

Experiment	4
Aim	Develop an app for TPO Office at SPIT
Objective	To Create TPO App using UI Component
	To Develop SideDrawer Navigation
	• To Use 60-30-10 rule
Name	Prabhat Anand Tiwari
UCID	2024510066
Class	FYMCA
Batch	С
Date of	27/02/2025
Submission	

Technology used	Flutter
Task	 Develop an app for TPO with the following requirement (Use side navigation drawer): Registration Form (Name, E-mail id, Contact, Roll no, HSC (Which College, Year of Passing, total, out of, should calculate percentage), SSC marks (Which College, Year of Passing, total, out of, should calculate percentage), Marks in sem 1-5 (CGPA and Percentage), upload Resume, Any Additional Courses). User should be able to view the uploaded Resume. (optional) Company details should be visible to the user. (Name of the company Location, Range of the salary be given for internship/Placement, Short Profile). Student should be able to view their own details.
Code with proper label	<pre>import 'package:flutter/material.dart'; import 'screens/home_screen.dart'; import 'screens/registration_screen.dart'; import 'screens/company_screen.dart'; import 'screens/profile_screen.dart'; import 'screens/resume_screen.dart'; import 'screens/resume_screen.dart'; import 'utils/app_theme.dart';</pre>
	<pre>void main() { runApp(const MyApp()); }</pre>



```
class MyApp extends StatelessWidget {
  const MyApp({super.key});
    return MaterialApp(
      title: 'TPO App',
      themeMode: ThemeMode.system,
      home: const HomeScreen(),
      routes: {
        '/home': (context) => const HomeScreen(),
        '/registration': (context) => const
RegistrationScreen(),
        '/companies': (context) => const CompanyScreen(),
        '/profile': (context) => const ProfileScreen(),
        '/resume': (context) => const ResumeScreen(),
app drawer.dart (/widgets/app drawer.dart)
import 'package:flutter/material.dart';
import '../services/student service.dart';
class AppDrawer extends StatelessWidget {
 const AppDrawer({super.key});
 @override
    return Drawer(
        future: StudentService.isRegistered(),
        builder: (context, snapshot) {
          final isRegistered = snapshot.data ?? false;
          return ListView(
            padding: EdgeInsets.zero,
            children: [
```



```
DrawerHeader(
                  color:
Theme.of(context).colorScheme.primary,
                child: Column(
                  crossAxisAlignment:
CrossAxisAlignment.start,
                  children: [
                    const CircleAvatar(
                      child: Icon(
                        color: Colors.blue,
                    ),
                    const SizedBox(height: 10),
                      style:
Theme.of(context).textTheme.titleLarge?.copyWith(
Theme.of(context).textTheme.bodyMedium?.copyWith(
                            color: Colors.white70,
                          ),
```



```
Navigator.pushReplacementNamed(context,
 /home');
                leading: const
Icon(Icons.app_registration),
                title: const Text('Registration'),
                onTap: () {
 /registration');
                title: const Text('Companies'),
                  Navigator.pushReplacementNamed(context,
                  title: const Text('My Profile'),
                  onTap: () {
Navigator.pushReplacementNamed(context, '/profile');
Navigator.pushReplacementNamed(context, '/resume');
                ),
```



```
home screen.dart (/pages/home screen.dart)
import 'package:flutter/material.dart';
import '../widgets/app_drawer.dart';
import '../services/student service.dart';
class HomeScreen extends StatelessWidget {
  const HomeScreen({super.key});
  @override
    return Scaffold(
      appBar: AppBar(
      drawer: const AppDrawer(),
      body: FutureBuilder<bool>(
        future: StudentService.isRegistered(),
        builder: (context, snapshot) {
          final isRegistered = snapshot.data ?? false;
          return SingleChildScrollView(
            child: Padding(
              padding: const EdgeInsets.all(16.0),
              child: Column(
                crossAxisAlignment:
CrossAxisAlignment.start,
                children: [
                      padding: const
EdgeInsets.all(16.0),
                       child: Column (
                        crossAxisAlignment:
CrossAxisAlignment.start,
                        children: [
```



```
Placement Office',
Theme.of(context).textTheme.headlineSmall,
                          const SizedBox(height: 8),
opportunities',
                            style:
Theme.of(context).textTheme.bodyLarge,
                          const SizedBox(height: 16),
                               onPressed: () {
Navigator.pushNamed(context, '/registration');
                              child: const Text('Register
Now'),
Navigator.pushNamed(context, '/profile');
Profile'),
                    ),
                  const SizedBox(height: 24),
                     'Upcoming Events',
Theme.of(context).textTheme.titleLarge,
                  const SizedBox(height: 16),
                   buildEventCard(
```



```
'Campus Recruitment Drive',
                  const SizedBox(height: 12),
                    'Learn how to create an impressive
resume.',
                  const SizedBox(height: 12),
                  buildEventCard(
                    'Practice your interview skills with
industry experts.',
                  const SizedBox(height: 24)
    );
    String date,
    String description,
```



```
import 'package:flutter/material.dart';
import 'package:file_picker/file_picker.dart';
import '../models/student.dart';
import '../services/student_service.dart';
import '../widgets/app_drawer.dart';

class RegistrationScreen extends StatefulWidget {
   const RegistrationScreen({super.key});

   @override
   State<RegistrationScreen> createState() =>
   _RegistrationScreenState();
}

class _RegistrationScreen> {
   final _formKey = GlobalKey<FormState>();
   final _pageController = PageController();
   int _currentPage = 0;
   String? _resumePath;
   final List<String> _additionalCourses = [];
   final TextEditingController _courseController =
TextEditingController();
```



```
// Personal details
TextEditingController();
TextEditingController();
TextEditingController();
TextEditingController();
 // HSC details
TextEditingController();
TextEditingController();
 final TextEditingController hscTotalMarksController =
     TextEditingController();
 final TextEditingController hscOutOfMarksController =
 // SSC details
 final TextEditingController sscCollegeController =
 final TextEditingController sscTotalMarksController =
 // Semester details
List.generate(
 final List<TextEditingController>
```



```
@override
    hscCollegeController.dispose();
    hscYearController.dispose();
    sscYearController.dispose();
    for (var controller in cgpaControllers) {
      controller.dispose();
    for (var controller in percentageControllers) {
    super.dispose();
  Future<void> pickResume() async {
FilePicker.platform.pickFiles(
      type: FileType.custom,
      allowedExtensions: ['pdf'],
   if (result != null) {
    if ( courseController.text.isNotEmpty) {
```



```
setState(() {
      additionalCourses.removeAt(index);
  Future<void> submitForm() async {
      // Create student object
        name: nameController.text,
          collegeName: hscCollegeController.text,
          yearOfPassing: _hscYearController.text,
          totalMarks:
double.parse( hscTotalMarksController.text),
          outOfMarks:
double.parse(_hscOutOfMarksController.text),
          collegeName: sscCollegeController.text,
          yearOfPassing: sscYearController.text,
          totalMarks:
double.parse( sscTotalMarksController.text),
          outOfMarks:
double.parse( sscOutOfMarksController.text),
        semesters: List.generate(
            cgpa: double.parse( cgpaControllers[i].text),
            percentage:
```



```
double.parse(_percentageControllers[i].text),
     // Save student data
     await StudentService.saveStudent(student);
     // Show success message
     if (mounted) {
         const SnackBar(
            content: Text('Registration successful!'),
           backgroundColor: Colors.green,
/profile');
 @override
   return Scaffold(
     appBar: AppBar(
       title: const Text('Registration'),
     drawer: const AppDrawer(),
       key: formKey,
       child: Column (
         children: [
            // Progress indicator
              backgroundColor: Colors.grey[300],
                Theme.of(context).colorScheme.primary,
```



```
// Page title
              padding: const EdgeInsets.all(16.0),
              child: Row(
MainAxisAlignment.spaceBetween,
                children: [
                    getPageTitle(),
                    style:
Theme.of(context).textTheme.titleLarge,
                    style:
Theme.of(context).textTheme.bodyMedium,
            // Form pages
                onPageChanged: (page) {
                    _currentPage = page;
                physics: const
NeverScrollableScrollPhysics(),
                children: [
                  buildPersonalDetailsPage(),
                  buildHSCDetailsPage(),
                  buildSSCDetailsPage(),
                  buildAdditionalDetailsPage(),
            // Navigation buttons
```



```
Padding(
              padding: const EdgeInsets.all(16.0),
MainAxisAlignment.spaceBetween,
                children: [
                      onPressed: () {
Duration (milliseconds: 300),
                          curve: Curves.easeInOut,
                  else
                    const SizedBox(),
                    onPressed: () {
                        // Validate current page before
proceeding
                            duration: const
Duration(milliseconds: 300),
                             curve: Curves.easeInOut,
                      } else {
                        // Submit form on last page
                        submitForm();
  'Submit'),
```



```
switch ( currentPage) {
 case 0:
    return 'Personal Details';
 case 1:
    return 'HSC Details';
  case 2:
    return 'SSC Details';
 case 3:
    return 'Semester Details';
    return 'Additional Details';
 default:
    return 'Registration';
// Validate specific fields based on current page
  case 0:
  case 1:
    return hscCollegeController.text.isNotEmpty &&
  case 2:
        sscYearController.text.isNotEmpty &&
  case 3:
```



```
// Check if all semester fields are filled
        if (cgpaControllers[i].text.isEmpty ||
            percentageControllers[i].text.isEmpty) {
         break;
      return allFilled;
    case 4:
      // Resume is optional, so always return true
      return true;
    default:
      return false;
Widget buildPersonalDetailsPage() {
  return SingleChildScrollView(
    padding: const EdgeInsets.all(16.0),
    child: Column(
      children: [
        TextFormField(
          decoration: const InputDecoration(
            prefixIcon: Icon(Icons.person),
              return 'Please enter your name';
            return null;
        const SizedBox(height: 16),
            labelText: 'Email ID',
```



```
prefixIcon: Icon(Icons.email),
            keyboardType: TextInputType.emailAddress,
              if (value == null || value.isEmpty) {
                return 'Please enter your email';
                return 'Please enter a valid email';
              return null;
          const SizedBox(height: 16),
          TextFormField(
            decoration: const InputDecoration(
              labelText: 'Contact Number',
            keyboardType: TextInputType.phone,
              if (value == null || value.isEmpty) {
                return 'Please enter your contact
number';
              return null;
          const SizedBox(height: 16),
          TextFormField(
              labelText: 'Roll Number',
              prefixIcon: Icon(Icons.numbers),
              if (value == null || value.isEmpty) {
                return 'Please enter your roll number';
              return null;
```



```
return SingleChildScrollView(
  padding: const EdgeInsets.all(16.0),
 child: Column (
    crossAxisAlignment: CrossAxisAlignment.start,
    children: [
        controller: hscCollegeController,
        decoration: const InputDecoration(
          labelText: 'College Name',
          prefixIcon: Icon(Icons.school),
        ),
          if (value == null || value.isEmpty) {
            return 'Please enter your college name';
          return null;
      const SizedBox(height: 16),
      TextFormField(
        decoration: const InputDecoration(
          prefixIcon: Icon(Icons.calendar today),
        keyboardType: TextInputType.number,
          if (value == null || value.isEmpty) {
            return 'Please enter year of passing';
          return null;
      const SizedBox(height: 16),
```



```
children: [
        labelText: 'Total Marks',
        prefixIcon: Icon(Icons.score),
      keyboardType: TextInputType.number,
        if (value == null || value.isEmpty)
          return 'Required';
        return null;
      onChanged: (value) {
  const SizedBox(width: 16),
    child: TextFormField(
      decoration: const InputDecoration(
        labelText: 'Out of Marks',
        prefixIcon: Icon(Icons.score),
      keyboardType: TextInputType.number,
        if (value == null || value.isEmpty)
          return 'Required';
        return null;
      onChanged: (value) {
```



```
const SizedBox(height: 16),
          // Percentage calculation
              child: Padding(
                padding: const EdgeInsets.all(16.0),
                child: Row(
                  mainAxisAlignment:
MainAxisAlignment.spaceBetween,
                  children: [
                    const Text('Percentage:'),
double.parse( hscOutOfMarksController.text) *
100).toStringAsFixed(2)}%',
                      style: const TextStyle(
                         fontSize: 16,
    return SingleChildScrollView(
      padding: const EdgeInsets.all(16.0),
      child: Column(
        children: [
          TextFormField(
            decoration: const InputDecoration(
              labelText: 'School Name',
              prefixIcon: Icon(Icons.school),
```



```
if (value == null || value.isEmpty) {
      return 'Please enter your school name';
    return null;
const SizedBox(height: 16),
TextFormField(
    labelText: 'Year of Passing',
    prefixIcon: Icon(Icons.calendar today),
  keyboardType: TextInputType.number,
    if (value == null || value.isEmpty) {
      return 'Please enter year of passing';
    return null;
const SizedBox(height: 16),
  children: [
          labelText: 'Total Marks',
        keyboardType: TextInputType.number,
            return 'Required';
          return null;
        onChanged: (value) {
```



```
const SizedBox(width: 16),
                child: TextFormField(
                  decoration: const InputDecoration(
                    labelText: 'Out of Marks',
                    prefixIcon: Icon(Icons.score),
                  keyboardType: TextInputType.number,
                    if (value == null || value.isEmpty)
                      return 'Required';
                    return null;
          ),
          const SizedBox(height: 16),
          // Percentage calculation
                padding: const EdgeInsets.all(16.0),
                child: Row(
MainAxisAlignment.spaceBetween,
                  children: [
                    const Text('Percentage:'),
double.parse( sscOutOfMarksController.text) *
100).toStringAsFixed(2)}%',
```



```
style: const TextStyle(
    return SingleChildScrollView(
      padding: const EdgeInsets.all(16.0),
      child: Column(
        children: [
              child: Padding(
                padding: const EdgeInsets.all(16.0),
                child: Column(
                  crossAxisAlignment:
CrossAxisAlignment.start,
                  children: [
Theme.of(context).textTheme.titleMedium,
                    ),
                    const SizedBox(height: 16),
                    Row (
                      children: [
                          child: TextFormField(
                            controller:
                            decoration: const
```



```
labelText: 'CGPA',
                               prefixIcon:
Icon(Icons.grade),
                             keyboardType:
TextInputType.number,
value.isEmpty) {
                                 return 'Required';
                               return null;
                           ),
                           child: TextFormField(
                             controller:
                             decoration: const
InputDecoration(
                               labelText: 'Percentage',
Icon(Icons.percent),
                             keyboardType:
TextInputType.number,
                             validator: (value) {
                              if (value == null ||
value.isEmpty) {
                                 return 'Required';
                               return null;
```



```
const SizedBox(height: 16),
    return SingleChildScrollView(
      padding: const EdgeInsets.all(16.0),
      child: Column (
        children: [
          // Resume upload
              padding: const EdgeInsets.all(16.0),
              child: Column(
                crossAxisAlignment:
Theme.of(context).textTheme.titleMedium,
                  const SizedBox(height: 8),
                  const Text(
                    'Upload your resume in PDF format',
                    style: TextStyle(color: Colors.grey),
                  const SizedBox(height: 16),
                    children: [
                        child: Text(
selected',
                            color: resumePath != null
```



```
: Colors.grey,
                          ),
                          overflow:
TextOverflow.ellipsis,
                        onPressed: pickResume,
                        icon: const
Icon(Icons.upload_file),
          const SizedBox(height: 24),
          // Additional courses
              padding: const EdgeInsets.all(16.0),
              child: Column (
                crossAxisAlignment:
CrossAxisAlignment.start,
Theme.of(context).textTheme.titleMedium,
                  const SizedBox(height: 16),
                    children: [
                        child: TextFormField(
                          decoration: const
InputDecoration(
```



```
hintText: 'e.g. Web
Development',
                            prefixIcon: Icon(Icons.book),
                        icon: const
Icon(Icons.add circle),
                        color:
Theme.of(context).colorScheme.primary,
                  const SizedBox(height: 16),
                    const Text('Added Courses:'),
                    const SizedBox(height: 8),
                    ListView.builder(
                      shrinkWrap: true,
                      physics: const
NeverScrollableScrollPhysics(),
                      itemCount:
                      itemBuilder: (context, index) {
                           leading: const
Icon(Icons.book),
                           title:
Text( additionalCourses[index]),
                             icon: const
Icon(Icons.delete, color: Colors.red),
                            onPressed: () =>
 removeCourse(index),
                          ),
```



```
profile_screen.dart ( /pages/profile_screen.dart)
       'package:flutter/material.dart';
import '../models/student.dart';
import '../services/student service.dart';
import '../widgets/app_drawer.dart';
class ProfileScreen extends StatelessWidget {
  const ProfileScreen({super.key});
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: const Text('My Profile'),
      ),
      drawer: const AppDrawer(),
      body: FutureBuilder<Student?>(
        future: StudentService.getStudent(),
        builder: (context, snapshot) {
          if (snapshot.connectionState ==
ConnectionState.waiting) {
            return const Center(
              child: CircularProgressIndicator(),
            );
          if (snapshot.hasError) {
            return Center (
              child: Text('Error: ${snapshot.error}'),
            );
```



```
final student = snapshot.data;
          if (student == null) {
            return Center (
              child: Column (
                mainAxisAlignment:
MainAxisAlignment.center,
                children: [
                  const Text('You have not registered
yet.'),
                  const SizedBox(height: 16),
                  ElevatedButton(
                    onPressed: () {
Navigator.pushReplacementNamed(context, '/registration');
                    },
                    child: const Text('Register Now'),
                  ),
                ],
              ),
            );
          return SingleChildScrollView(
            padding: const EdgeInsets.all(16),
            child: Column (
              crossAxisAlignment:
CrossAxisAlignment.start,
              children: [
                // Personal Information
                buildSection(
                  context,
                   'Personal Information',
                  Icons.person,
                    buildInfoRow('Name', student.name),
                    buildInfoRow('Email',
student.email),
                    buildInfoRow('Contact',
 student.contact) ,
                    buildInfoRow('Roll Number',
 tudent.rollNumber),
```



```
],
                ),
                const SizedBox(height: 16),
                // HSC Details
                buildSection(
                  context,
                  'HSC Details',
                  Icons.school,
                    buildInfoRow('College',
tudent.hsc.collegeName),
                    buildInfoRow('Year of Passing',
student.hsc.yearOfPassing),
                    buildInfoRow(
                      'Marks',
                      '${student.hsc.totalMarks} /
${student.hsc.outOfMarks}',
                    ),
                    buildInfoRow(
                      'Percentage',
${student.hsc.percentage.toStringAsFixed(2)}%',
                const SizedBox(height: 16),
                // SSC Details
                buildSection(
                  context,
                  'SSC Details',
                  Icons.school,
                    buildInfoRow('School',
student.ssc.collegeName),
                    buildInfoRow('Year of Passing',
student.ssc.yearOfPassing),
                    buildInfoRow(
                      'Marks',
                      '${student.ssc.totalMarks} /
${student.ssc.outOfMarks}',
```



```
),
                   buildInfoRow(
                      'Percentage',
${student.ssc.percentage.toStringAsFixed(2)}%',
                   ),
                 1,
               ),
               const SizedBox(height: 16),
               // Semester Details
               buildSection(
                 context,
                 'Semester Details',
                 Icons.grade,
                 List.generate(
                   student.semesters.length,
                    (i) => buildInfoRow(
                      'Semester ${i + 1}',
                      'CGPA: ${student.semesters[i].cgpa}
 Percentage: ${student.semesters[i].percentage}%',
                   ),
                 ),
               const SizedBox(height: 16),
               // Additional Courses
               if (student.additionalCourses.isNotEmpty)
                 buildSection(
                   context,
                    'Additional Courses',
                   Icons.book,
                   student.additionalCourses
                        .map((course) =>
buildInfoRow('•', course))
                        .toList(),
               const SizedBox(height: 16),
               // Resume
               if (student.resumePath != null)
                  buildSection(
```



```
context,
                     'Resume',
                    Icons.description,
                       buildInfoRow('File', 'Resume
uploaded'),
                      const SizedBox(height: 8),
                      ElevatedButton.icon(
                         onPressed: () {
                           Navigator.pushNamed(context,
 /resume');
                         },
                         icon: const
Icon(Icons.visibility),
                         label: const Text('View Resume'),
                      ),
                    ],
                  ),
                const SizedBox(height: 16),
                // Edit button
                Center (
                  child: ElevatedButton.icon(
                    onPressed: () {
Navigator.pushReplacementNamed(context, '/registration');
                     },
                    icon: const Icon(Icons.edit),
                    label: const Text('Edit Profile'),
                  ),
                ),
          );
        },
      ),
    );
  Widget buildSection(
    BuildContext context,
    String title,
```



```
IconData icon,
    List<Widget> children,
    return Card(
      child: Padding(
        padding: const EdgeInsets.all(16),
        child: Column(
          crossAxisAlignment: CrossAxisAlignment.start,
          children: [
            Row (
              children: [
                Icon (
                  icon,
                  color:
Theme.of(context).colorScheme.primary,
                ),
                const SizedBox(width: 8),
                Text(
                  title,
                  style:
Theme.of(context).textTheme.titleMedium?.copyWith(
                        fontWeight: FontWeight.bold,
              ],
            ),
            const Divider(),
            ...children,
          ],
      ),
    );
  Widget buildInfoRow(String label, String value) {
    return Padding(
      padding: const EdgeInsets.symmetric(vertical: 4),
      child: Row(
        crossAxisAlignment: CrossAxisAlignment.start,
        children: [
          SizedBox(
            width: 100,
```



(Autonomous Institute Affiliated to University of Mumbai) Munshi Nagar, Andheri (W), Mumbai – 400 058. Department of Computer Science and Engineering

resume_screen.dart (/pages/resume_screen.dart)

```
import 'package:flutter/material.dart';
import 'package:flutter pdfview/flutter pdfview.dart';
import '../services/student service.dart';
import '../widgets/app drawer.dart';
class ResumeScreen extends StatelessWidget {
  const ResumeScreen({super.key});
  @override
    return Scaffold(
      appBar: AppBar(
        title: const Text('My Resume'),
      body: FutureBuilder<String?>(
        future: getResumePath(),
        builder: (context, snapshot) {
          if (snapshot.connectionState ==
ConnectionState.waiting) {
            return const Center(
```



```
if (snapshot.hasError) {
            return Center(
              child: Text('Error: ${snapshot.error}'),
          final resumePath = snapshot.data;
          if (resumePath == null) {
            return Center(
              child: Column (
MainAxisAlignment.center,
                children: [
                  const Icon(
                    size: 64,
                  const SizedBox(height: 16),
                  const Text('No resume uploaded yet.'),
                  const SizedBox(height: 16),
                    onPressed: () {
Navigator.pushReplacementNamed(context, '/registration');
                    child: const Text('Upload Resume'),
          return PDFView(
            filePath: resumePath,
            enableSwipe: true,
            swipeHorizontal: false,
            autoSpacing: true,
            pageFling: true,
            pageSnap: true,
```



```
defaultPage: 0,
            fitPolicy: FitPolicy.BOTH,
            preventLinkNavigation: false,
            onRender: ( pages) {
              // Handle error
                  content: Text('Error: $error'),
            onPageError: (page, error) {
              // Handle page error
              ScaffoldMessenger.of(context).showSnackBar(
                  content: Text ('Error on page $page:
$error'),
  Future<String?> _getResumePath() async {
    final student = await StudentService.getStudent();
    return student?.resumePath;
company service.dart (/services/company service.dart)
import '../models/company.dart';
class CompanyService {
  // Mock data for companies
```



```
static List<Company> getMockCompanies() {
    return [
      Company (
        name: 'Google',
        location: 'Bangalore, India',
        salaryRange: '₹12-18 LPA',
       profile:
            'Google is a multinational technology company
specializing in Internet-related services and products.',
        logoUrl:
https://www.google.com/images/branding/googlelogo/2x/goo
glelogo color 272x92dp.png',
      ),
      Company (
        name: 'Microsoft',
        location: 'Hyderabad, India',
        salaryRange: '₹10-16 LPA',
       profile:
            'Microsoft Corporation is an American
multinational technology company that develops,
manufactures, licenses, supports, and sells computer
software, consumer electronics, and personal computers.',
        logoUrl:
'https://img-prod-cms-rt-microsoft-com.akamaized.net/cms/
api/am/imageFileData/RE1Mu3b?ver=5c31',
      ),
      Company (
        name: 'Amazon',
        location: 'Pune, India',
        salaryRange: '₹11-17 LPA',
       profile:
            'Amazon.com, Inc. is an American
multinational technology company focusing on e-commerce,
cloud computing, digital streaming, and artificial
intelligence.',
        logoUrl:
'https://upload.wikimedia.org/wikipedia/commons/thumb/a/a
9/Amazon logo.svg/1024px-Amazon logo.svg.png',
```



```
Company (
        name: 'Infosys',
        location: 'Chennai, India',
        salaryRange: '₹4-7 LPA',
        profile:
            'Infosys Limited is an Indian multinational
information technology company that provides business
consulting, information technology and outsourcing
services.',
        logoUrl:
https://www.infosys.com/content/dam/infosys-web/en/globa
l-resource/media-resources/infosys-logo.jpg',
      ),
      Company (
        name: 'TCS',
        location: 'Mumbai, India',
        salaryRange: '₹3.5-6.5 LPA',
        profile:
            'Tata Consultancy Services Limited is an
Indian multinational information technology services and
consulting company.',
        logoUrl:
'https://www.tcs.com/content/dam/tcs/images/Newtcslogo/tc
s-logo-tata-blue-1x-dec2021.png',
      ),
    ];
  // Get all companies
  static Future<List<Company>> getCompanies() async {
    // In a real app, this would fetch from an API
    return getMockCompanies();
student service.dart (/services/student services.dart)
import 'dart:convert';
import
 package:shared preferences/shared preferences.dart';
```



```
import '../models/student.dart';
class StudentService {
  static const String _storageKey = 'student_profile';
  // Save student data
  static Future<void> saveStudent(Student student) async
    final prefs = await SharedPreferences.getInstance();
    final studentJson = jsonEncode(student.toJson());
    await prefs.setString( storageKey, studentJson);
  // Get student data
  static Future<Student?> getStudent() async {
    final prefs = await SharedPreferences.getInstance();
    final studentJson = prefs.getString(_storageKey);
    if (studentJson == null) {
      return null;
    return Student.fromJson(jsonDecode(studentJson));
  // Check if student is registered
  static Future<bool> isRegistered() async {
    final student = await getStudent();
    return student != null;
app theme.dart (utils/app theme.dart)
import 'package:flutter/material.dart';
class AppTheme {
 static final ThemeData lightTheme = ThemeData(
    useMaterial3: true,
    colorScheme: ColorScheme.fromSeed(
      seedColor: Colors.blue,
      brightness: Brightness.light,
```



```
appBarTheme: const AppBarTheme(
    centerTitle: true,
    elevation: 0,
  cardTheme: CardTheme(
    elevation: 2,
    shape: RoundedRectangleBorder(
      borderRadius: BorderRadius.circular(12),
    ),
  ),
  inputDecorationTheme: InputDecorationTheme(
    border: OutlineInputBorder(
      borderRadius: BorderRadius.circular(8),
    ),
    filled: true,
    contentPadding: const EdgeInsets.all(16),
);
static final ThemeData darkTheme = ThemeData(
 useMaterial3: true,
  colorScheme: ColorScheme.fromSeed(
    seedColor: Colors.blue,
   brightness: Brightness.dark,
  appBarTheme: const AppBarTheme(
    centerTitle: true,
    elevation: 0,
  cardTheme: CardTheme(
    elevation: 2,
    shape: RoundedRectangleBorder(
      borderRadius: BorderRadius.circular(12),
    ),
  ),
  inputDecorationTheme: InputDecorationTheme(
    border: OutlineInputBorder(
      borderRadius: BorderRadius.circular(8),
    ),
    filled: true,
    contentPadding: const EdgeInsets.all(16),
```



```
);
company.dart (/models/company.dart)
class Company {
  final String name;
  final String location;
  final String salaryRange;
  final String profile;
  final String logoUrl;
  Company ({
    required this.name,
    required this.location,
    required this.salaryRange,
    required this.profile,
    required this.logoUrl,
  });
  factory Company.fromJson(Map<String, dynamic> json) {
    return Company(
      name: json['name'],
      location: json['location'],
      salaryRange: json['salaryRange'],
      profile: json['profile'],
      logoUrl: json['logoUrl'],
    );
student.dart (/models/student.dart)
class Student {
  final String name;
  final String email;
  final String contact;
  final String rollNumber;
  final EducationDetails hsc;
  final EducationDetails ssc;
```



```
final List<SemesterDetails> semesters;
  final String? resumePath;
  final List<String> additionalCourses;
  Student({
    required this.name,
    required this.email,
    required this.contact,
    required this.rollNumber,
    required this.hsc,
    required this.ssc,
    required this.semesters,
    this.resumePath,
    required this.additionalCourses,
  });
  factory Student.empty() {
    return Student(
      name: '',
      email: '',
      contact: '',
      rollNumber: '',
      hsc: EducationDetails.empty(),
      ssc: EducationDetails.empty(),
      semesters: List.generate(5, ( ) =>
SemesterDetails.empty()),
      resumePath: null,
      additionalCourses: [],
    );
 Map<String, dynamic> toJson() {
    return {
      'name': name,
      'email': email,
      'contact': contact,
      'rollNumber': rollNumber,
      'hsc': hsc.toJson(),
      'ssc': ssc.toJson(),
      'semesters': semesters.map((s) =>
 .toJson()).toList(),
```



```
'resumePath': resumePath,
      'additionalCourses': additionalCourses,
  factory Student.fromJson(Map<String, dynamic> json) {
    return Student(
      name: json['name'],
      email: json['email'],
      contact: json['contact'],
      rollNumber: json['rollNumber'],
      hsc: EducationDetails.fromJson(json['hsc']),
      ssc: EducationDetails.fromJson(json['ssc']),
      semesters: (json['semesters'] as List)
          .map((s) => SemesterDetails.fromJson(s))
          .toList(),
      resumePath: json['resumePath'],
      additionalCourses:
List<String>.from(json['additionalCourses']),
    );
class EducationDetails {
  final String collegeName;
  final String yearOfPassing;
  final double totalMarks;
  final double outOfMarks;
 EducationDetails({
    required this.collegeName,
    required this.yearOfPassing,
    required this.totalMarks,
    required this.outOfMarks,
  });
  factory EducationDetails.empty() {
    return EducationDetails(
      collegeName: '',
      yearOfPassing: '',
      totalMarks: 0,
      outOfMarks: 0,
```

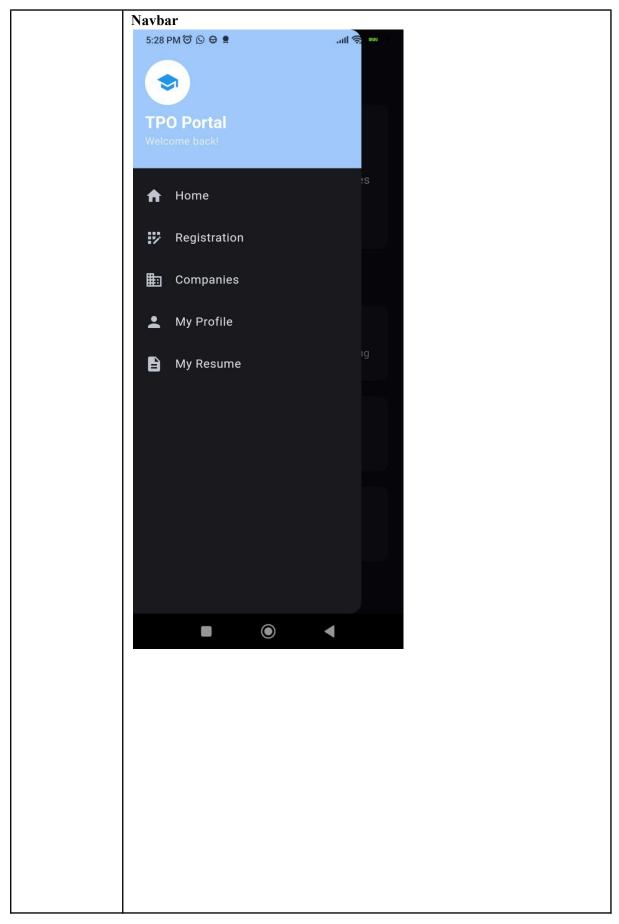


```
);
 double get percentage => outOfMarks > 0 ? (totalMarks
outOfMarks) * 100 : 0;
 Map<String, dynamic> toJson() {
    return {
      'collegeName': collegeName,
      'yearOfPassing': yearOfPassing,
      'totalMarks': totalMarks,
      'outOfMarks': outOfMarks,
    };
  factory EducationDetails.fromJson(Map<String, dynamic>
    return EducationDetails(
      collegeName: json['collegeName'],
      yearOfPassing: json['yearOfPassing'],
      totalMarks: json['totalMarks'],
      outOfMarks: json['outOfMarks'],
    );
class SemesterDetails {
 final double cgpa;
  final double percentage;
 SemesterDetails({
   required this.cgpa,
    required this.percentage,
  });
  factory SemesterDetails.empty() {
    return SemesterDetails(
      cgpa: 0,
      percentage: 0,
    );
```

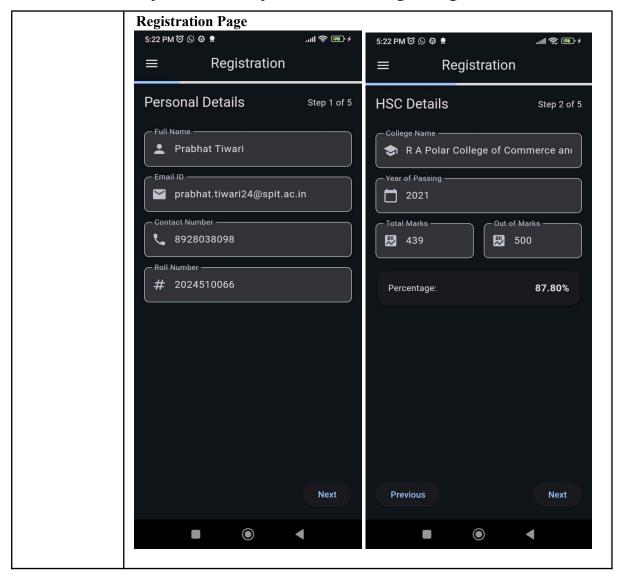


```
Map<String, dynamic> toJson() {
                       return {
                          'cgpa': cgpa,
                          'percentage': percentage,
                        };
                    factory SemesterDetails.fromJson(Map<String, dynamic>
                  json) {
                       return SemesterDetails(
                          cgpa: json['cgpa'],
                          percentage: json['percentage'],
                       );
Screenshots
                  Home Page
                    5:28 PM 🏵 🕒 🕏 🙎
                             TPO Portal
                     Welcome to Training &
                     Placement Office
                     Your gateway to career opportunities
                       View Profile
                   Upcoming Events
                     Campus Recruitment Drive
                         May 15, 2023
                         Major tech companies will be visiting
                     Resume Building Workshop
                         May 10, 2023
                     Mock Interview Session
                         industry experts.
                          \odot
                                       •
```

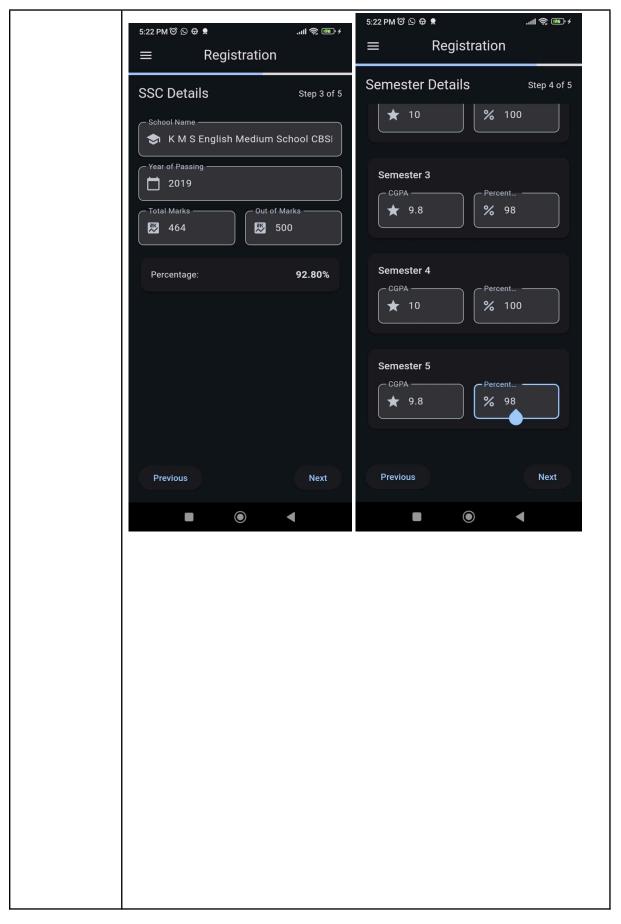




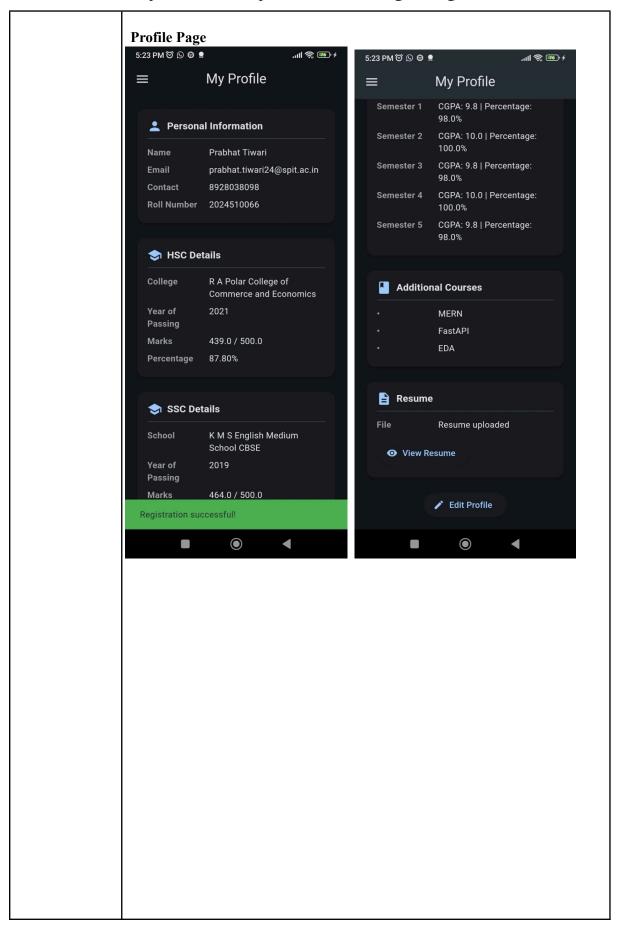




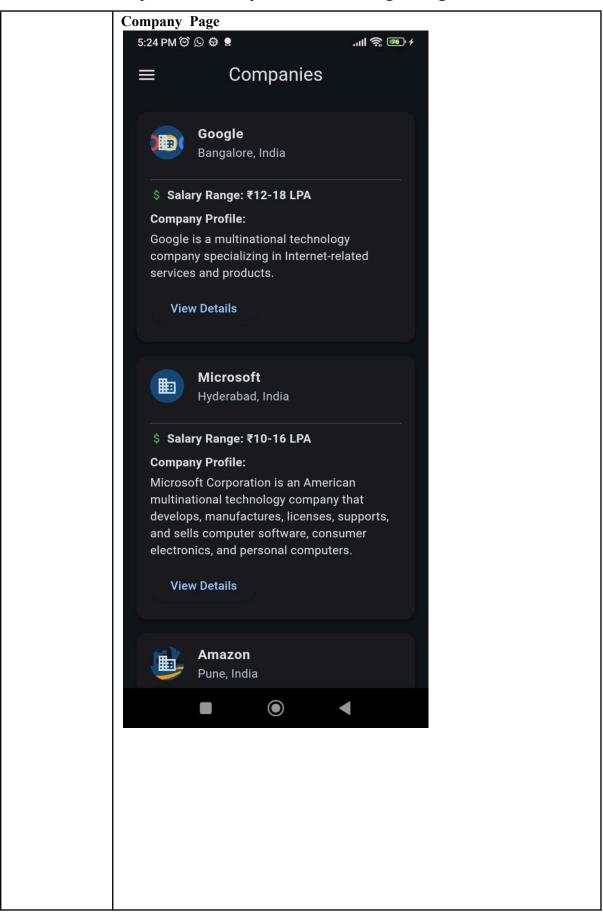




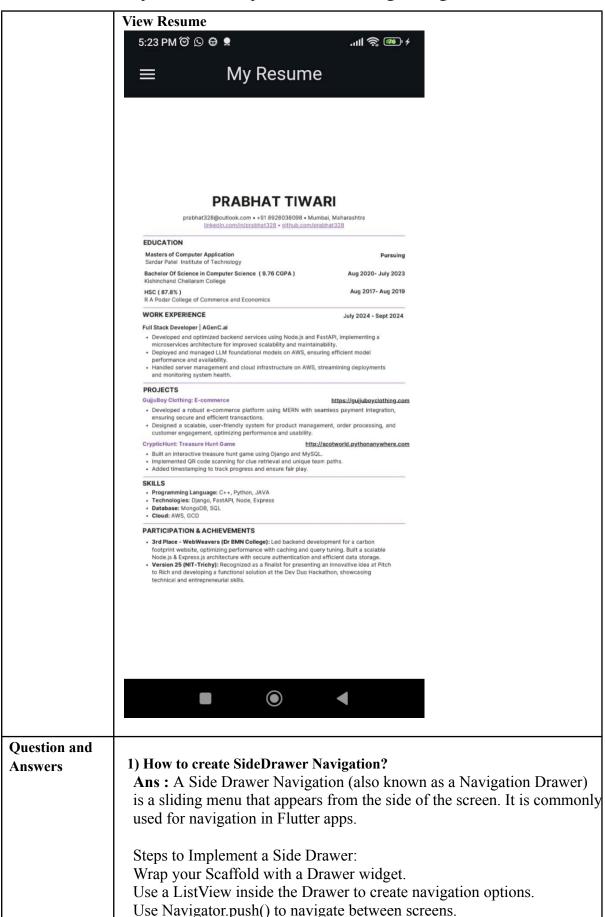














(Autonomous Institute Affiliated to University of Mumbai) Munshi Nagar, Andheri (W), Mumbai – 400 058. Department of Computer Science and Engineering

2) How did you use the 60-30-10 rule in your application?

Ans : The ColorScheme.fromSeed forms the 60% primary color of the UI, with blue as the dominant color, adapting dynamically for both light and dark modes. This ensures a visually appealing and cohesive look while maintaining the 60-30-10 color rule.

The secondary color (30%) is applied to UI elements such as cards, input fields, and the app bar, creating contrast against the primary background while maintaining harmony within the theme.

The accent color (10%) is used for buttons, highlights, and icons, ensuring key interactions stand out. Further refinement can be achieved by explicitly defining accent colors in button themes or using a specific highlight color for elevated actions.

3) Which new elements did you use for creating UI components?

Ans: For an interactive and well-structured UI, I used BottomNavigationBar for screen switching and Drawer for side navigation. The AppBar provides easy access to the title and actions. Card displays product details, while ListView.builder efficiently handles dynamic content. Additionally, ElevatedButton is used for actions, and a Gradient Background enhances aesthetics.

Conclusion

The TPO App provides a structured and interactive platform for students to manage their academic and placement-related information efficiently. With a side navigation drawer, users can seamlessly navigate through different sections, including registration, resume upload, and company details. The app ensures a smooth user experience by allowing students to view their personal details, uploaded resumes, and company opportunities. By integrating a well-designed UI with the 60-30-10 color rule, the app enhances usability and engagement, making it a valuable tool for both students and placement coordinators.