

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELAGAVI – 590018



A MINI-PROJECT REPORT ON

“TIME TABLE MANAGEMENT SYSTEM”

Submitted in partial fulfilment of the requirements of the award of degree of

BACHELOR OF ENGINEERING IN

INFORMATION SCIENCE AND ENGINEERING

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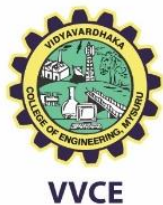
Dept of ISE

VVCE, Mysuru



2021-2022

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING
VIDYAVARDHAKA COLLEGE OF ENGINEERING MYSURU-570002



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CERTIFICATE

This is to certify that the mini-project report entitled “**TIME TABLE MANAGEMENT SYSTEM**” is a bona fide work carried out by **MANOJ M, MADHAVA P ACHAR** and **MANOHAR SN**, students of 6th semester Information Science and Engineering, **Vidyavardhaka College of Engineering, Mysuru** in partial fulfilment for the award of the degree of Bachelor of Engineering in **Information Science & Engineering of the Visvesvaraya Technological University, Belagavi**, during the academic year **2021-2022**. It is certified that all the suggestions and corrections indicated for the internal assessment have been incorporated in the report deposited in the department library. The report has been approved as it satisfies the requirements in respect of mini-project work prescribed for the said degree.

Signature of the Guide

(Prof. Rakshitha M S)

Signature of the Guide

(Prof R Kasturi Rangan)

Signature of the HOD

(Dr. A B Rajendra)

Name of the Examiners

1.

2.

Signature with Date

ACKNOWLEDGEMENT

The Mini project would not have been possible without the guidance, assistance, and suggestions of many individuals. I would like to express our deep sense of gratitude and indebtedness to each one who has helped me to make this project a success.

We heartily thank our beloved Principal, **Dr. B Sadashive Gowda** for his wholehearted support and for his kind permission to undergo the mini project.

We wish to express our deepest gratitude to **Dr. A B Rajendra**, Head of Department, Information Science and Engineering, VVCE, for his constant encouragement and inspiration in taking up this mini project.

We gracefully thank our mini-project guides, **Prof. Rakshita M S and Prof. R Kasturi Rangan** Associate Professor, Dept. of Information Science and Engineering for their encouragement and advice throughout the course of the mini project work

In the end, we are anxious to offer our sincere thanks to our family members and friends for their valuable suggestions and encouragement.

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ABSTRACT

Time Table Management plays a vital role in mankind's day-to-day life, which in turn stresses tasks related to the creation of an environment conducive to "real" effectiveness or to achieve productive work.

Every academic year, the Faculty of Computing faces this rigorous task of preparing timetables. Although the current manually operated timetable system is sufficient to conduct lectures without collisions, due to insufficient lecture hall facilities and laboratory resources, it is very time consuming and resource optimization problems occur.

Repeated time allocations may be made for a particular course thereby leading to data redundancy. Many people face the trouble in time management as we all know, in many of the cases lack of allocation and management of time are there. In other words, timetable schedules of activities of an entity tabulated on a periodic basis for the working days

This timetable management system is the very 1st system used to make timetable in the faculty because there is not any existing system to make timetable. The assistant creates the timetable manually for every week.

From our proposed system he/she can create the timetable in any manner. Also, the students are willing to get the timetable on time and it is easy to check with the new format and only receive their intake timetable.

The Faculty can make timetable in a more user-friendly format, more efficient and more reliable with minimum of errors.

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CHAPTER 1

1.INTRODUCTION

1.1 MOTIVATION

Technological advancements in this era of digitization along with being a boon to the world have been advantageous to the educational sector too. As we discussed earlier that manual maintenance of a Time Table Management System is a tedious job. So, to enhance the ease of working we go for this package.

Manual maintenance of databases of items, time table processing is a time taking process and somehow erroneous. To give more accuracy to the system i.e., rather going manual modification we involve computer for accuracy. The least but most important it saves time.

1.2 PROPOSED SYSTEM

The proposed System is completely computer-based application. In the proposed system administrator should not to worry about their late and improper management of sales details. All the information will be available by just clicking on a single button. Thousands of records can search and displayed without taking any significant time.

Some of the advantages are:

- Saves Time and Effort.
- Reduces Error
- Easy customization
- Instant Notifications for changes

1.3 RELATED WORK

CHAPTER 2

2.REQUIREMENT ANALYSIS AND SYSTEM SPECIFICATIONS

2.1 SOFTWARE REQUIREMENTS SPECIFICATION DOCUMENT

- OS: Android 8 or higher
- Memory: 4GB RAM
- Free storage: 2GB
- Android Studio
- Android Software Development Kit
- Java Development Kit
- The SDK and AVD Manager

2.2 VALIDATION

CHAPTER 3

3.SYSTEM DESIGN

3.1 DESIGN APPROACH

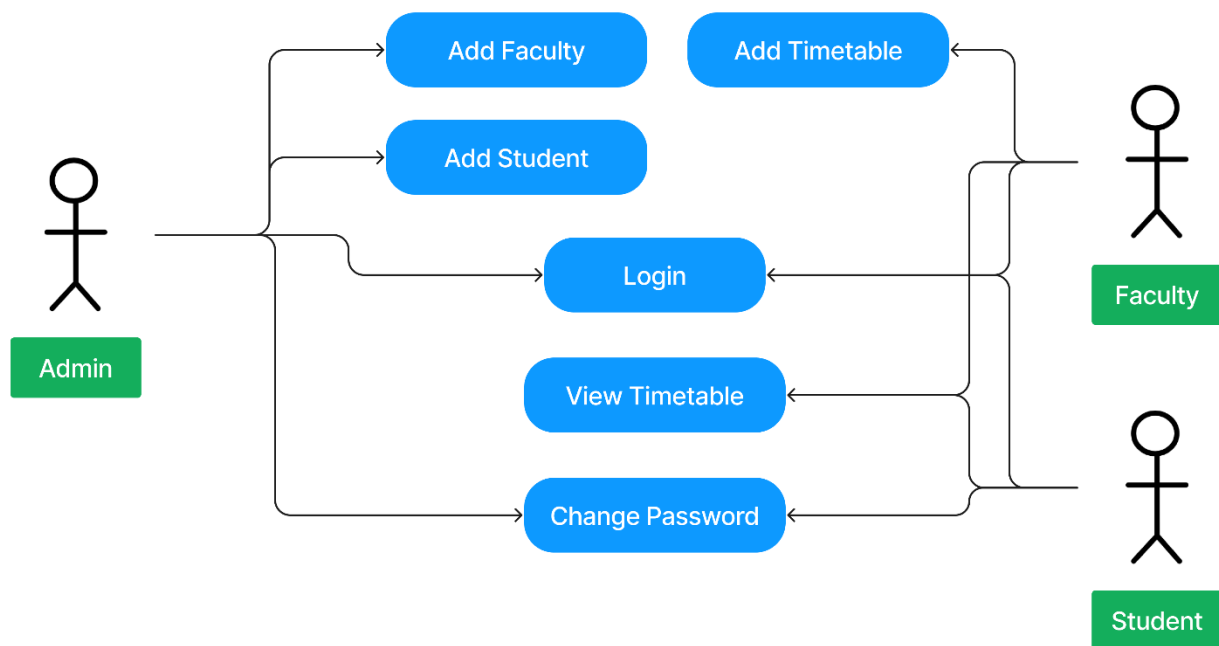


Fig 3.1.1: Use-Case diagram

3.2 LAYOUT DESIGN

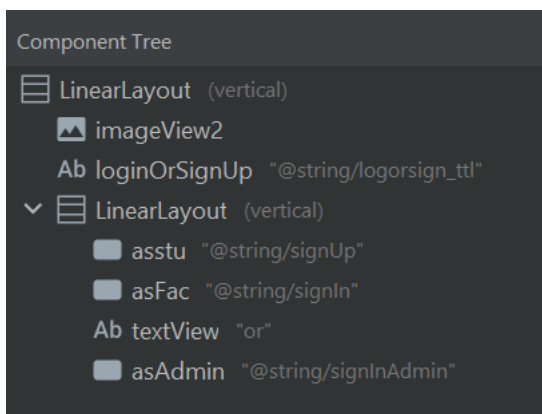


Fig 3.2.1: Home Page

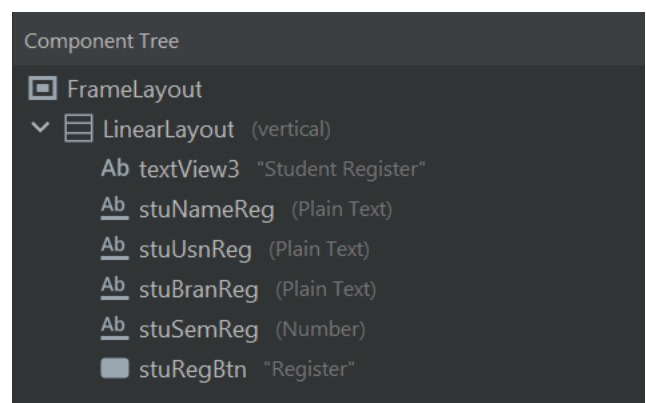


Fig 3.2.2: Student registration

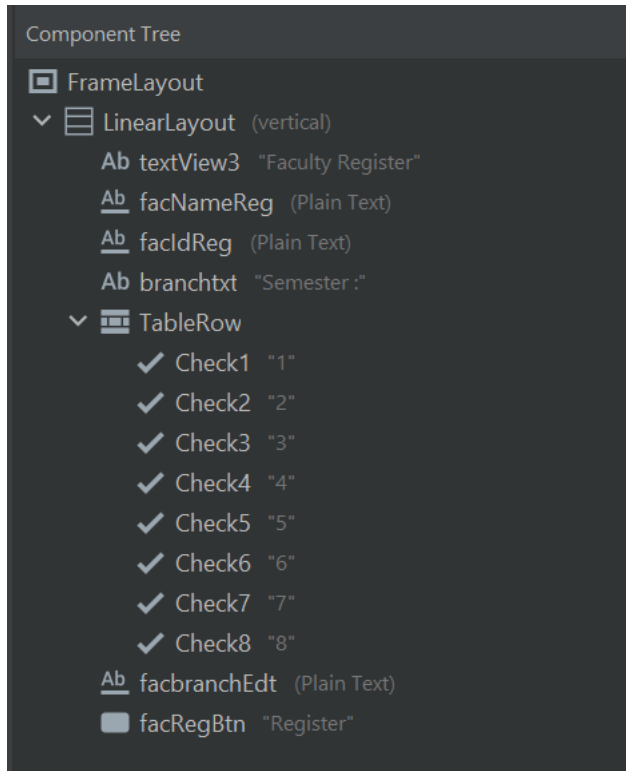


Fig 3.2.3: Faculty Registration

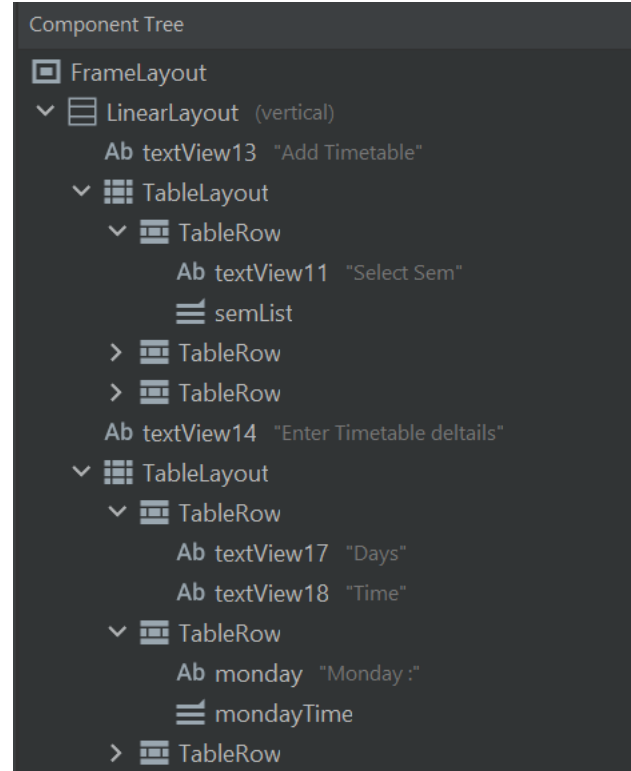


Fig 3.2.4: Add Time Table

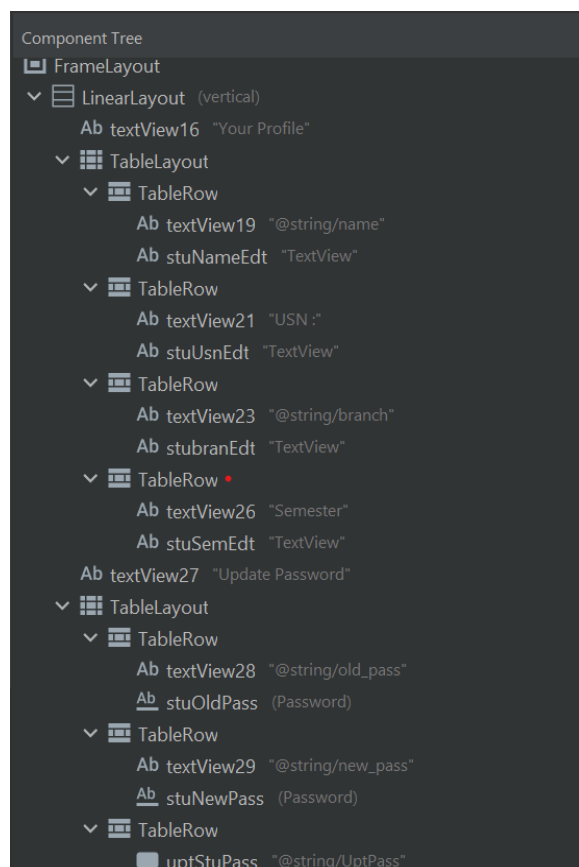


Fig 3.2.5: Timetable

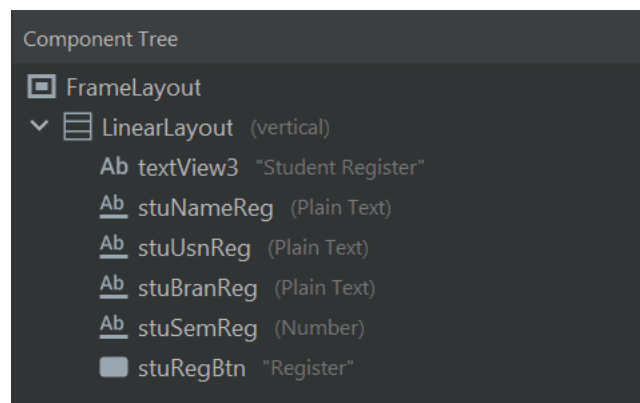


Fig 3.2.6: Student registration

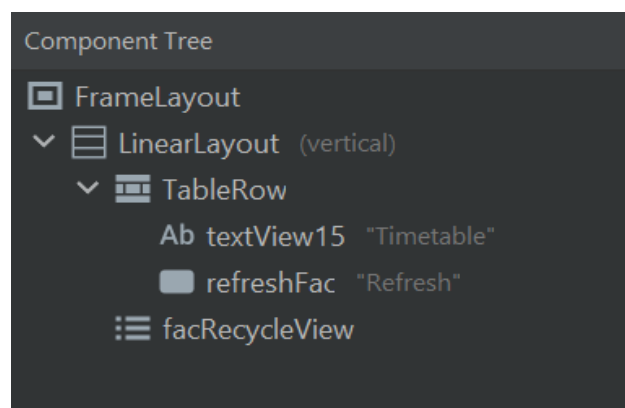


Fig 3.2.7: Faculty View

CHAPTER 4

4.IMPLEMENTATION

4.1 INTRODUCTION TO PROGRAMMING LANGUAGES, IDEs, TOOLS AND TECHNOLOGIES

ANDROID STUDIO

Android Studio is the official Integrated Development Environment (IDE) for Android app development, based on IntelliJ IDEA. On top of IntelliJ's powerful code editor and developer tools, Android Studio offers even more features that enhance your productivity when building Android apps.

ANDROID SOFTWARE DEVELOPMENT KIT

The Android SDK (software development kit) is a set of development tools used to develop applications for the Android platform. It's a set of software tools and programs used by developers to create applications for specific platforms. The Android SDK includes the following: Required libraries, Debugger.

JAVA DEVELOPMENT KIT

Java is one of the most popular coding languages out there, and Java Development Kit (or JDK) is its official development package. Currently, Java Development Kit is also one of the most popular development environments in which to code Java. The Java Development Kit offers a wide range of practical tools like javac. You also have java and jdb which works as the debugger of the system.

THE SDK AND AVD MANAGER

The sdk manager is a command line tool that allows you to view, install, update, and uninstall packages for the Android SDK. The avd manager is a command line tool that allows you to create and manage Android Virtual Devices (AVDs) from the command line. An AVD lets you define the characteristics of an Android handset, Wear OS watch, or Android TV device that you want to simulate in the Android Emulator.

NodeJS

Node.js is an open-source, cross-platform, back-end JavaScript runtime environment that runs on the V8 engine and executes JavaScript code outside a web browser, which was designed to build scalable network applications. Node.js lets developers use JavaScript to write command line tools and for server-side

scripting—running scripts server-side to produce dynamic web page content before the page is sent to the user's web browser. Consequently, Node.js represents a "JavaScript everywhere" paradigm, unifying web-application development around a single programming language, rather than different languages for server-side and client-side scripts.

Express web framework

Express is a popular unopinionated web framework, written in JavaScript and hosted within the Node.js runtime environment. This module explains some of the key benefits of the framework, how to set up your development environment and how to perform common web development and deployment tasks.

MongoDB:

MongoDB is a source-available cross-platform document-oriented database program. Classified as a NoSQL database program, MongoDB uses JSON-like documents with optional schemas. MongoDB is developed by MongoDB Inc. and licensed under the Server-Side Public License which is deemed non-free by several distributions

4.2 IMPLEMENTATION

```
package com.example.timetablemanagementsystem;

import android.app.Activity;
import android.os.Bundle;

import androidx.appcompat.app.AppCompatActivity;
import androidx.fragment.app.Fragment;

import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import java.util.HashMap;

import retrofit2.Call;
import retrofit2.Callback;
import retrofit2.Response;
import retrofit2.Retrofit;
import retrofit2.converter.gson.GsonConverterFactory;

public class StudentReg extends Fragment {
    private Retrofit retrofit;
    private RetrofitInterface retrofitInterface;
    private String BASE_URL = "http://10.0.2.2:9001";

    Button regStudent;
    EditText stuNameEd, stuUsnEd , stuPassEd, stuSemEdt, stuBraEdt ;
```

```

public StudentReg() {
}
@Override
public View onCreateView(LayoutInflater inflater, ViewGroup container,
                          Bundle savedInstanceState) {
    Activity activityObj = this.getActivity();
    View myView =inflater.inflate(R.layout.fragment_student_reg, container, false);
    retrofit = new
Retrofit.Builder().baseUrl(BASE_URL).addConverterFactory(GsonConverterFactory.create())
.build();
    retrofitInterface = retrofit.create(RetrofitInterface.class);

    regStudent =(Button) myView.findViewById(R.id.stuRegBtn);
    stuNameEd =(EditText) myView.findViewById(R.id.stuNameReg);
    stuUsnEd = (EditText)myView.findViewById(R.id.stuUsnReg);

    stuBraEdt = (EditText)myView.findViewById(R.id.stuBranReg);
    stuSemEdt = (EditText)myView.findViewById(R.id.stuSemReg);
    regStudent.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            HashMap<String,String> map = new HashMap<>();
            map.put("name",stuNameEd.getText().toString());
            map.put("usn",stuUsnEd.getText().toString());
            map.put("sem",stuSemEdt.getText().toString());
            map.put("branch",stuBraEdt.getText().toString());
            Call<Void> call = retrofitInterface.executeSignup(map);
            call.enqueue(new Callback<Void>() {
                @Override
                public void onResponse(Call<Void> call, Response<Void> response) {
                    if(response.code() == 200){
                        Toast.makeText(activityObj, "Registration Successfull",
Toast.LENGTH_SHORT).show();

                        resetfields();
                    }
                    else if(response.code() == 400){
                        Toast.makeText(activityObj, "Already registered",
Toast.LENGTH_SHORT).show();
                    }
                }
                @Override
                public void onFailure(Call<Void> call, Throwable t) {
                    Toast.makeText(activityObj, t.getMessage(),
Toast.LENGTH_SHORT).show();
                }
            });
        }
    });
    return myView;
}

private void resetfields() {
    stuNameEd.setText("");
    stuUsnEd.setText("");
    stuBraEdt.setText("");
    stuSemEdt.setText("");
}
}

```

CHAPTER 5

5.TESTING

5.1 TYPES OF TESTING

5.1.1 UNIT TESTING

Unit testing involves the testing of each unit or individual component of the software application. It is the first level of functional testing. The aim behind unit testing is to validate unit components with its performance. The purpose of unit testing is to test the correctness of isolated code. A unit component is an individual function or code of the application. White box testing approach used for unit testing and usually done by developers.

5.1.2 INTEGRATION TESTING

Integration testing is the second level of the software testing process comes after unit testing. In this testing, units or individual components of the software are tested in a group. The focus of the integration testing level is to expose defects at the time of interaction between integrated components or units. Unit testing uses modules for testing purpose, and these modules are combined and tested in integration testing. The goal of integration testing is to check the correctness of communication among all the modules.

5.2 TEST CASES AND ITS RESULTS

Test case Id	Test case name	Input	Expected output	Actual output	Result
1	Admin Login	admin@gmail.com admin123	Login successful	Login successful	Pass
2	Admin Login	admin@gmail.com admin1	Invalid Password	Invalid Password	Pass
3	Faculty Login	FAC12 FAC12@123	Login Successful	Login Successful	Pass
4	Faculty Login	FAC12 FAC12	Invalid Password	Invalid Password	Pass
5	Student Login	4VV19IS045 4VV19IS045@123	Login Successful	Login Successful	Pass
6	Student Login	4VV19IS045 4VV19IS045@123	Invalid Password	Invalid Password	Pass

7	Faculty Registration	(FAC ID, Name, Sem, Branch)	Registration Successful	Registration Successful	Pass
8	Student Registration	(USN, Name, Sem, Branch)	Registration Successful	Registration Successful	Pass
9	Add Timetable	(Sem, Subcode, Subject name, Timings)	Timetable added successfully	Timetable added successfully	Pass
10	Update Timetable	(Sem, Exist Subcode, Subject name, Timings)	Timetable updated successfully	Timetable updated successfully	Pass

Table 5.2.1: Testcases

CHAPTER 6

6.SNAPSHOTS

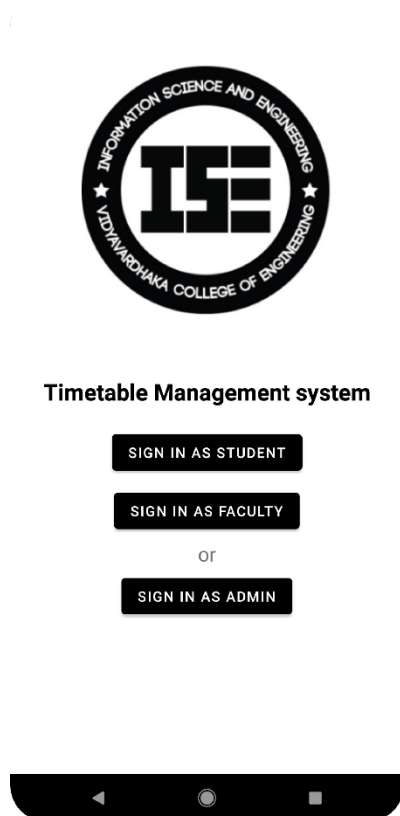


Fig 6.0.1: Home

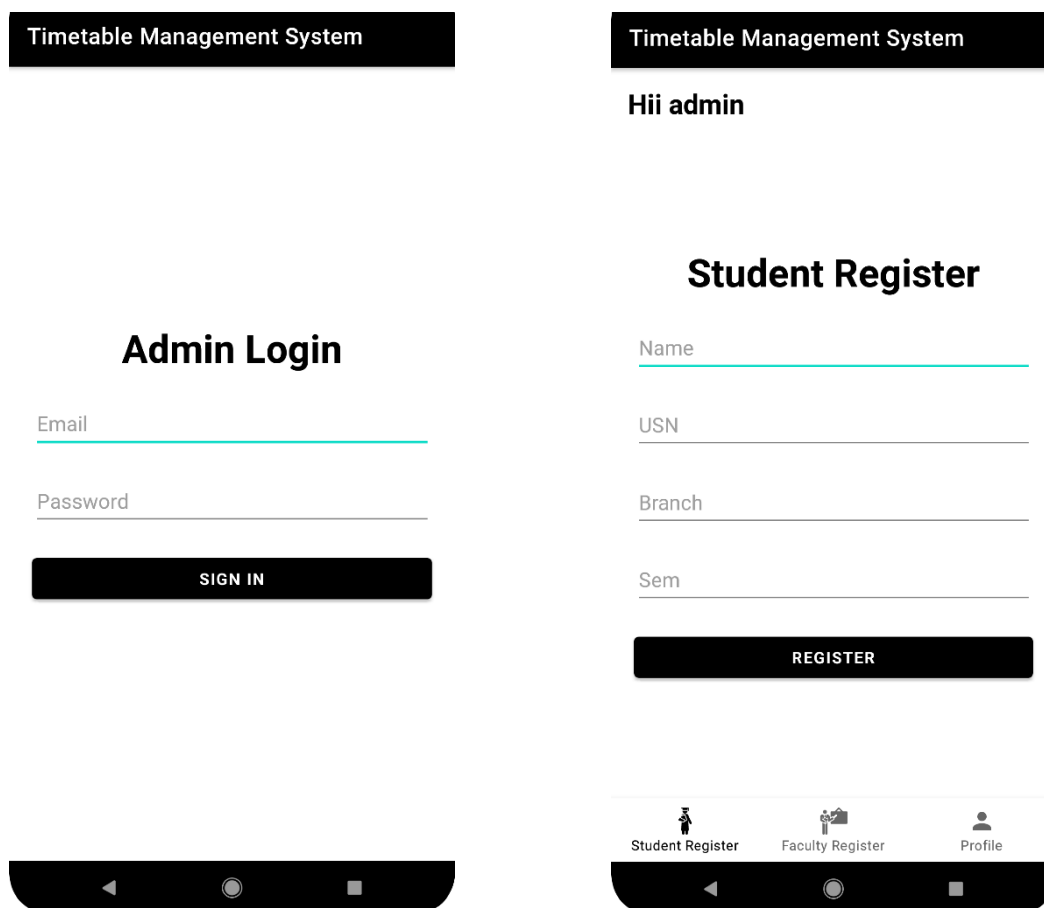


Fig 6.0.2: Admin Login

Fig 6.0.3: Register Student

Timetable Management System

Hii admin

Faculty Register

Name

ID num

Semester :

1

2

3

4

5

6

7

8

Branch

REGISTER

Fig 6.0.4: Register Faculty

Timetable Management System

Hii admin

Name :admin

Email : admin@gmail.com

Update Password

Old Password

New Password

UPDATE PASSWORD

Fig 6.0.5: Admin Profile

11

Timetable Management System

Faculty Login

Faculty ID

Password

SIGN IN

Fig 6.0.6: Faculty Login

Timetable Management System

Add Timetable

Select Sem6

Subject Code18IS61

Subject NameSubject code

Enter Timetable details

Days	Time	
Monday :	08:30 am - 09:30 am	
Tuesday :	08:30 am - 09:30 am	
Wednesday :	08:30 am - 09:30 am	
Thursday :	08:30 am - 09:30 am	
Friday :	08:30 am - 09:30 am	
Saturday :	08:30 am - 09:30 am	

ADD CLASS

+

Add ClassTimetableProfile

Fig 6.0.7: Add or update class

Timetable Management System

Timetable

REFRESH

Subject

Semester :6

Sub Code :Cloud Computing

SubName :18CS64X

Timings

Monday :08:30 am - 09:30 am

Tuesday :08:30 am - 09:30 am

Wednesday :08:30 am - 09:30 am

Thursday :08:30 am - 09:30 am

Friday :08:30 am - 09:30 am

Saturday :08:30 am - 09:30 am

+

Add ClassTimetableProfile

Timetable Management System

Student Login

USN

Password

SIGN IN

Fig 6.0.8: Faculty Timetable

Timetable Management System

Timetable

Subject	
Semester :	6
Sub Code :	Cloud Computing
SubName :	18CS64X
Timings	
Monday :	08:30 am - 09:30 am
Tuesday :	08:30 am - 09:30 am
Wednesday :	08:30 am - 09:30 am
Thursday :	08:30 am - 09:30 am
Friday :	08:30 am - 09:30 am
Saturday :	08:30 am - 09:30 am

Home

Profile

Fig 6.0.9: Student Login

Timetable Management System

Your Profile

Name :	Manoj M
USN :	4VV19IS045
Branch	ISE
Semester	6

Update Password

Old Password	<input type="password"/>
New Password	<input type="password"/>

UPDATE PASSWORD

Home

Profile

Fig 6.0.10: Student Timetable

Fig 6.0.11: Student Profile

CHAPTER 7

7.FUTURE WORK

CHAPTER 8

8.CONCLUSION

This methodology is an effective and efficient way to maintain and provide required information from the system as per need of head of institution. The proposed system reduces combust Ness of manual system with cutting edge technology that helps to visualize the complicacies of time table.

All the modules have been designed helped to retrieve data according to the given information available like Room No. semester or Time. The proposed system can be extended to make it web based.

CHAPTER 9

9.BIBLIOGRAPHY