Software Design Specification

for

Automated Timetable Generator (ATG)

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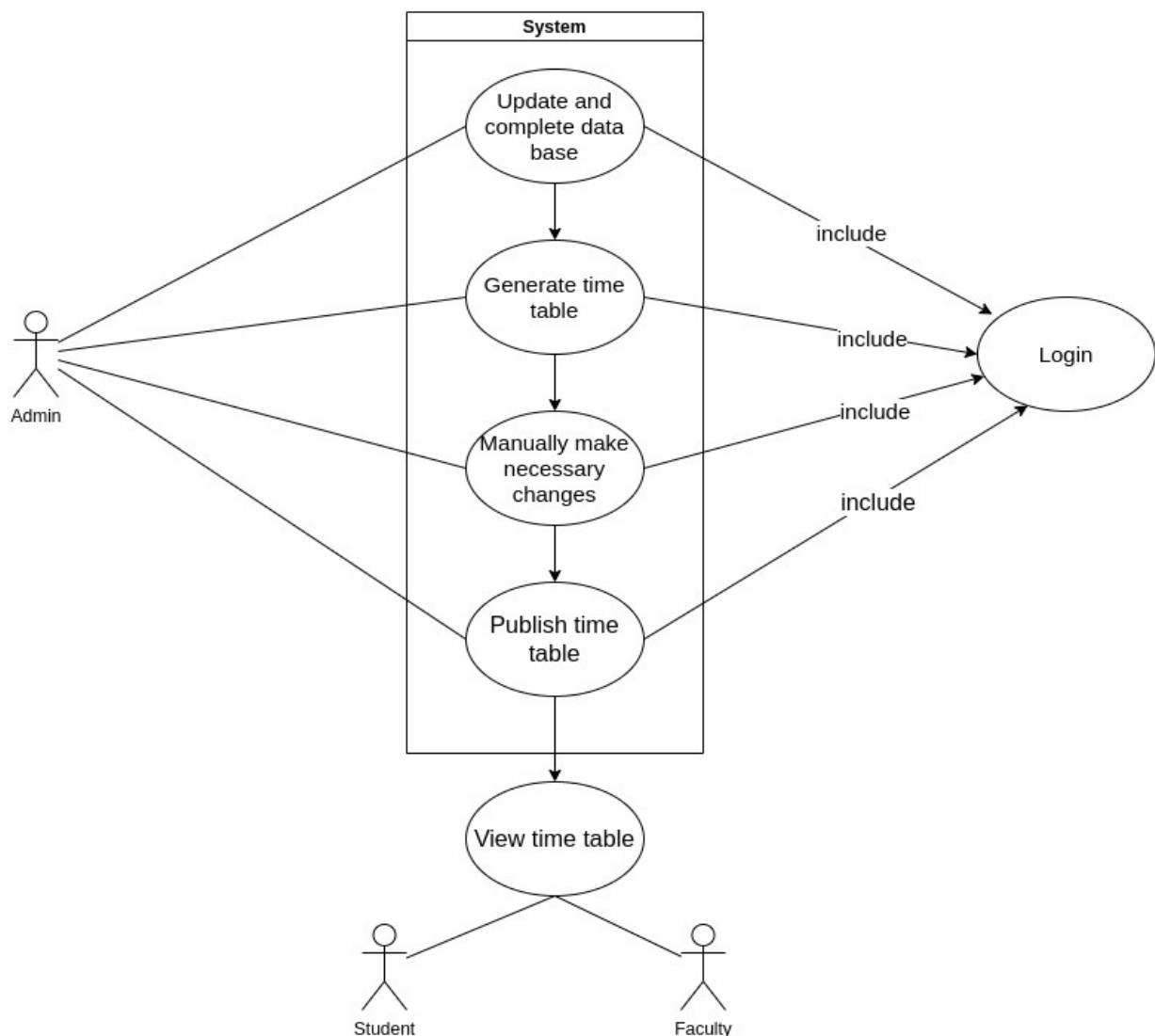
Table of Contents

Project Design/Architecture

- 4+1 Architectural view model
  - Use case view
  - Logical view
  - Development view
  - Process view
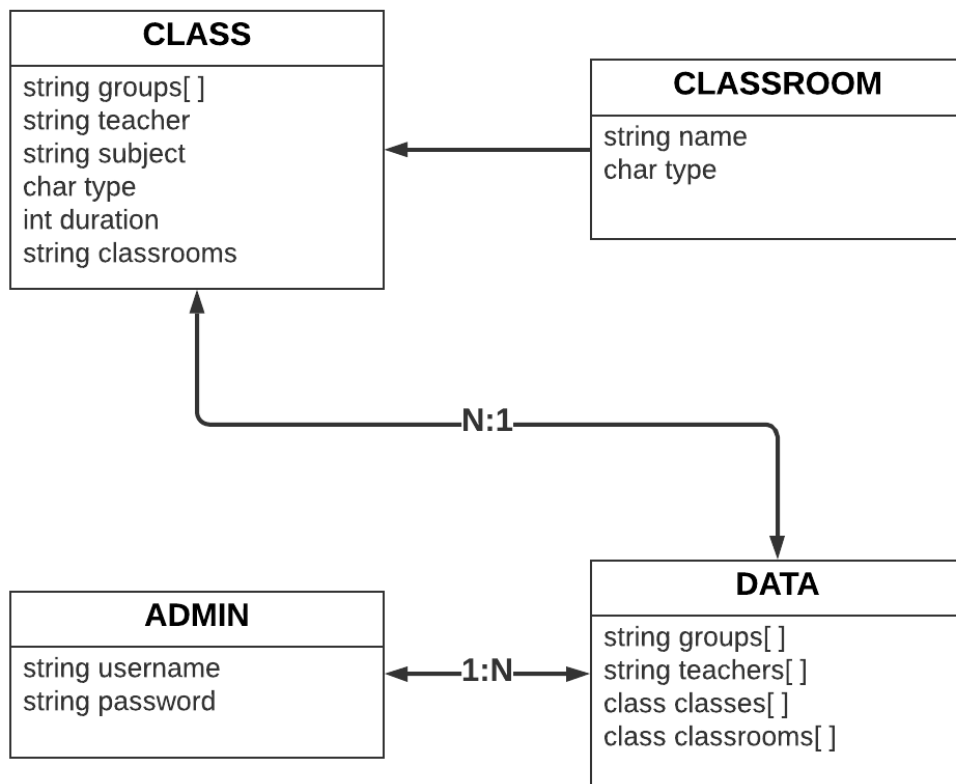 - Physical view
  - User Interface Design

1. Use Case View

Administrative users can make changes to the database while students and faculty can only view the generated time tables.

2. Logical View
1. Class Diagram

CLASS

string groups[ ]
string teacher
string subject
char type
int duration
string classrooms

CLASSROOM

string name
char type

N:1

ADMIN

string username
string password

1:N

DATA

string groups[ ]
string teachers[ ]
class classes[ ]
class classrooms[ ]
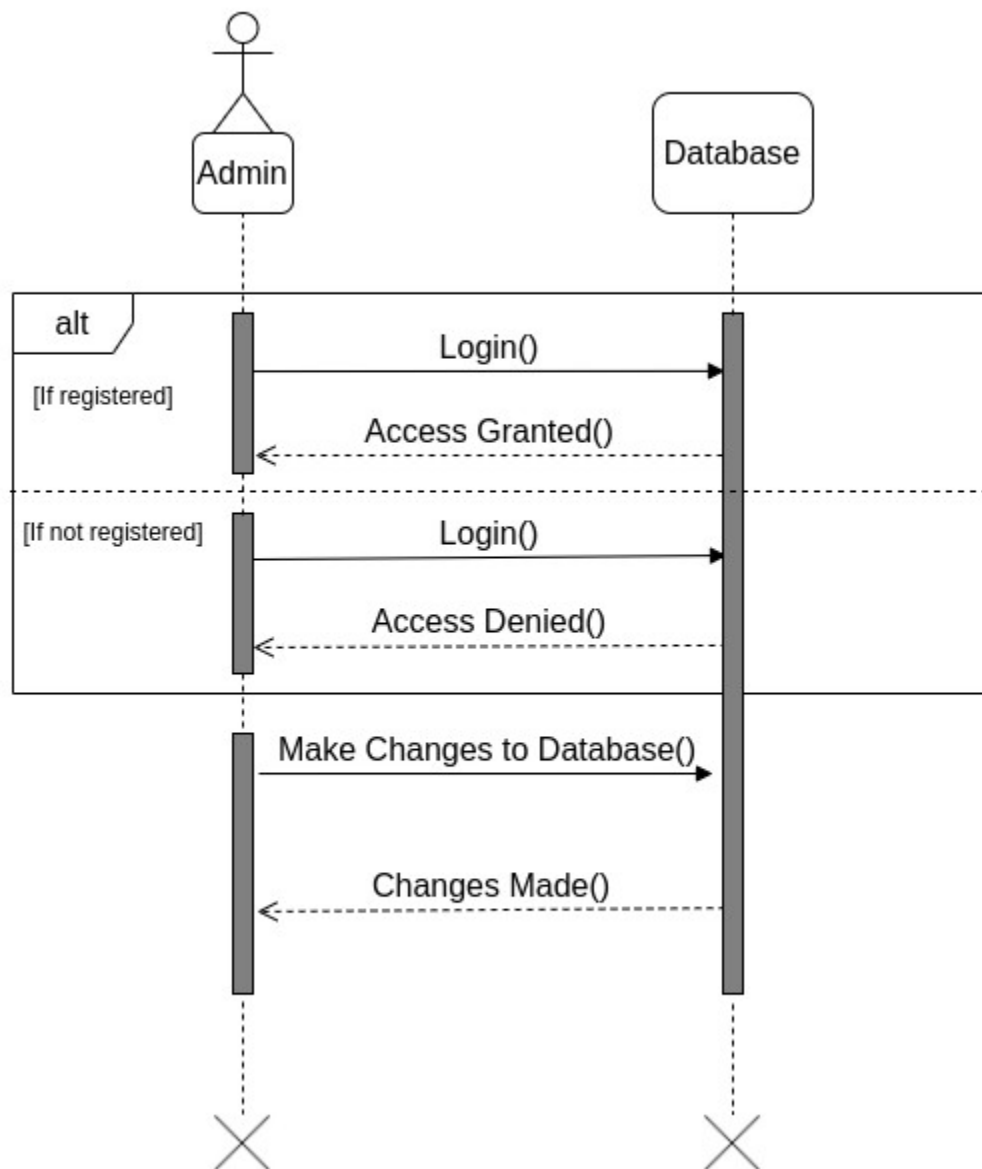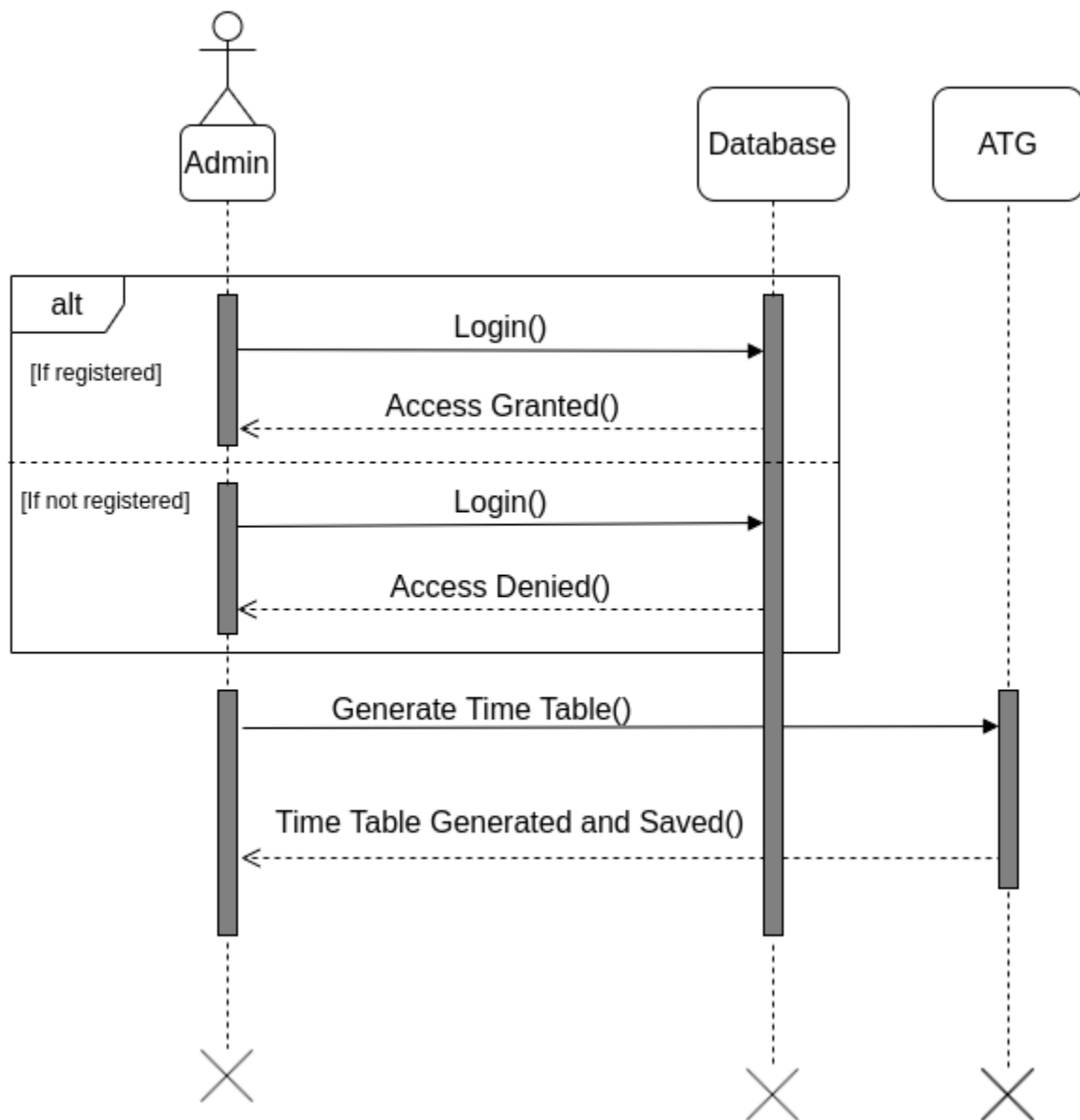
3. Development View
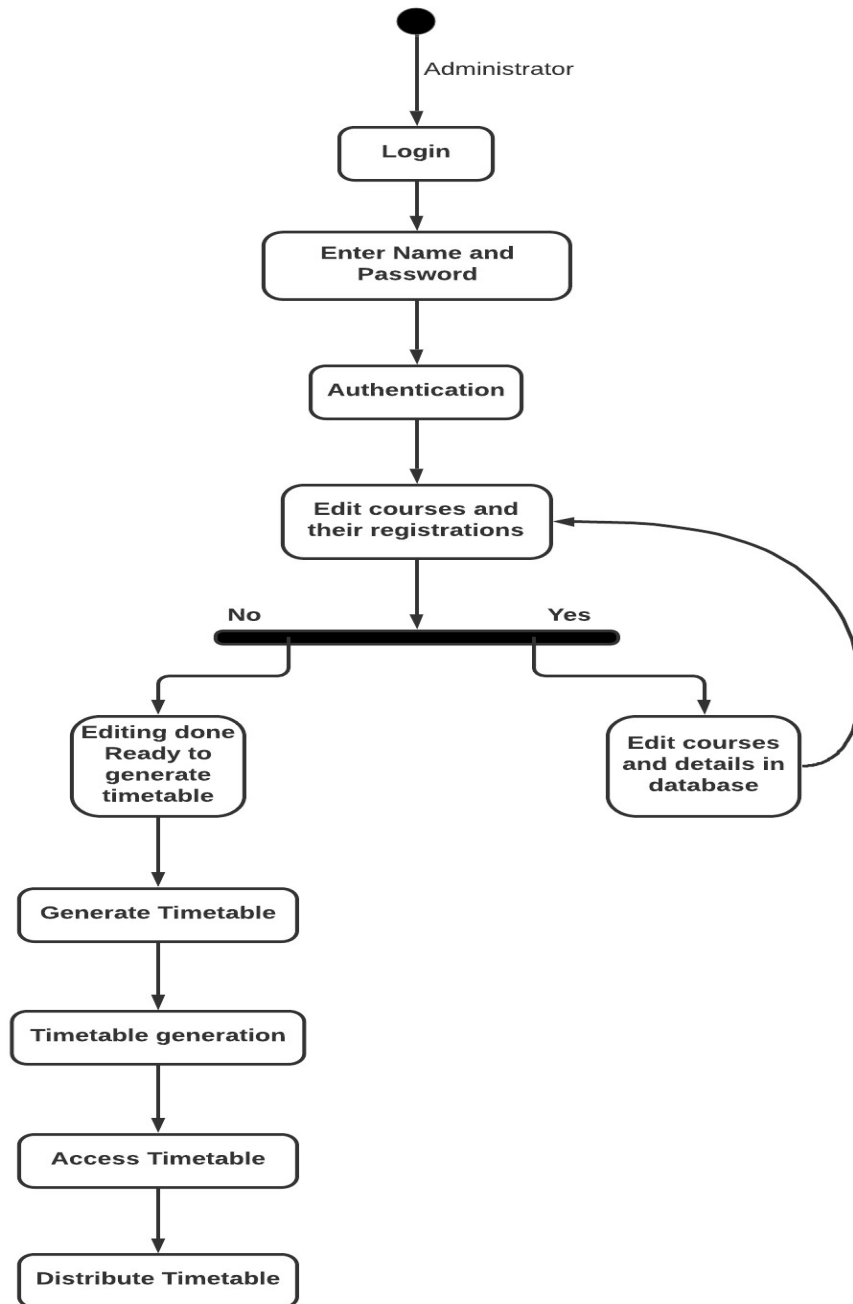## 1. Component Diagram
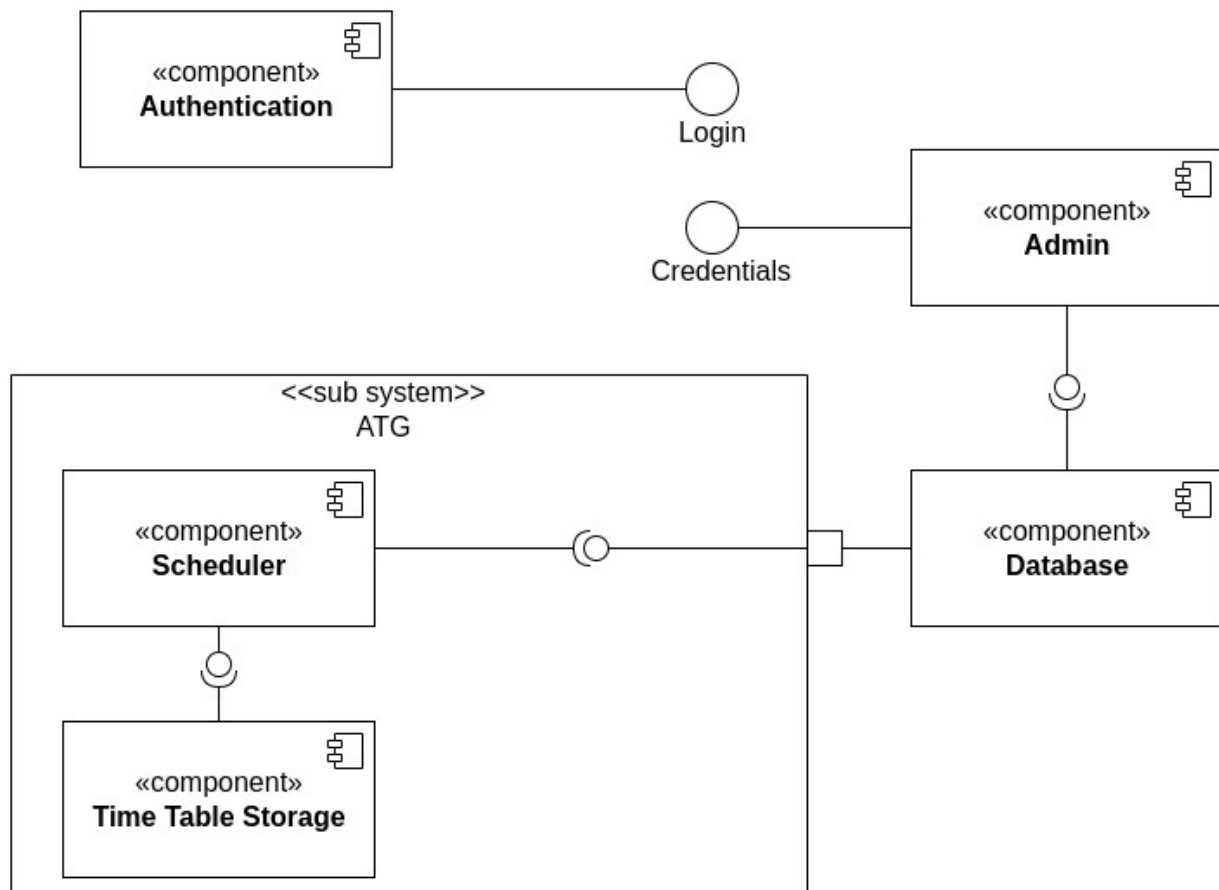
4. Process View

1. Sequence Diagram(Make changes to Database)
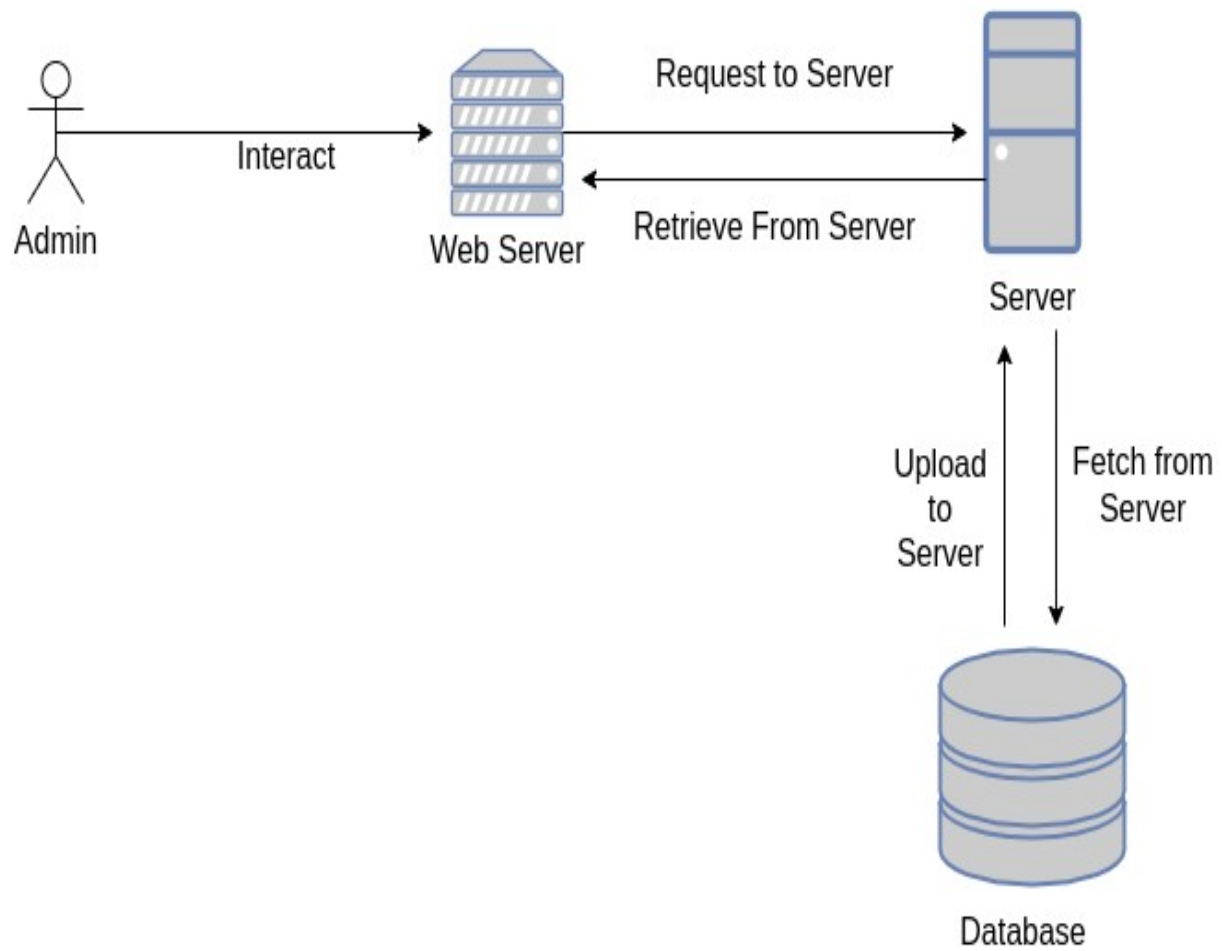
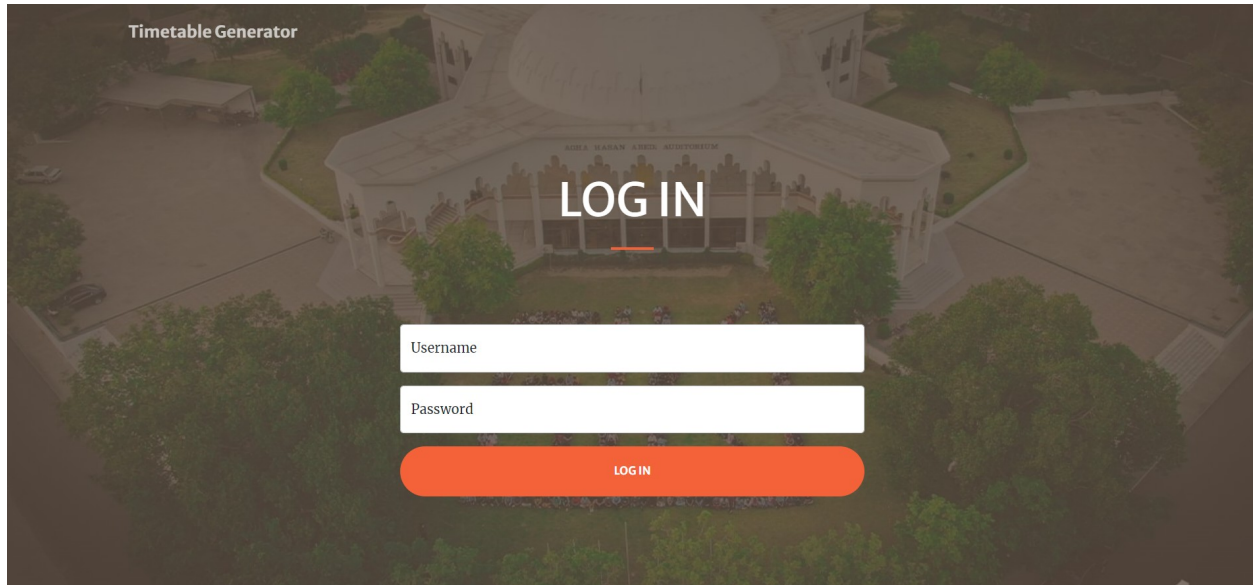## 2. Sequence Diagram(Generate Time Table)

3. Activity Diagram

```
              ●
         Administrator

          ┌──────────┐
          │  Login   │
          └──────────┘
               │
       ┌────────────────┐
       │ Enter Name and │
       │   Password     │
       └────────────────┘
               │
       ┌────────────────┐
       │ Authentication │
       └────────────────┘
               │
       ┌────────────────┐
       │ Edit courses and│◄──────────┐
       │ their registrations│        │
       └────────────────┘            │
No                        Yes        │
  ━━━━━━━━━━━━━━━━━━━━━━━━━━━━        │
   │                      │          │
┌──────────┐      ┌──────────────┐   │
│Editing done│    │ Edit courses │   │
│Ready to    │    │and details in│───┘
│generate    │    │ database     │
│timetable   │    └──────────────┘
└──────────┘
   │
┌──────────────────┐
│Generate Timetable│
└──────────────────┘
   │
┌──────────────────────┐
│Timetable generation  │
└──────────────────────┘
   │
┌──────────────────┐
│ Access Timetable │
└──────────────────┘
   │
┌────────────────────┐
│Distribute Timetable│
└────────────────────┘
```
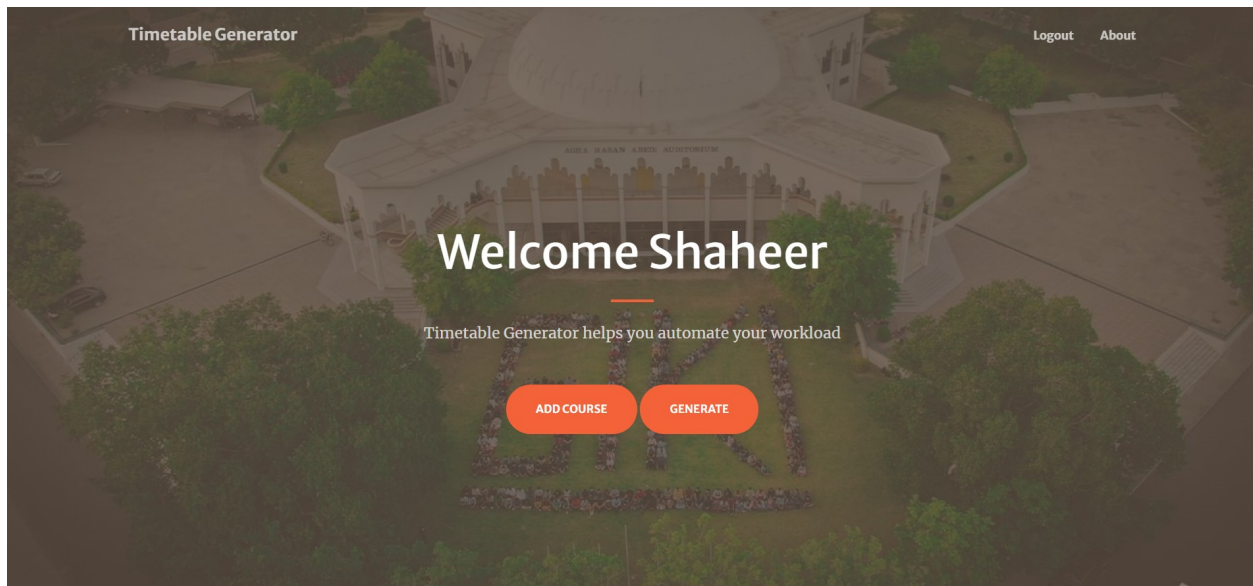
5. Physical View

Admin — Interact → Web Server — Request to Server → Server

Web Server ← Retrieve From Server — Server

Server → Fetch from Server → Database

Database — Upload to Server → Server

6. User Interface Design
1. Login Page

2. Home Page

3. Course Entry Page

4. Time Table Generated Page