DAYANANDA SAGAR UNIVERSITY

Bachelor of Technology
in
COMPUTER SCIENCE AND ENGINEERING

Special Topic- 2 Report

WEB APP USING FLUTTER

By

KUNIKA MATHUR ENG20CS0168
SHREYAS SHET ENG20CS0347
TAMANNA VERMA ENG20CS0379

Under the supervision of

Ms. RANJINI K

ASSISTANT PROFESSOR,
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING,
SCHOOL OF ENGINEERING
DAYANANDA SAGAR UNIVERSITY,

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DAYANANDA SAGAR UNIVERSITY

School of Engineering
Department of Computer Science& Engineering
Kudlu Gate, Bangalore –560068
Karnataka, India

CERTIFICATE

This is to certify that the Special Topic 2 titled **"WEB APP USING FLUTTER"** is carried out by **KUNIKA MATHUR(ENG20CS0168), SHREYAS SHET(ENG20CS0347), TAMANNA VERMA(ENG20CS0379)** bonafide students of Bachelor of Technology in Computer Science and Engineering at the School of Engineering, Dayananda Sagar University, Bangalore in partial fulfilment for the award of degree in Bachelor of Technology in Computer Science and Engineering, during the year **2022-2023**.

Prof. Ranjini K	**Dr. Girisha G S**	**Dr. Uday Kumar Reddy**
Assistant Professor, CSE	Chairman, CSE	Dean
School of Engineering	School of Engineering	School of Engineering
Dayananda Sagar University	Dayananda Sagar University	Dayananda Sagar University
Date:	Date:	Date:

DECLARATION

We, **KUNIKA MATHUR(ENG20CS0168), SHREYAS SHET(ENG20CS0347), Tamanna Verma(ENG20CS0379),** are student's of the fifth semester B.Tech in **Computer Science and Engineering**, at School of Engineering, **Dayananda Sagar University**, hereby declare that the Special Topic 2 titled **"Web App using Flutter"** has been carried out by us and submitted in partial fulfilment for the award of degree in **Bachelor of Technology in Computer Science and Engineering** during the academic year **2022-2023**.

Student	Signature
Name1: KUN IKA MATHUR **USN: ENG20CS0168**	
Name2: SHREYAS SHET **USN: ENG20CS0347**	
Name3: TAMANNA VERMA **USN: ENG20CS0379**	

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ABSTRACT

The "WEB APP USING FLUTTER" project is software that automates and engages in numerous day-to-day activities while also giving the quick data required for successful College management for applying leave. In the general management of the college, the default component of the software will comprise recording data and keeping records of the college, teachers and leave related activities. The user's selected preferences can be used to create record for number of days the leave is applied. With the selected date and number of days, attendance and days left can be viewed. Thus, when a teacher has to take time off, they can easily apply for leave through the web app. When employee requests time off; HOD and Dean can review and approve requests. Notification will be issued once the leave has been authorized. If the leave request is denied, a letter should be written to the appropriate staff authority. The program will include: Teacher Login, HOD login, Dean login. Either the HOD or the Dean can effortlessly add the staff members. The project is being developed by means of Android-Flutter as the front end and php the back end.

Chapter 1 INTRODUCTION

A user-friendly solution for the working professionals to easily apply for leave. It is a tedious to manage the student workload and to manage their timetables. We need to provide to provide a solution which would not only speed up the process of applying for leave but also easier to record the status of their leave application.

The application is built in Flutter using web plugin to enable easy debugging and ease of access.

An application is a programme that can be accessed by anyone in the organization using a single login. College departments can use this programme as a request to manage their leave record.

1.1 MULTIPLE LOGINS

The various modules included are:

1.1.1 TEACHER LOGIN

A teacher will be able to apply for a leave after mentioning the reason. They can also verify the status of their leave. A leave is said to be approved if HOD and the Dean approves it.

1.1.2 HOD LOGIN

A HOD can apply for leave which can be approved by the Dean. HOD can also view the faculty list and has the authority to add more faculties.

1.1.3 DEAN LOGIN

Dean can view the entire hierarchy of the institute and has the authority to cancel the leave.

1.2 SCOPE

As mentioned, the project has significant impact on the way employees apply for leaves. This project enables smooth functioning of the management.

This project aims at expanding its functionalities to various other professional institutes. The extensions include enabling the users to maintain several other aspects of an institution like maintaining students' data, their academic performance etc.

CHAPTER 2 PROBLEM DEFINITION

Inconvenient physical means for applying leave are difficult to be maintained as records and are time consuming. A teacher friendly and developer friendly application should provide ad easy to use and fast method to apply for leave.

CHAPTER 3 LITERATURE REVIEW

The research has come up with a number of tools for managing school attendance and to analyse student. As a result of this research, a number of methods for tracking school attendance and analyzing student data have been developed. During key occurrences at the institution, the programme keeps the learner and caregiver informed. Another factor is that anytime a learner fails a test or a learner fails, the caregiver is notified. The Learner Information Report System (LIRS) is an application programme that intends to meet learners, skills, parents, and college/school administrators by exchanging statistics directly and in a secure environment. Learner information is data (such as a student's semester registration identification number, gender, parent information, and personal demographic profile details) that is sent to the system with skills. Everything is saved in the application's database. The LIRS system is simple to implement[1].

The LIRS programme is an internet application that anyone can access from the comfort of their own home without having to look at a map, allowing for seamless navigation. This study provides details on the institute growth and business performance. This research reveals information on the institute's growth and financial success. Increased performance at appropriate educational institutions has resulted in a significant increase in learners. This task will result in speedier distribution, better learner tracking, and the desired outcome. Learners will be able to save personal information using this way. This task is less risky, more reliable, and easier to exploit. The purpose of this survey is to determine the size of any individual tracking structure. It is a required process in the educational system that publicly imitates the growth of the learner. Managing school attendance at educational institutions is often a time-consuming task. There has been a significant increase in software engineering recently, which has provided institutes the ability to maintain an existing system using widgets, which is a fantastic method. We don't need to keep an attendance register because we utilize an attractive handset. It's simple to do using a mobile app. When the class begins, faculty will be present. They will initially use the portable app to log into the application. The presence will be relayed individually through GPRS once it has been successfully taken to class. Skills are also capable

of carrying out the needed tasks. The chief point of this practice is to shrink the warning of manual endeavour.

This task is completed with the assistance of a computer software. The model demonstrates a significant role in the institution or operation of the college. These programmes provide comprehensive information about the learner, their abilities, and the educational institution. The user's foundation on their grouping is the third obsession in this work. The end user will appreciate the smooth navigation and easy access provided by this effort. The concept clarifies the storing of data for student scholastic reports. This representation includes a variety of events, such as a timeline of college courses from first grade through graduation day. It also allows students to register for specific courses online, pay fees online, view exam results, and be notified of significant events.

CHAPTER 4 PROJECT DESCRIPTION

Staff Leave Management System (SLMS) is divided into three modules:

1. Staff module
2. HOD module
3. Dean module

4.1 Staff Module

The Staff can log in with a valid email and password.

Update his/her profile.

Apply for leave.

View the leave history.

4.2 HOD Module

HOD can add/update/ delete leave type and departments.

HOD can add a Staff and also update the Staff info.

HOD can also manage the leave application (approve and reject).

HOD can change own password after login.

HOD can also view admin dashboard.

4.3 Dean Module

Dean can add an Staff and also update the Staff info.

Dean can also manage the leave application (approve and reject).

Dean can change own password after login.

Dean can also view admin dashboard.

The project is based on web App creation using Flutter. Flutter uses Dart programming languages and is being used for its popularity among youths and industrialists.

This project has dealt with learning the basic concept of Flutter and an comparative study of React with Flutter.

CHAPTER 5 REQUIREMENTS

- ANDROID STUDIO

  -Provides developers with an integrated development environment (IDE) optimized for android apps.

- FLUTTER

  -A framework for building multi platform natively compiled applications.

- VISUAL STUDIO CODE

  -code editor redefined and optimized for building and debugging modern web and cloud applications.

- PHP API

  -Defines the classes methods and functions needed in the application to store the values entered by user.

- IMAGES

  -Various images including DSU images, DSU logo and other background images.

- CMD

  -starts a new instance of the command interpreter

- 64 GB CONFIGURATION

- 8 GB RAM

CHAPTER 6 METHODOLOGY

STEP 1: INSTALLATION OF FLUTTER AND CMD INTEGRATION

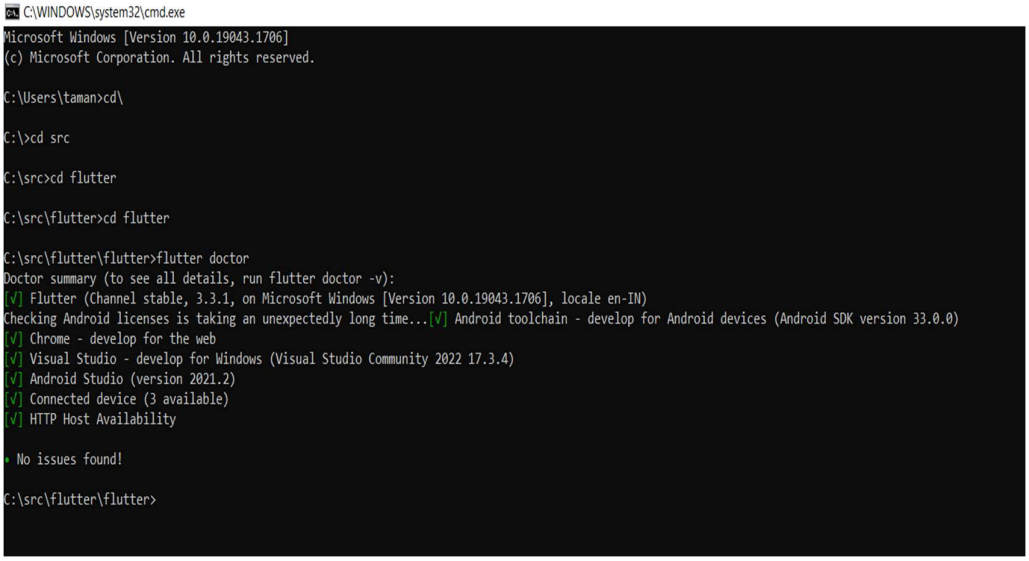


Figure 1: CMD INTEGRATION

STEP 2: INSTALLING THE EXTENSIONS IN VS CODE AND CREATING DEMO CODE.

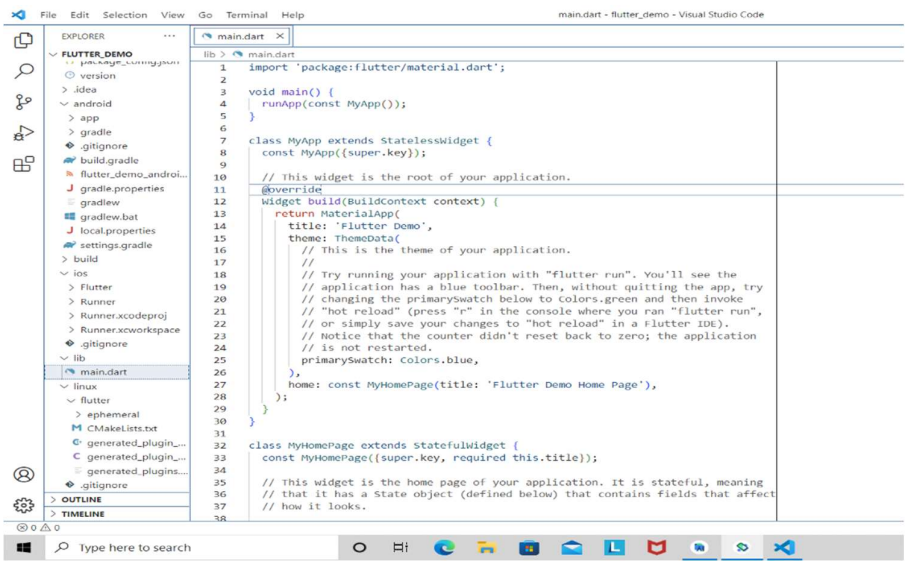


Figure 2: CREATING APP

STEP 3: WORKING ON LOGIN PAGE

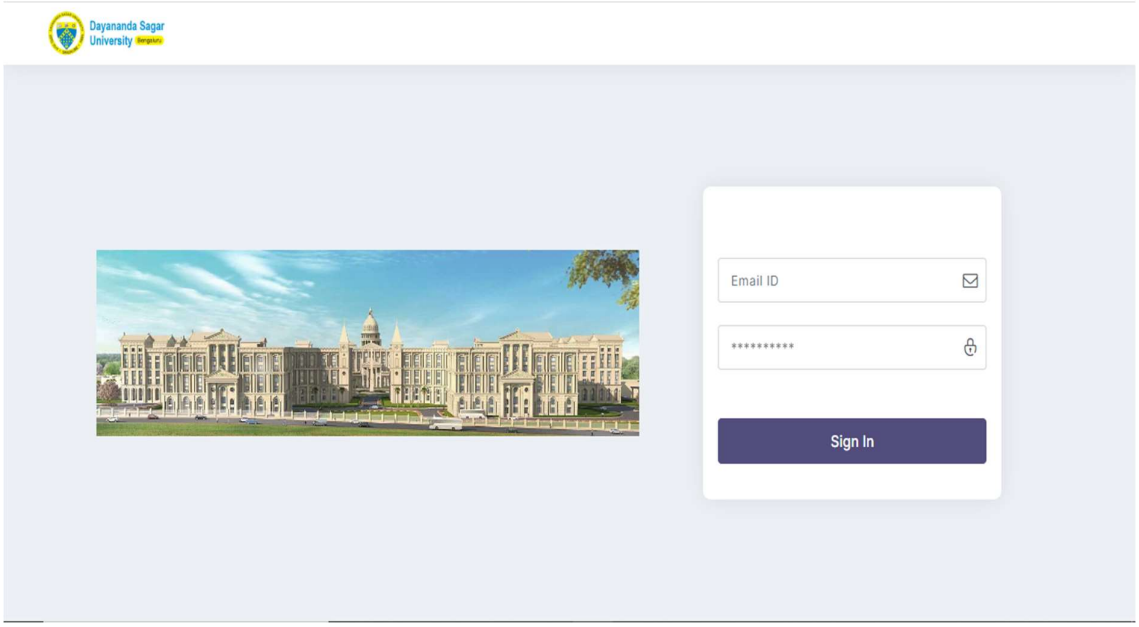
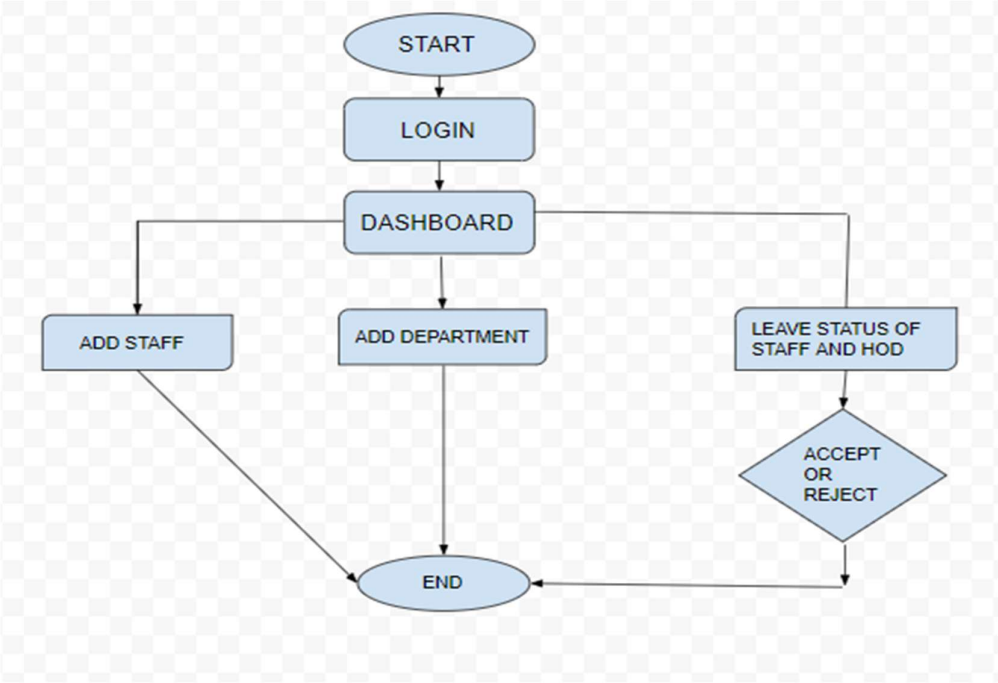
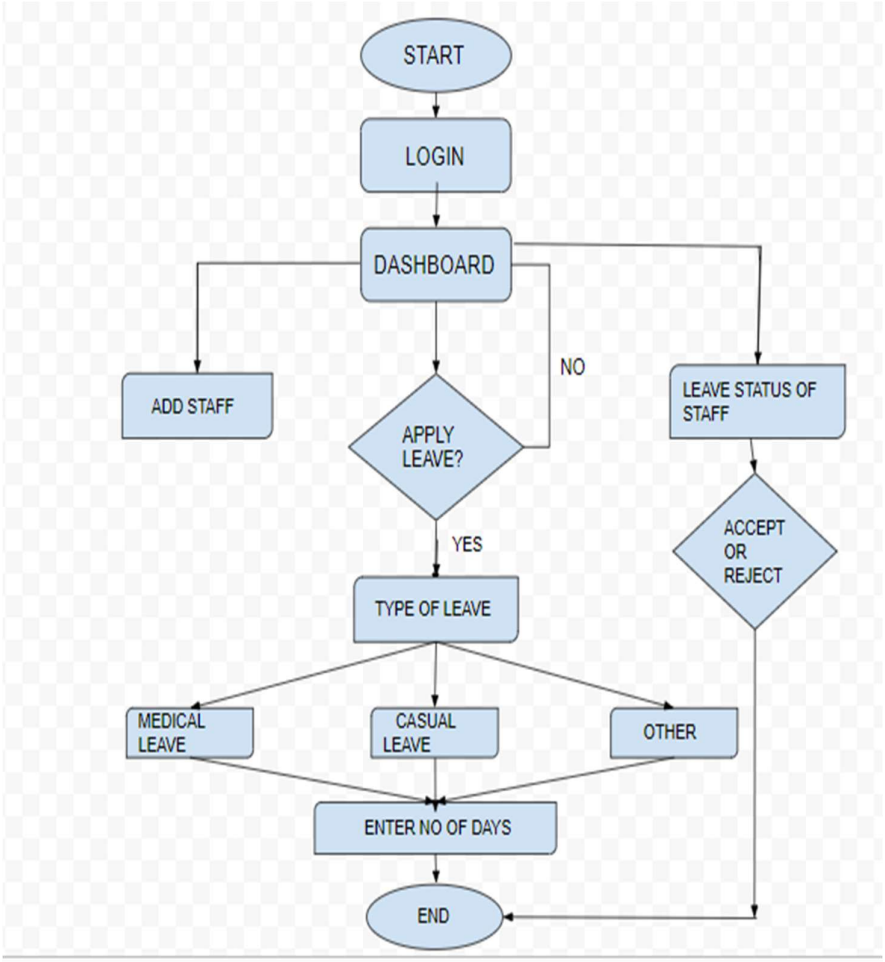


Figure 3:LOGIN PAGE

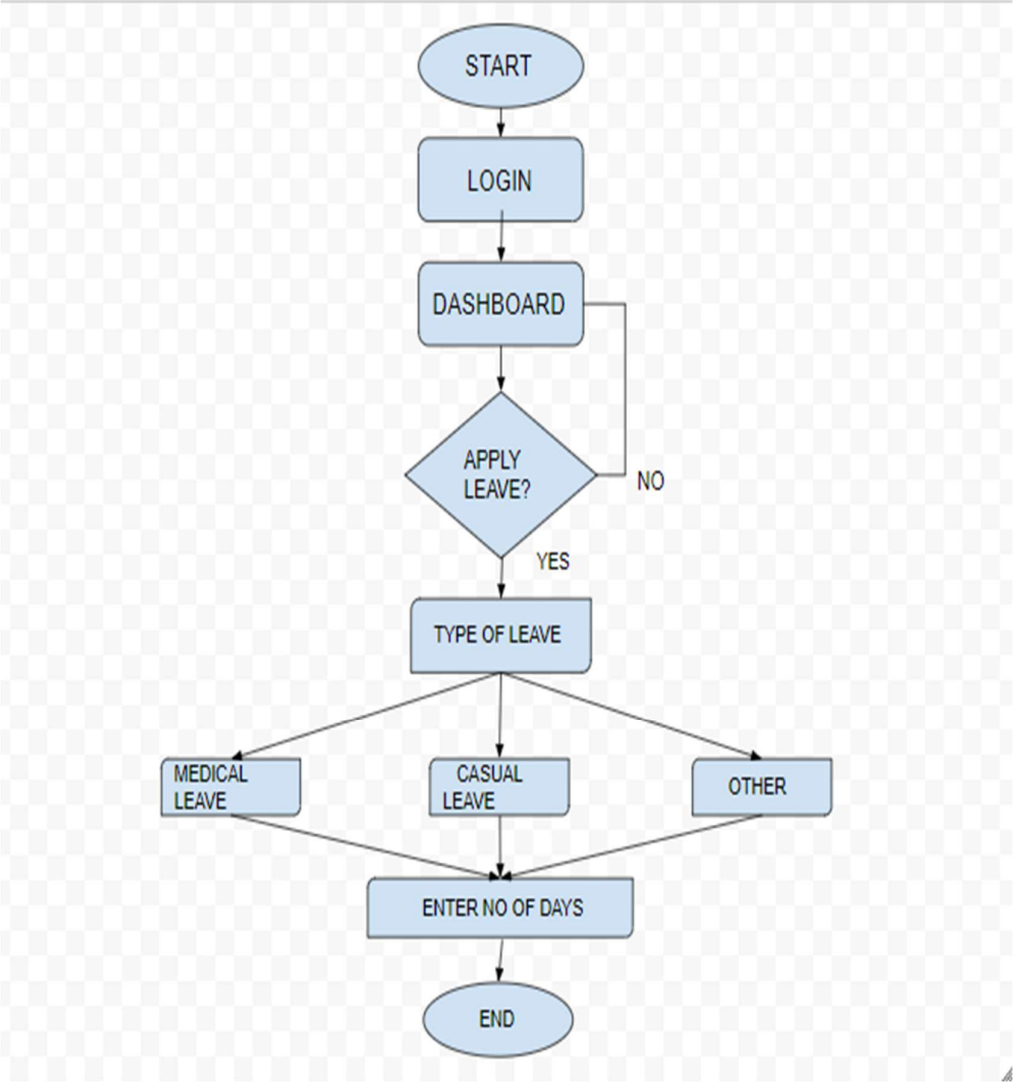
STEP 2: PLANNING DIFFERENT MODULES



FLOWCHAT 1: HOD MODULE



FLOWCHAT 2: DEAN MODULE



FLOWCHAT 3: STAFF MODULE

CHAPTER 7 EXPERIMENTATION

```
// @dart=2.9
import 'package:flutter/material.dart';
import 'package:flutter/services.dart';
// ignore: unused_import
import 'splashscreen.dart';

void main() {
  runApp(const MyApp());
}

class MyApp extends StatelessWidget {
  const MyApp({Key key}) : super(key: key);

  // This widget is the root of your application.
  void initState() {
    SystemChrome.setEnabledSystemUIMode(SystemUiMode.manual, overlays: []);
  }

  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
      title: 'Welcome',
      theme: ThemeData(
        primarySwatch: Colors.blue,
      ),
      home: SplashScreen(),
    );
  }

  // ignore: non_constant_identifier_names
  SplashScreen() {}
}
```

CHAPTER 8 TESTING AND RESULTS

8.1 Apply Leave Page

Lecturers can apply leave providing all the details including number of days, reason of the leave and other details.

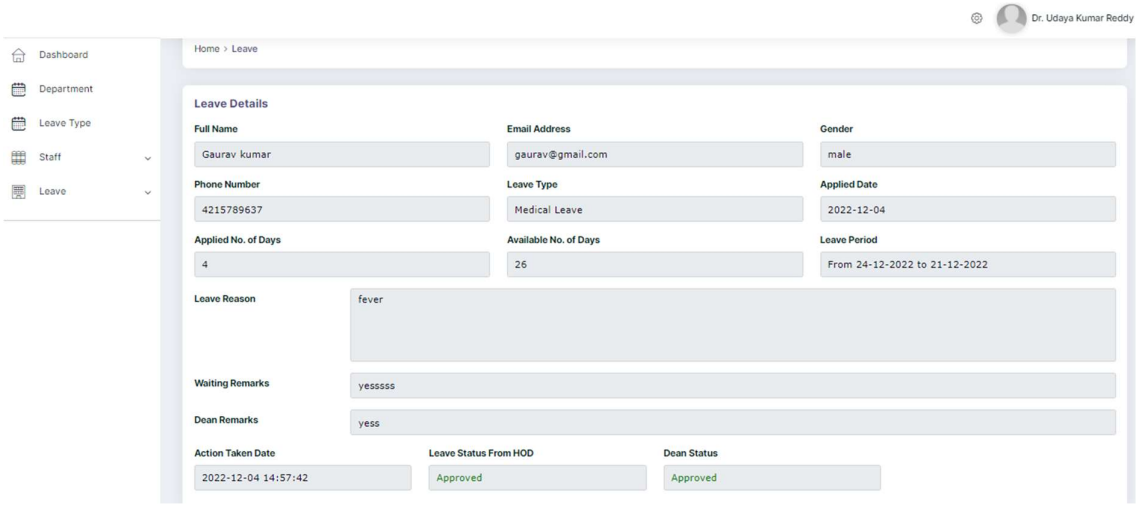


Figure 4: APPLY LEAVE

HOD can view the status of applied leaves, pending leaves and can add/delete staff members.

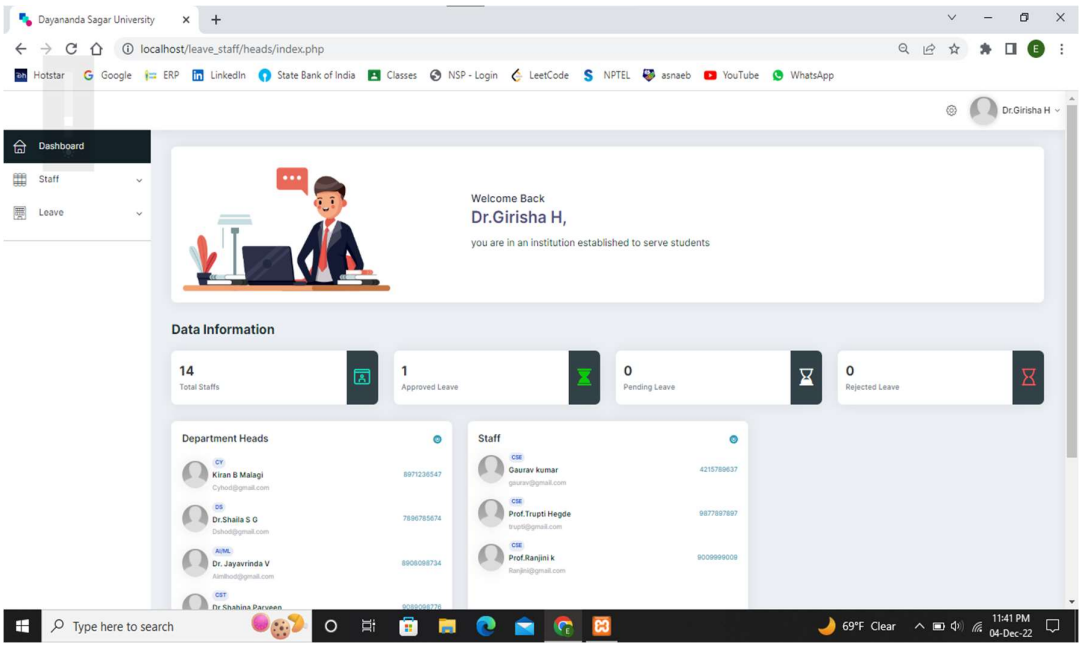


Figure 5: HOD LOGIN

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[3] https://www.mantralabsglobal.com/blog/flutter-framework/
[4] International Journal of Engineering Research & Technology (IJERT)