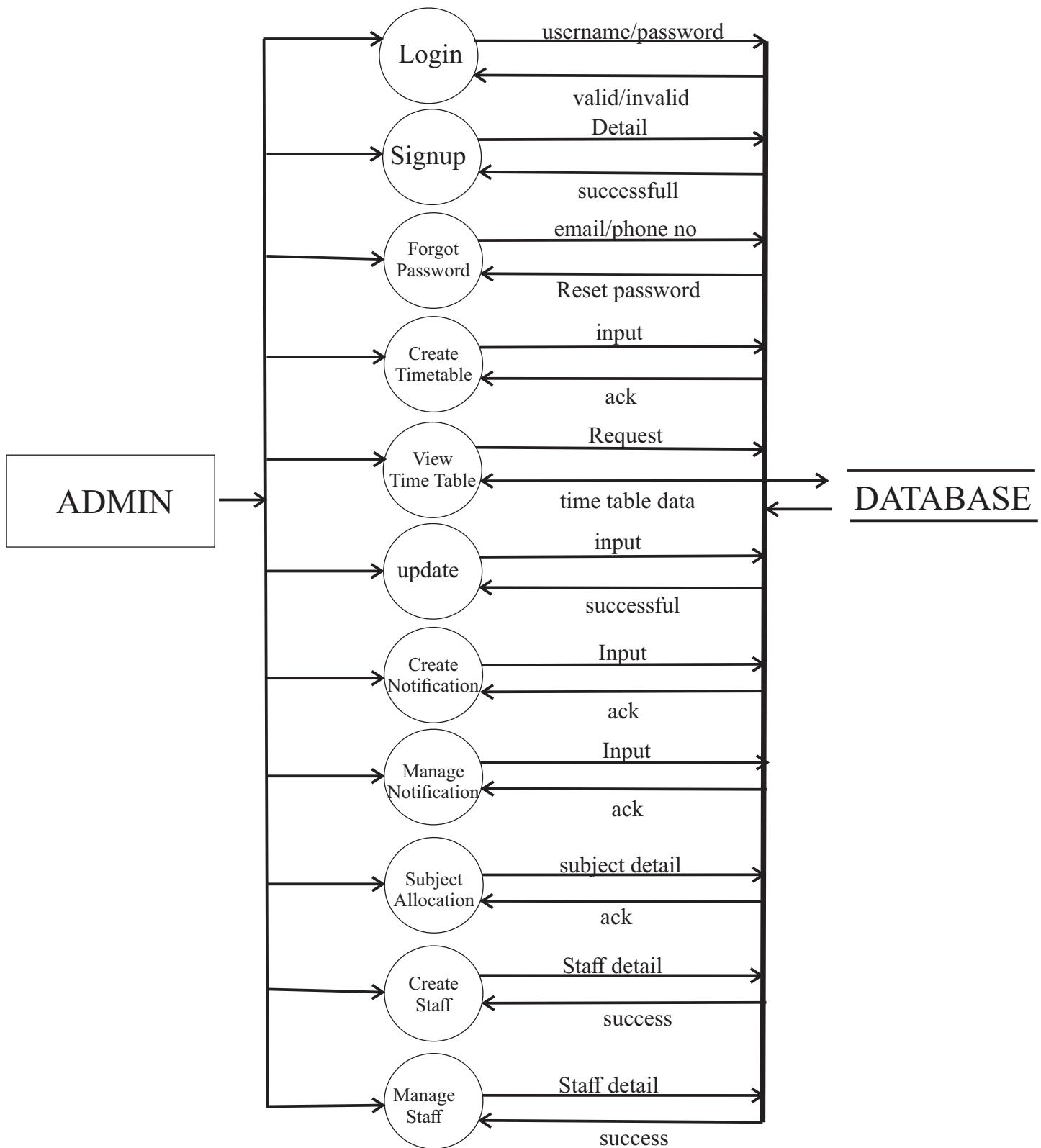
[Figure 4.4 Faculty Level 1 diagram]

## 4.2.1.4 Student level 1 Diagram



[Figure 4.5 Student Level 1 diagram]

#### 4.2.1.5 Admin level 2 Diagram



[Figure 4.6 Admin Level 2 diagram]



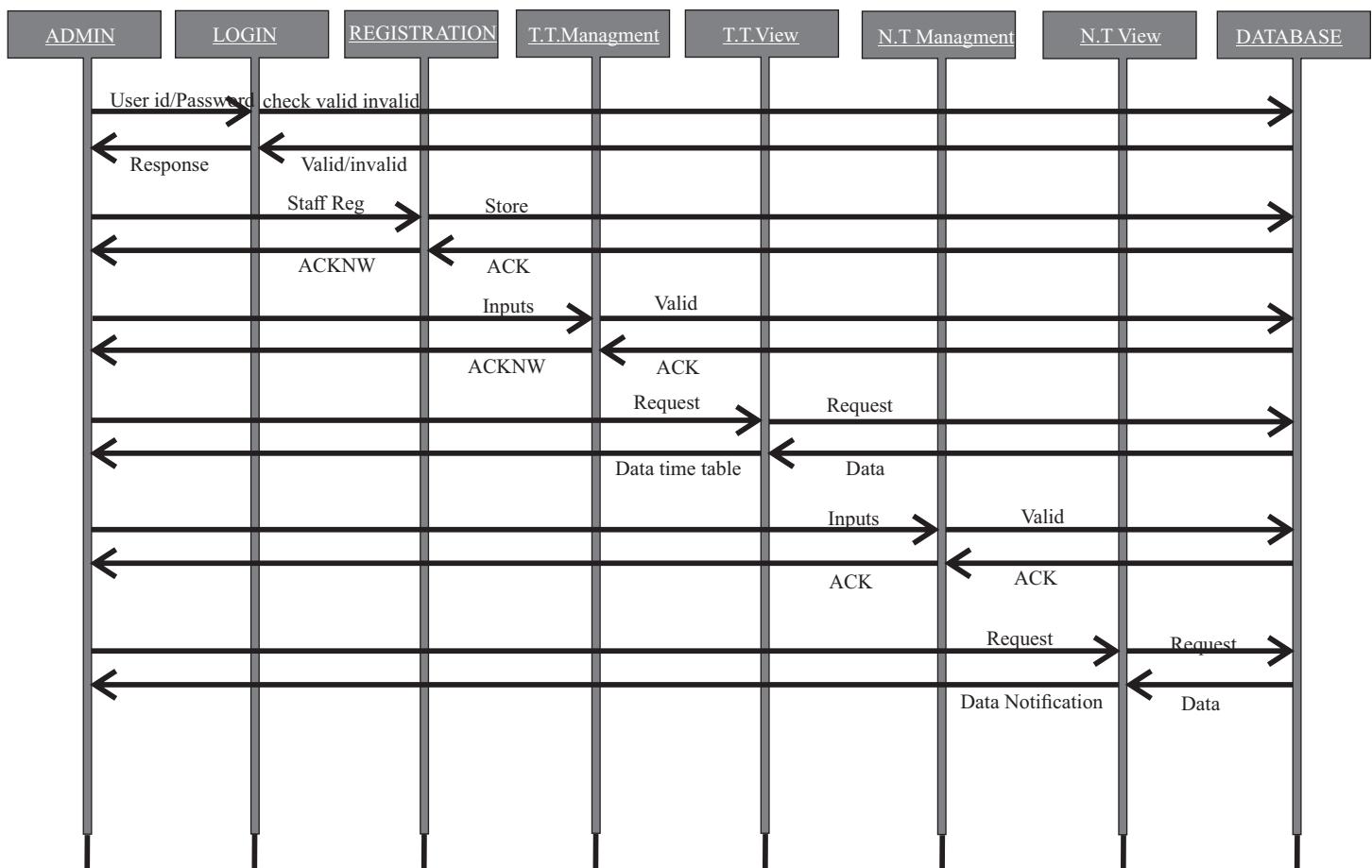
# Chapter 5

## System Design – UML

## 5.0 SYSTEM DESIGN - UML

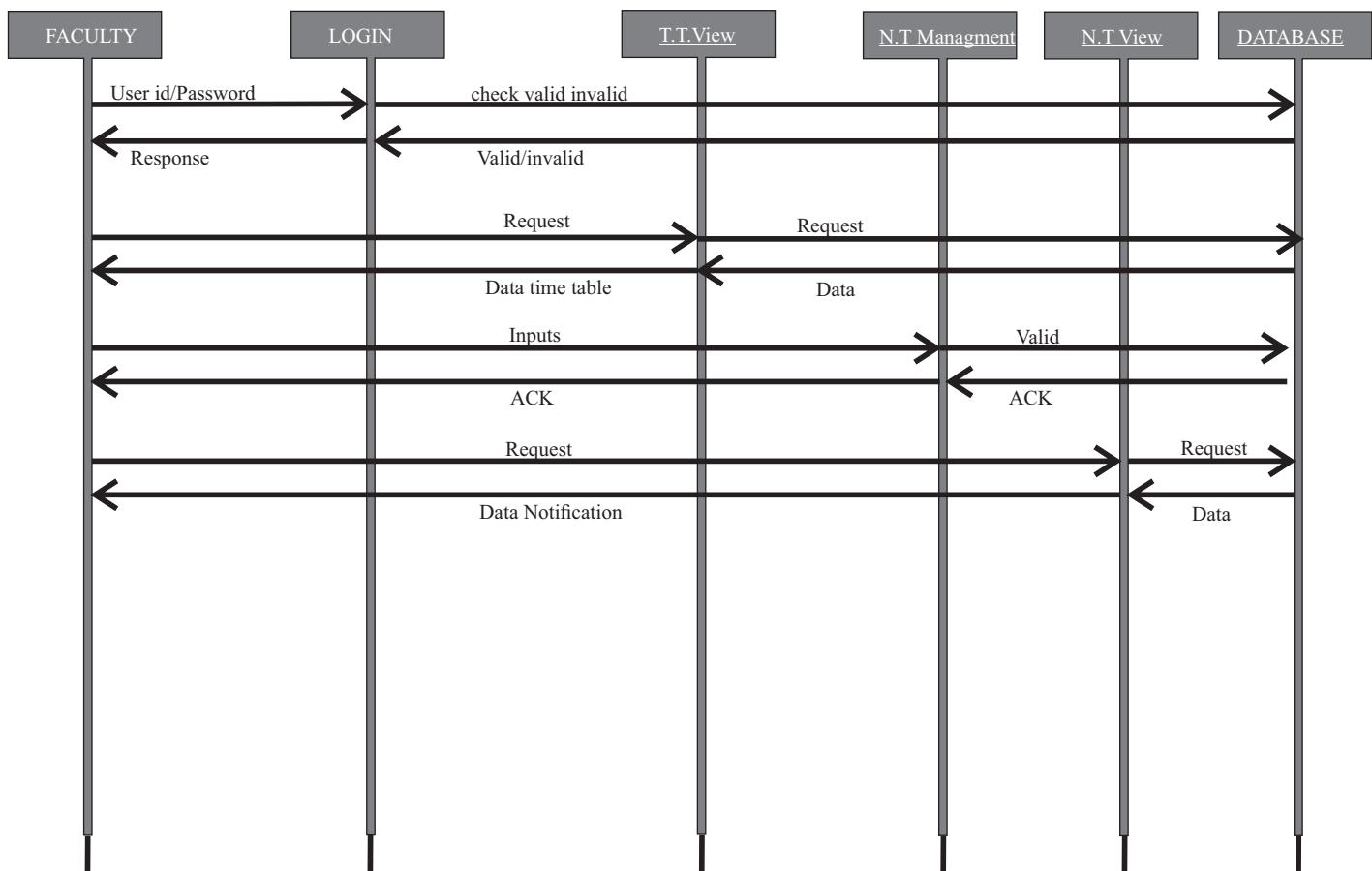
### 5.1 SEQUENCE DIAGRAM

#### 5.1.1 Admin Sequence Diagram



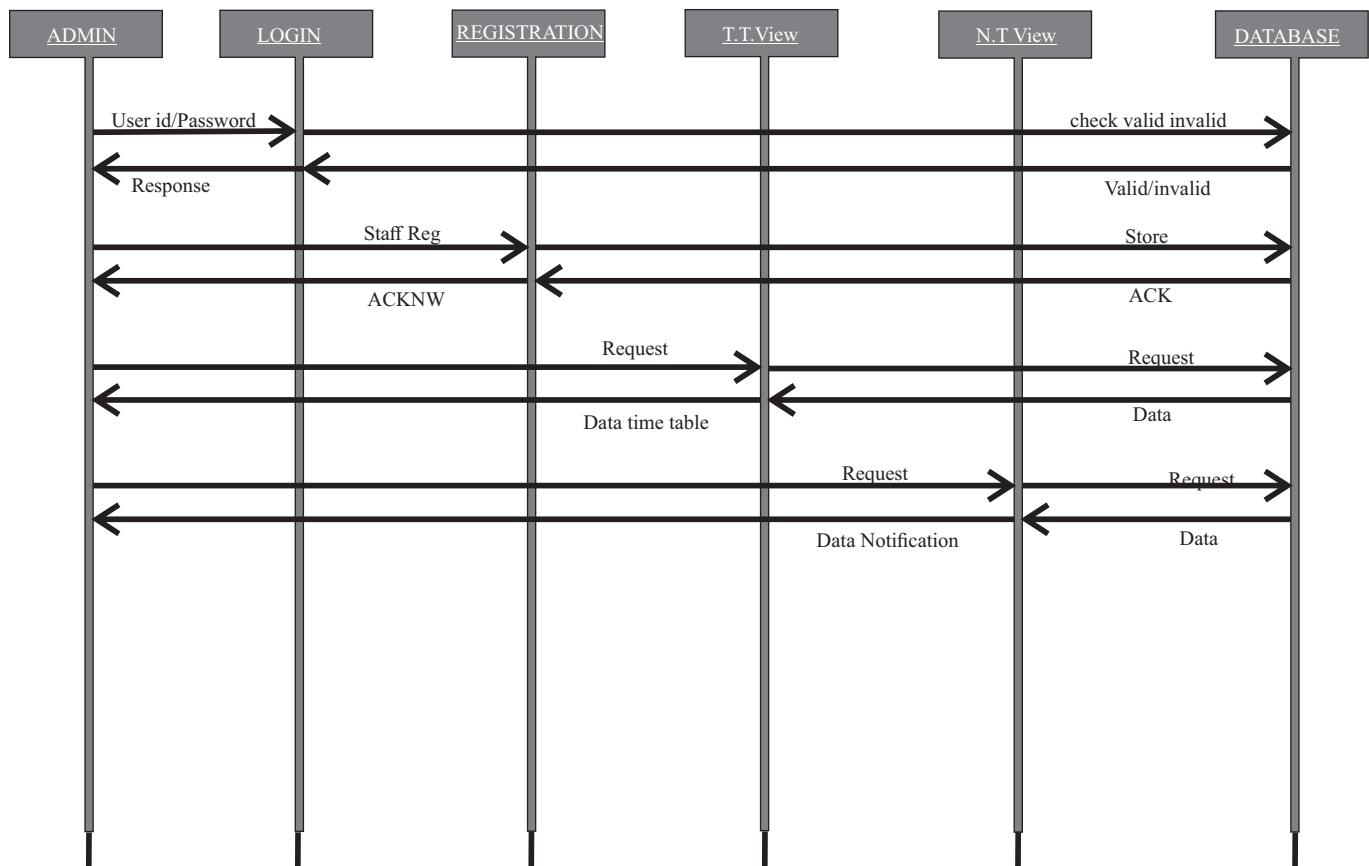
[Figure 5.1 Admin Sequence Diagram]

### 5.1.2 Faculty Sequence Diagram



[Figure 5.2 Faculty Sequence Diagram]

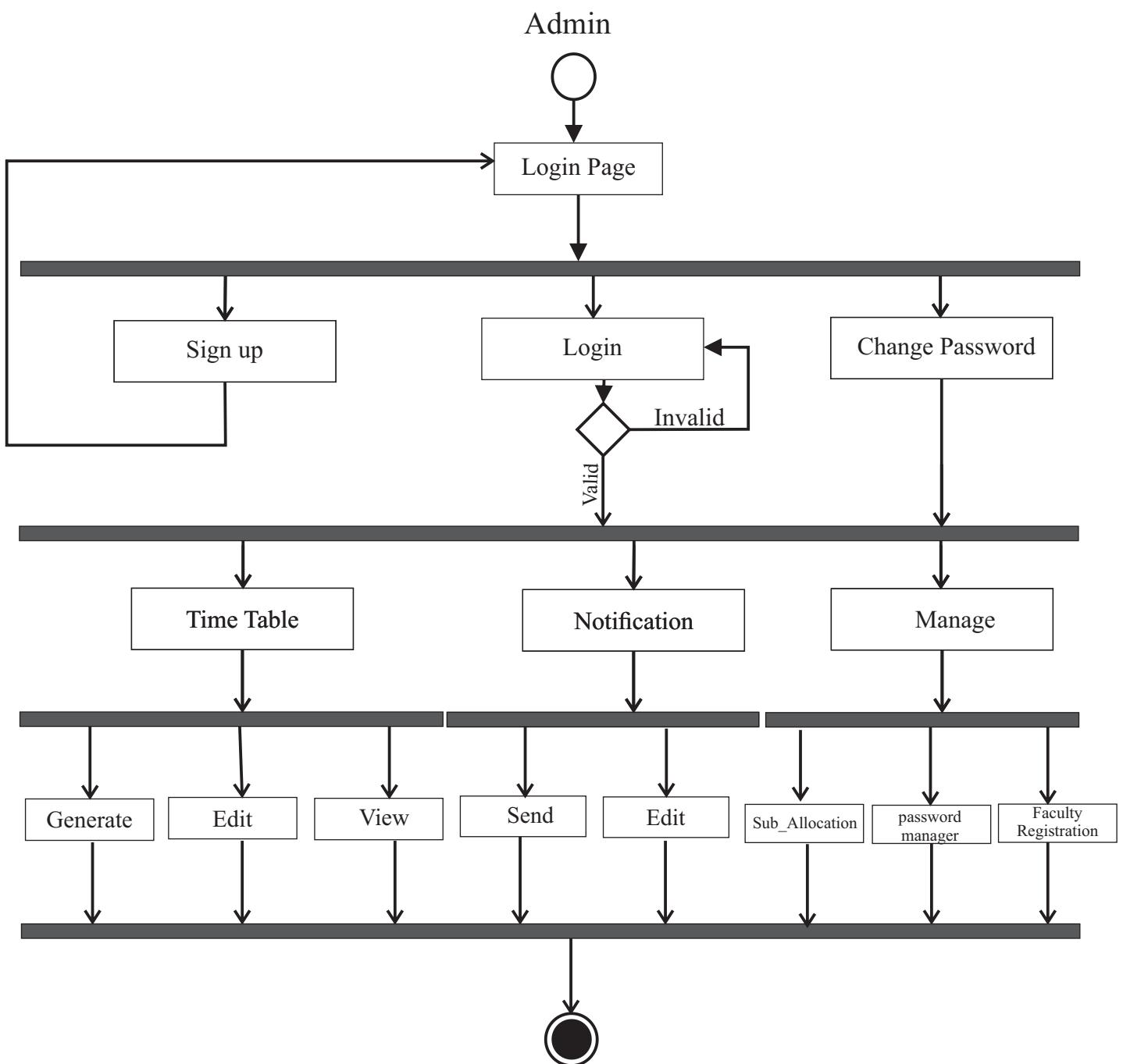
### 5.1.3 Student Sequence Diagram



[Figure 5.3 Student Sequence Diagram]

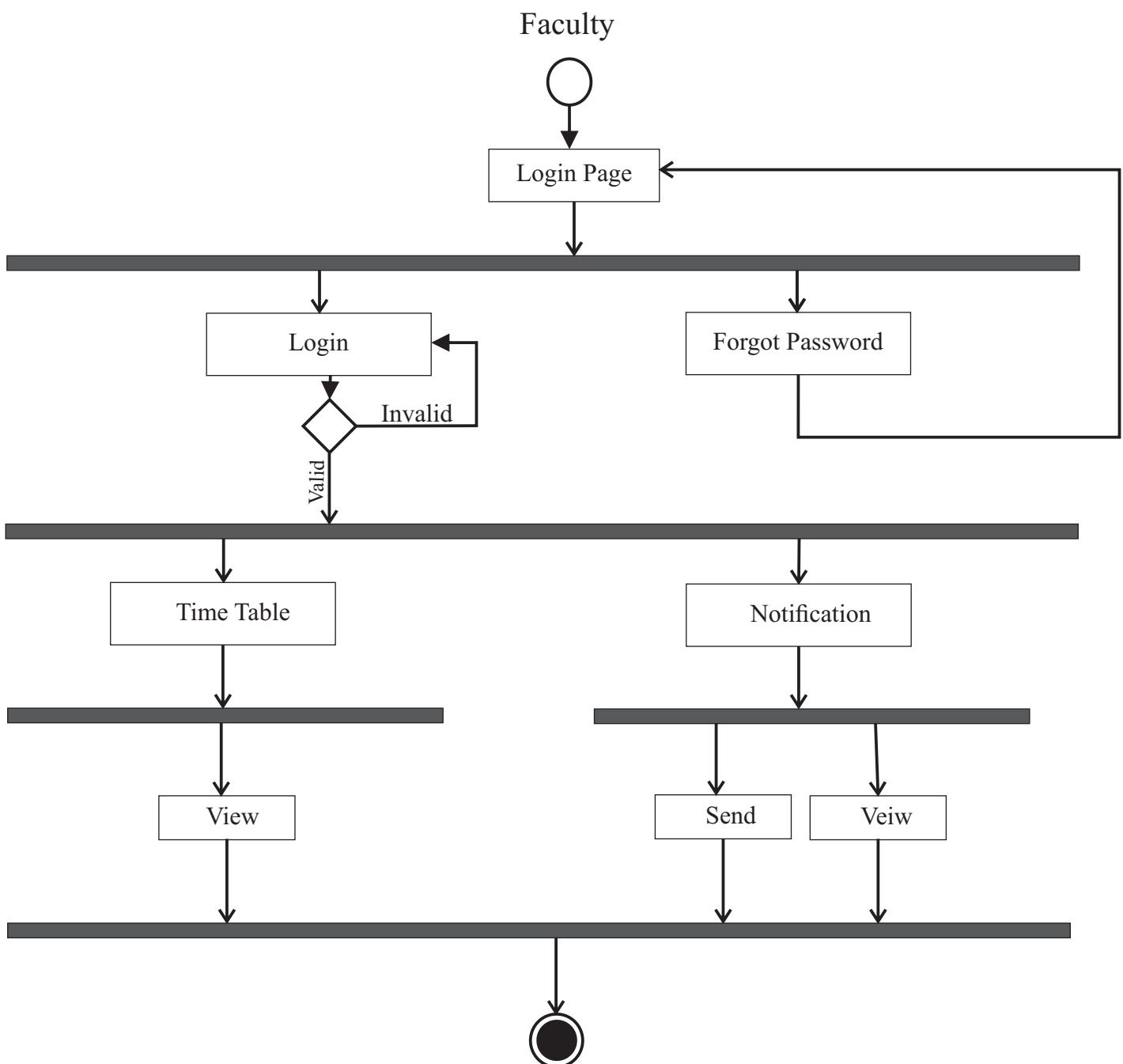
## 5.2 ACTIVITY DIAGRAMS

### 5.2.1 Admin Activity Diagram



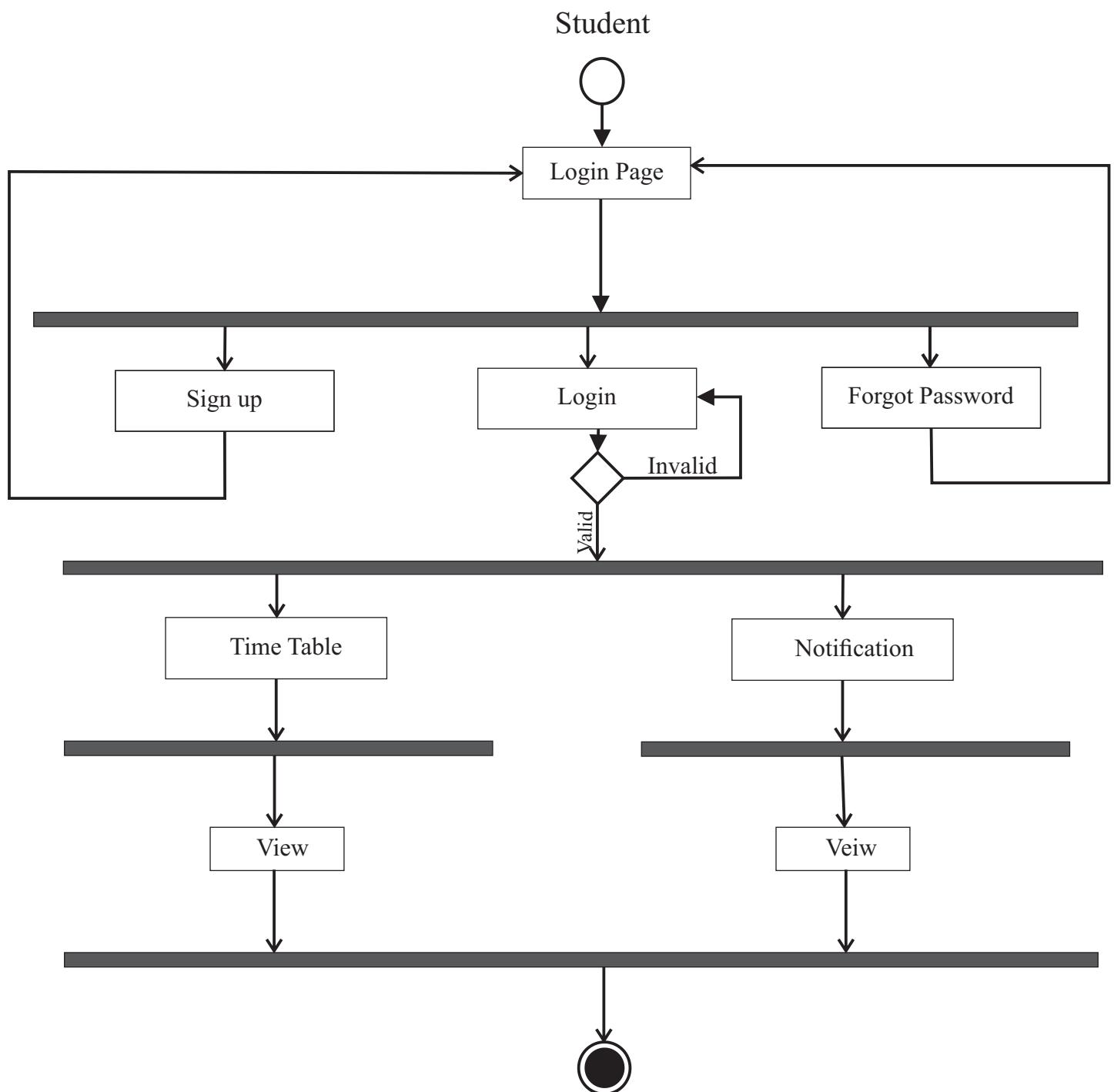
[Figure 5.4 Activity Diagram Admin]

### 5.2.2 Faculty Activity Diagram



[Figure 5.5 Activity Diagram Faculty]

### 5.2.3 Student Activity Diagram



[Figure 5.6 Activity Diagram Student]

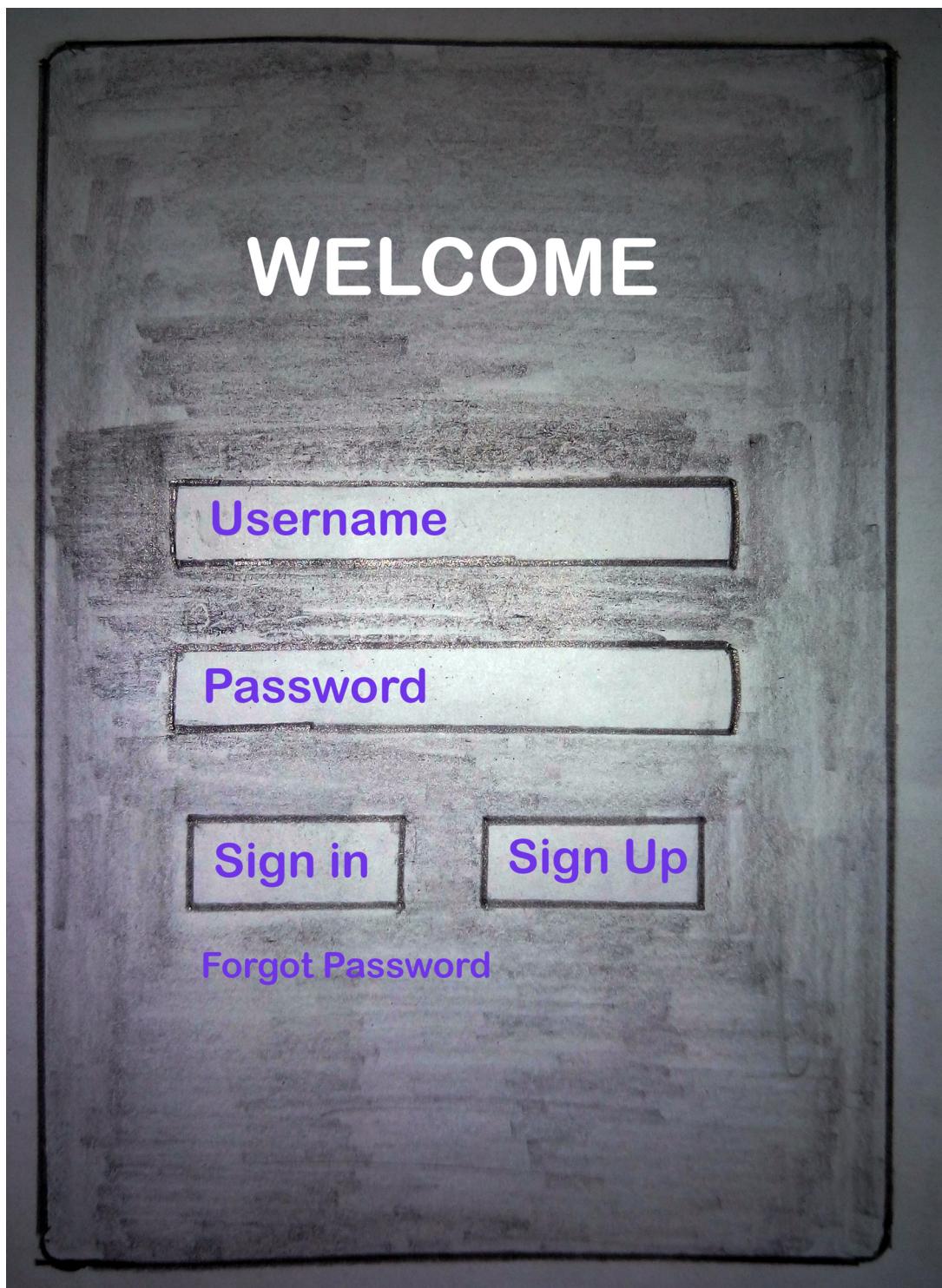


# Chapter 6

## System Interface Design

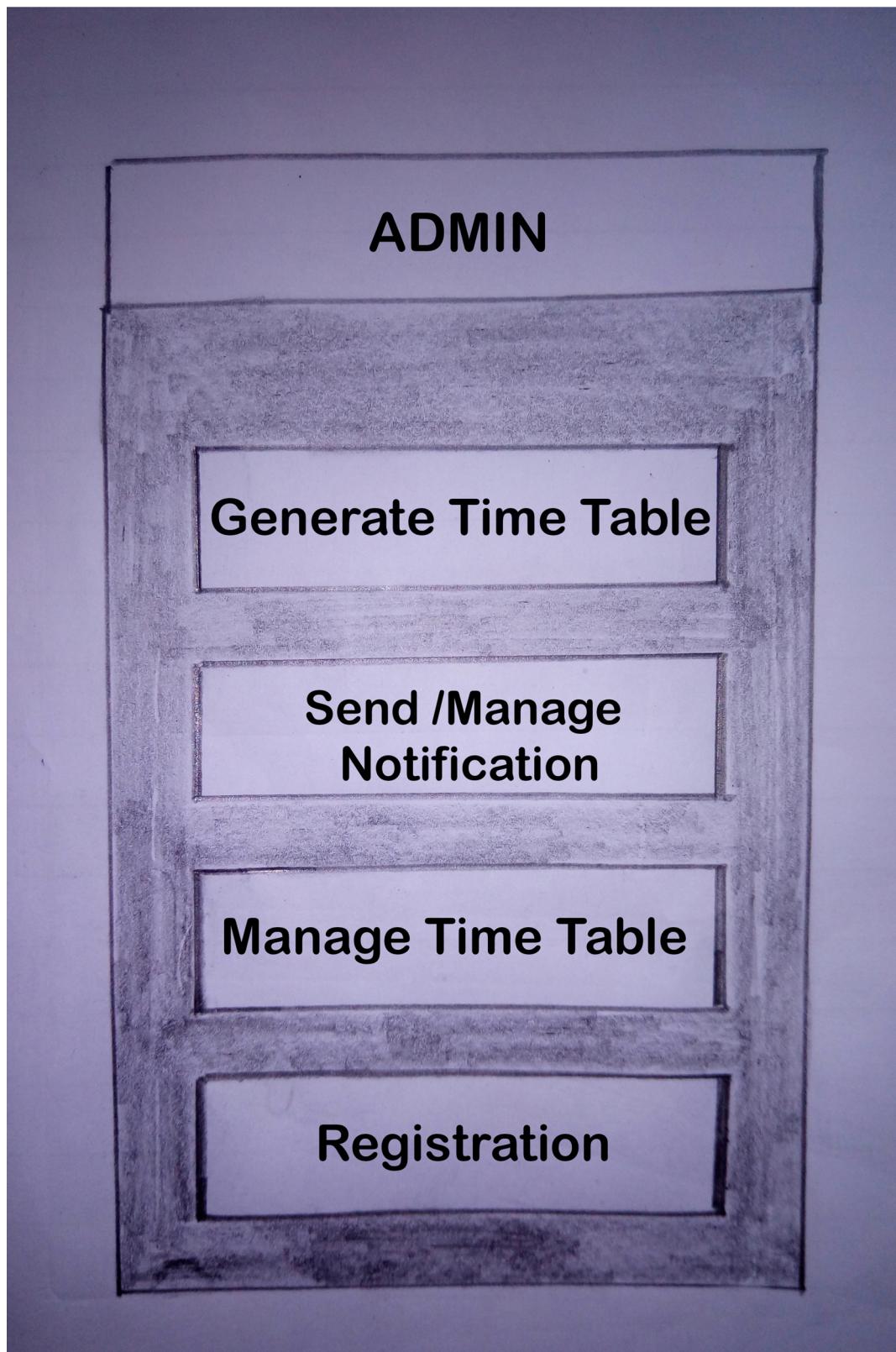
## 6.0 Graphical User Interface Design

### 6.1 Login Page

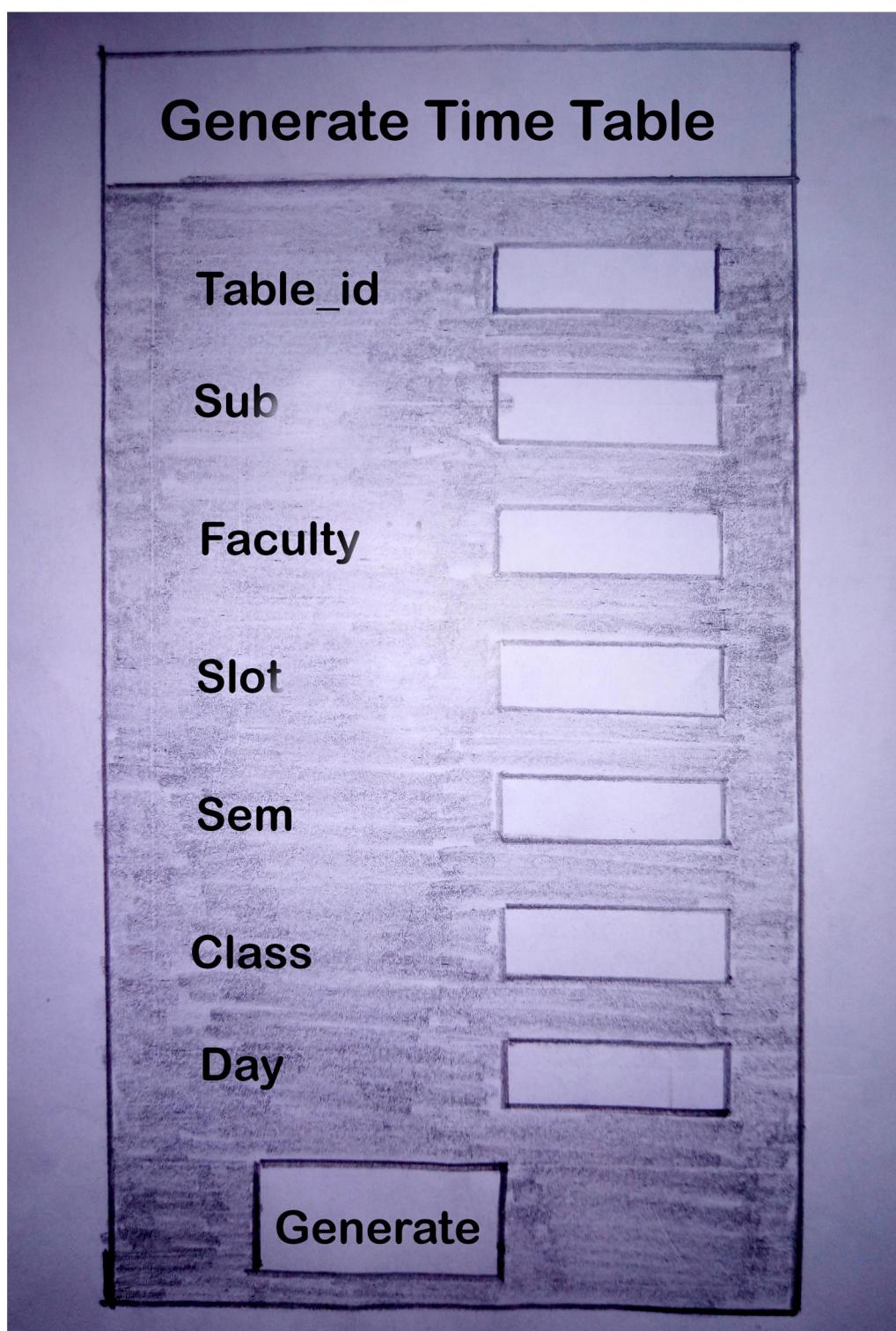


[Figure 6.1 Login Page]

## 6.2 Admin Homepage

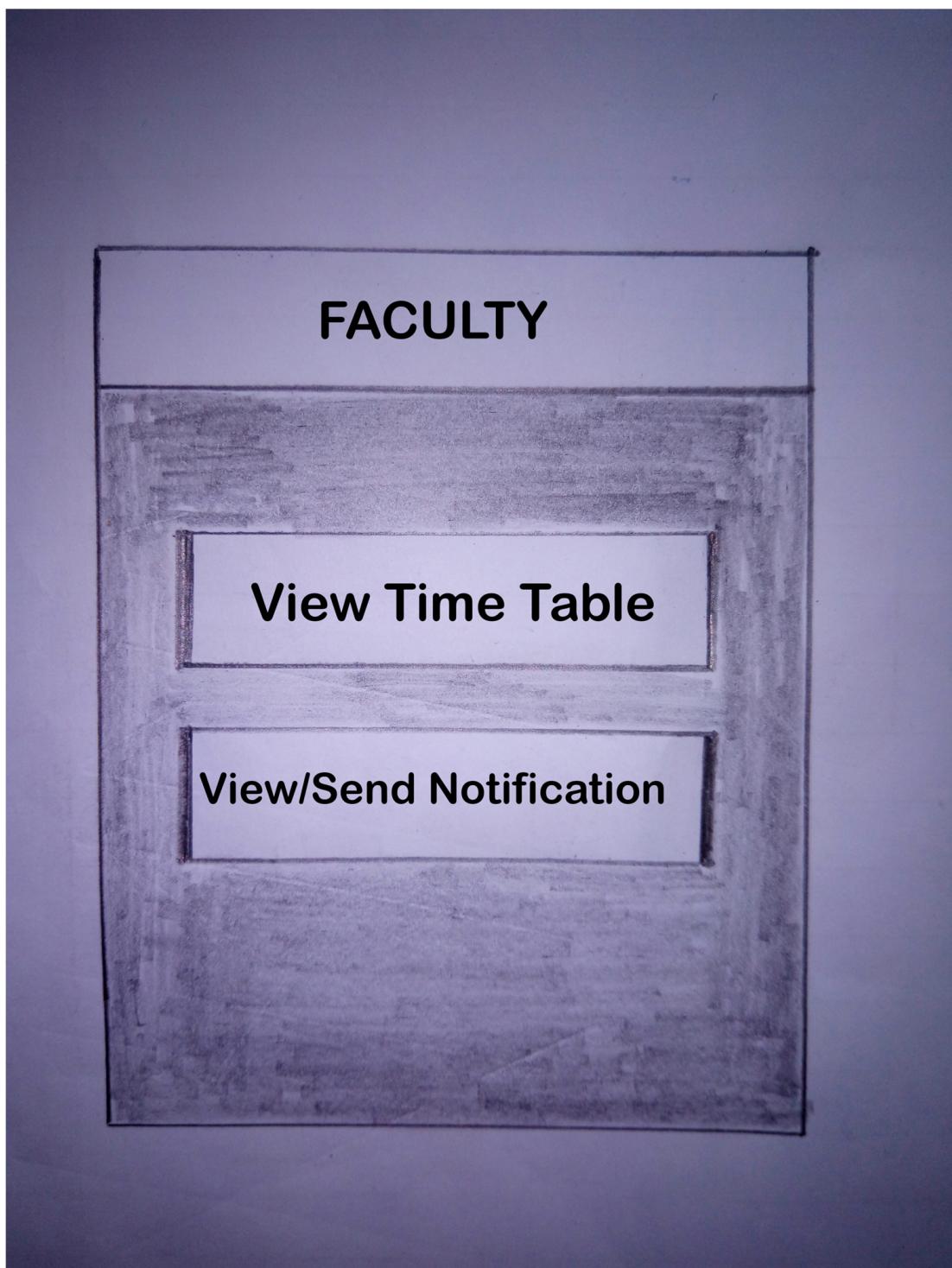


### 6.3 Time Table Generate



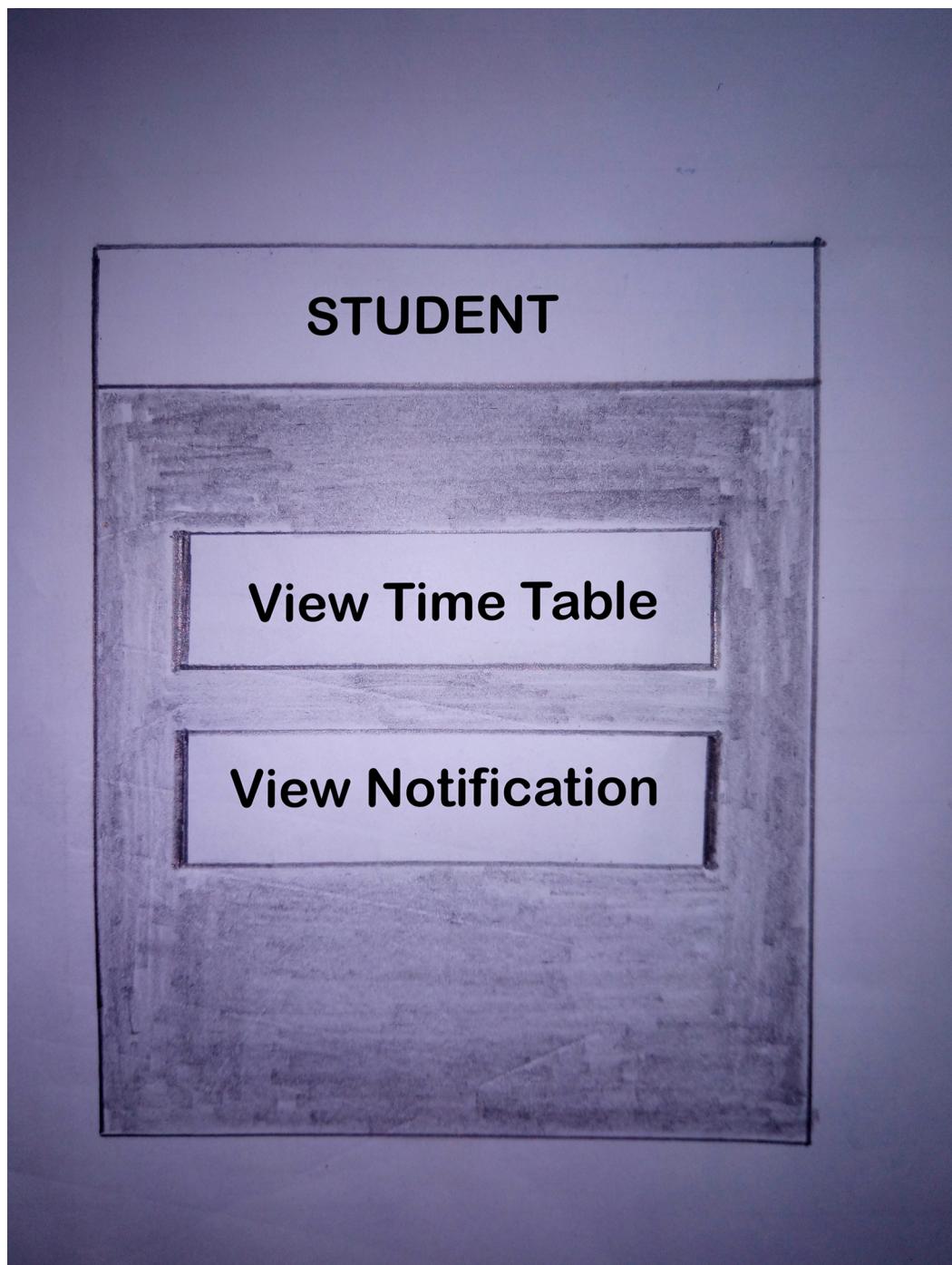
[Figure 6.3 Generate Timetable]

#### 6.4 Faculty Homepage



[Figure 6.4 Faculty Homepage]

## 6.5 Student Homepage



[Figure 6.5 Student Homepage]

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