Bharatiya Vidya Bhavan's
SARDAR PATEL INSTITUTE OF TECHNOLOGY
(Autonomous Institute Affiliated to University of Mumbai) Munshi Nagar, Andheri (W), Mumbai – 400

Experiment	5
Aim	Create an app for MCA department using side and tabs navigation
Objective	● To Create MCA App using UI Component ● To Develop SideDrawer and Tabs Navigation in one application ● To Use 60-30-10 rule ● To Use Webview concept ● To Use Expandable Card View Concept
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Technology used	**FLUTTER**
Task	Create an app for MCA department using side and tabs navigation consisting of the following: 1) Faculty information with Expandable Card view 2) Department Vision and Mission with expandable Card view 3) Notification of any upcoming event (links to the website). 4) WebView 5) Feedback form along with rating

Code with proper label	**Main.dart**
	import 'package:flutter/material.dart';
	import 'package:flutter/services.dart';
	import 'screens/splash_screen.dart';
	import 'theme/app_theme.dart';
	
	void main() {
	WidgetsFlutterBinding.ensureInitialized();
	SystemChrome.setPreferredOrientations([
	DeviceOrientation.portraitUp,
	DeviceOrientation.portraitDown,
	]);
	runApp(const MyApp());
	}
	
	class MyApp extends StatelessWidget {
	const MyApp({Key? key}) : super(key: key);
	
	@override
	Widget build(BuildContext context) {
	return MaterialApp(
	title: 'MCA Department App',
	debugShowCheckedModeBanner: false,
	theme: AppTheme.lightTheme,

```
      home: const SplashScreen(),
    );
  }
}
```

Faculty.dart

```
import 'package:flutter/material.dart';

class Faculty {
  final String name;
  final String designation;
  final String qualification;
  final String experience;
  final String specialization;
  final String email;
  final String imageUrl;

  Faculty({
    required this.name,
    required this.designation,
    required this.qualification,
    required this.experience,
    required this.specialization,
    required this.email,
    required this.imageUrl,
  });
}

final List<Faculty> facultyList = [
  Faculty(
    name: 'Dr. Dhananjay Kalbande',
    designation: 'Professor & Dean (Industry Relations)',
    qualification: 'Ph.D. (Computer Engineering), M.E. (Computer Engineering)',
    experience: '20+ years of teaching and research experience',
    specialization: 'Artificial Intelligence, Machine Learning, Data Science',
    email: 'drkalbande@spit.ac.in',
    imageUrl: 'assets/asset 2.jpeg',
  ),
  Faculty(
    name: 'Dr. Pooja Raundale',
    designation: 'Associate Professor & MCA Coordinator',
    qualification: 'Ph.D. (Computer Science), M.Tech (Computer Engineering)',
    experience: '15+ years of teaching experience',
    specialization: 'Database Systems, Data Mining, Big Data Analytics',
    email: 'pooja.raundale@spit.ac.in',
    imageUrl: 'assets/asset 3.jpeg',
  ),
  Faculty(
    name: 'Prof. Pallavi Thakur',
    designation: 'Assistant Professor',
    qualification: 'M.E. (Computer Engineering), Pursuing Ph.D.',
    experience: '10+ years of teaching experience',
    specialization: 'Web Technologies, Cloud Computing, IoT',
    email: 'pallavi.thakur@spit.ac.in',
    imageUrl: 'assets/asset 6.png',
```

```
  ),
  Faculty(
    name: 'Prof. Harshil Kanakia',
    designation: 'Assistant Professor',
    qualification: 'M.Tech (Computer Engineering)',
    experience: '8+ years of teaching and industry experience',
    specialization: 'Mobile Application Development, Software Engineering',
    email: 'harshil.kanakia@spit.ac.in',
    imageUrl: 'assets/asset 5.png',
  ),
  Faculty(
    name: 'Prof. Sakina Salmani',
    designation: 'Assistant Professor',
    qualification: 'M.E. Computers (DJSCOE), Pursuing Ph.D. in Computer
(SPIT)',
    experience: '10+ years of teaching experience',
    specialization: 'Network Security, Ethical Hacking, User Experience Design,
Mobile Programming (Android/lonic)',
    email: 'sakina_shaikh@spit.ac.in',
    imageUrl: 'assets/asset 7.png',
  ),
];
```

Notification.dart

```
import 'package:flutter/material.dart';

class NotificationItem {
  final String title;
  final String description;
  final String date;
  final String link;
  final NotificationType type;
  final bool isUrgent;

  NotificationItem({
    required this.title,
    required this.description,
    required this.date,
    this.link = '',
    this.type = NotificationType.general,
    this.isUrgent = false,
  });

  IconData getIcon() {
    switch (type) {
      case NotificationType.event:
        return Icons.event;
      case NotificationType.academic:
        return Icons.school;
      case NotificationType.placement:
        return Icons.work;
      case NotificationType.general:
      default:
        return Icons.notifications;
    }
```

```
  }
}

enum NotificationType {
  general,
  event,
  academic,
  placement,
}

final List<NotificationItem> notificationsList = [
  NotificationItem(
    title: 'MCA Admissions 2023-24',
    description: 'Applications are now open for MCA admissions for the academic
year 2023-24. Last date to apply is June 30, 2023.',
    date: 'May 15, 2023',
    link: 'https://mca.spit.ac.in/admissions',
    type: NotificationType.academic,
    isUrgent: true,
  ),
  NotificationItem(
    title: 'Tech Symposium 2023',
    description: 'Annual technical symposium featuring workshops, hackathons,
and guest lectures from industry experts.',
    date: 'April 10, 2023',
    link: 'https://mca.spit.ac.in/events/techsymposium2023',
    type: NotificationType.event,
  ),
  NotificationItem(
    title: 'Campus Placement Drive',
    description: 'Major IT companies will be visiting campus for recruitment.
Eligible students must register by May 5, 2023.',
    date: 'April 25, 2023',
    link: 'https://mca.spit.ac.in/placements',
    type: NotificationType.placement,
    isUrgent: true,
  ),
  NotificationItem(
    title: 'Workshop on Cloud Computing',
    description: 'Two-day workshop on AWS and Azure cloud services.
Certificates will be provided to all participants.',
    date: 'March 18, 2023',
    link: 'https://mca.spit.ac.in/workshops',
    type: NotificationType.event,
  ),
  NotificationItem(
    title: 'Semester Exam Schedule',
    description: 'The end semester examination for MCA will commence from
June 10, 2023. Detailed schedule is now available.',
    date: 'March 5, 2023',
    link: 'https://mca.spit.ac.in/examinations',
    type: NotificationType.academic,
  ),
  NotificationItem(
    title: 'Alumni Meet 2023',
    description: 'Annual alumni gathering will be held on July 15, 2023. All
```

```
alumni are cordially invited to attend.',
    date: 'February 28, 2023',
    link: 'https://mca.spit.ac.in/alumni',
    type: NotificationType.event,
  ),
];
```

Faculty_screen.dart

```
import 'package:flutter/material.dart';
import 'package:mca_department_app/widgets/app_drawer.dart';
import 'package:mca_department_app/models/faculty.dart';

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

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(title: const Text('Faculty Information')),
      drawer: const AppDrawer(),
      body: ListView.builder(
        padding: const EdgeInsets.all(16.0),
        itemCount: dummyFaculty.length,
        itemBuilder: (context, index) {
          return FacultyCard(faculty: dummyFaculty[index]);
        },
      ),
    );
  }
}

class FacultyCard extends StatefulWidget {
  final Faculty faculty;

  const FacultyCard({Key? key, required this.faculty}) : super(key: key);

  @override
  State<FacultyCard> createState() => _FacultyCardState();
}

class _FacultyCardState extends State<FacultyCard> {
  bool _expanded = false;

  @override
  Widget build(BuildContext context) {
    return Card(
      margin: const EdgeInsets.only(bottom: 16.0),
      elevation: 4.0,
      child: Column(
        children: [
          ListTile(
            leading: CircleAvatar(
              backgroundImage: NetworkImage(widget.faculty.imageUrl),
              radius: 25,
            ),
            title: Text(
```

```
          widget.faculty.name,
          style: const TextStyle(fontWeight: FontWeight.bold),
        ),
        subtitle: Text(widget.faculty.designation),
        trailing: IconButton(
          icon: Icon(_expanded ? Icons.expand_less : Icons.expand_more),
          onPressed: () {
            setState(() {
              _expanded = !_expanded;
            });
          },
        ),
      ),
      if (_expanded)
        Container(
          padding: const EdgeInsets.symmetric(
            horizontal: 16.0,
            vertical: 8.0,
          ),
          child: Column(
            crossAxisAlignment: CrossAxisAlignment.start,
            children: [
              const Divider(),
              _buildInfoRow('Qualification', widget.faculty.qualification),
              _buildInfoRow(
                'Experience',
                '${widget.faculty.experience} years',
              ),
              _buildInfoRow(
                'Specialization',
                widget.faculty.specialization,
              ),
              _buildInfoRow('Email', widget.faculty.email),
              const SizedBox(height: 8.0),
              const Text(
                'Research Areas:',
                style: TextStyle(fontWeight: FontWeight.bold),
              ),
              const SizedBox(height: 4.0),
              ...widget.faculty.researchAreas.map(
                (area) => Padding(
                  padding: const EdgeInsets.only(left: 8.0, bottom: 4.0),
                  child: Row(
                    crossAxisAlignment: CrossAxisAlignment.start,
                    children: [
                      const Text('• '),
                      Expanded(child: Text(area)),
                    ],
                  ),
                ),
              ),
              const SizedBox(height: 8.0),
            ],
          ),
        ),
    ],
```

```
      ),
    );
  }

  Widget _buildInfoRow(String label, String value) {
    return Padding(
      padding: const EdgeInsets.only(bottom: 8.0),
      child: Row(
        crossAxisAlignment: CrossAxisAlignment.start,
        children: [
          SizedBox(
            width: 120,
            child: Text(
              '$label:',
              style: const TextStyle(fontWeight: FontWeight.bold),
            ),
          ),
          Expanded(child: Text(value)),
        ],
      ),
    );
  }
}
```

Feedback_screen.dart

```
import 'package:flutter/material.dart';
import 'package:mca_department_app/widgets/app_drawer.dart';

class FeedbackScreen extends StatefulWidget {
  const FeedbackScreen({Key? key}) : super(key: key);

  @override
  State<FeedbackScreen> createState() => _FeedbackScreenState();
}

class _FeedbackScreenState extends State<FeedbackScreen> {
  final _formKey = GlobalKey<FormState>();
  final TextEditingController _nameController = TextEditingController();
  final TextEditingController _emailController = TextEditingController();
  final TextEditingController _feedbackController = TextEditingController();

  int _courseRating = 0;
  int _facultyRating = 0;
  int _facilitiesRating = 0;
  String _selectedCategory = 'General';

  final List<String> _categories = [
    'General',
    'Curriculum',
    'Faculty',
    'Infrastructure',
    'Placements',
    'Events',
  ];

  @override
```

```
void dispose() {
  _nameController.dispose();
  _emailController.dispose();
  _feedbackController.dispose();
  super.dispose();
}

void _submitForm() {
  if (_formKey.currentState!.validate()) {
    // In a real app, you would send this data to a server
    ScaffoldMessenger.of(context).showSnackBar(
      const SnackBar(
        content: Text('Thank you for your feedback!'),
        backgroundColor: Colors.green,
      ),
    );

    // Clear form
    _nameController.clear();
    _emailController.clear();
    _feedbackController.clear();
    setState(() {
      _courseRating = 0;
      _facultyRating = 0;
      _facilitiesRating = 0;
      _selectedCategory = 'General';
    });
  }
}

@override
Widget build(BuildContext context) {
  return Scaffold(
    appBar: AppBar(title: const Text('Feedback')),
    drawer: const AppDrawer(),
    body: SingleChildScrollView(
      padding: const EdgeInsets.all(16.0),
      child: Form(
        key: _formKey,
        child: Column(
          crossAxisAlignment: CrossAxisAlignment.start,
          children: [
            const Text(
              'We value your feedback!',
              style: TextStyle(fontSize: 24, fontWeight: FontWeight.bold),
            ),
            const SizedBox(height: 8),
            const Text(
              'Please share your thoughts to help us improve.',
              style: TextStyle(fontSize: 16, color: Colors.grey),
            ),
            const SizedBox(height: 24),

            // Personal Information
            TextFormField(
              controller: _nameController,
```

```
          decoration: const InputDecoration(
            labelText: 'Name',
            border: OutlineInputBorder(),
            prefixIcon: Icon(Icons.person),
          ),
          validator: (value) {
            if (value == null || value.isEmpty) {
              return 'Please enter your name';
            }
            return null;
          },
        ),
        const SizedBox(height: 16),

        TextFormField(
          controller: _emailController,
          decoration: const InputDecoration(
            labelText: 'Email',
            border: OutlineInputBorder(),
            prefixIcon: Icon(Icons.email),
          ),
          keyboardType: TextInputType.emailAddress,
          validator: (value) {
            if (value == null || value.isEmpty) {
              return 'Please enter your email';
            }
            if (!RegExp(
              r'^[\w-\.]+@([\w-]+\.)+[\w-]{2,4}$',
            ).hasMatch(value)) {
              return 'Please enter a valid email';
            }
            return null;
          },
        ),
        const SizedBox(height: 24),

        // Category Dropdown
        DropdownButtonFormField<String>(
          decoration: const InputDecoration(
            labelText: 'Feedback Category',
            border: OutlineInputBorder(),
            prefixIcon: Icon(Icons.category),
          ),
          value: _selectedCategory,
          items:
              _categories.map((category) {
                return DropdownMenuItem(
                  value: category,
                  child: Text(category),
                );
              }).toList(),
          onChanged: (value) {
            setState(() {
              _selectedCategory = value!;
            });
          },
```

```
),
const SizedBox(height: 24),

// Ratings
const Text(
  'Please rate the following:',
  style: TextStyle(fontSize: 18, fontWeight: FontWeight.bold),
),
const SizedBox(height: 16),

_buildRatingRow('Course Content', _courseRating, (rating) {
  setState(() {
    _courseRating = rating;
  });
}),

_buildRatingRow('Faculty', _facultyRating, (rating) {
  setState(() {
    _facultyRating = rating;
  });
}),

_buildRatingRow('Facilities', _facilitiesRating, (rating) {
  setState(() {
    _facilitiesRating = rating;
  });
}),

const SizedBox(height: 24),

// Feedback Text
TextFormField(
  controller: _feedbackController,
  decoration: const InputDecoration(
    labelText: 'Your Feedback',
    border: OutlineInputBorder(),
    alignLabelWithHint: true,
  ),
  maxLines: 5,
  validator: (value) {
    if (value == null || value.isEmpty) {
      return 'Please enter your feedback';
    }
    return null;
  },
),
const SizedBox(height: 24),

// Submit Button
SizedBox(
  width: double.infinity,
  height: 50,
  child: ElevatedButton(
    onPressed: _submitForm,
    child: const Text(
      'Submit Feedback',
```

```
                style: TextStyle(fontSize: 16),
              ),
            ),
          ),
        ],
      ),
    ),
  ),
 );
}

Widget _buildRatingRow(
 String label,
 int currentRating,
 Function(int) onRatingChanged,
) {
 return Padding(
  padding: const EdgeInsets.only(bottom: 16.0),
  child: Row(
   children: [
    SizedBox(
     width: 120,
     child: Text(label, style: const TextStyle(fontSize: 16)),
    ),
    const SizedBox(width: 16),
    Row(
     children: List.generate(5, (index) {
      return IconButton(
       icon: Icon(
        index < currentRating ? Icons.star : Icons.star_border,
        color: index < currentRating ? Colors.amber : Colors.grey,
        size: 30,
       ),
       onPressed: () {
        onRatingChanged(index + 1);
       },
      );
     }),
    ),
   ],
  ),
 );
}
}
```

Home_screen.dart

```
import 'package:flutter/material.dart';
import 'package:mca_department_app/widgets/app_drawer.dart';

class HomeScreen extends StatefulWidget {
 const HomeScreen({Key? key}) : super(key: key);

 @override
 State<HomeScreen> createState() => _HomeScreenState();
}
```

```
class _HomeScreenState extends State<HomeScreen>
    with SingleTickerProviderStateMixin {
  late TabController _tabController;

  @override
  void initState() {
    super.initState();
    _tabController = TabController(length: 3, vsync: this);
  }

  @override
  void dispose() {
    _tabController.dispose();
    super.dispose();
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: const Text('MCA Department'),
        bottom: TabBar(
          controller: _tabController,
          tabs: const [
            Tab(text: 'Home', icon: Icon(Icons.home)),
            Tab(text: 'Announcements', icon: Icon(Icons.announcement)),
            Tab(text: 'Events', icon: Icon(Icons.event)),
          ],
        ),
      ),
      drawer: const AppDrawer(),
      body: TabBarView(
        controller: _tabController,
        children: [
          // Home Tab
          SingleChildScrollView(
            padding: const EdgeInsets.all(16.0),
            child: Column(
              crossAxisAlignment: CrossAxisAlignment.start,
              children: [
                const Text(
                  'Welcome to Department of Computer Applications',
                  style: TextStyle(
                    fontSize: 22.0,
                    fontWeight: FontWeight.bold,
                    color: Colors.blue,
                  ),
                ),
                const SizedBox(height: 16.0),
                ClipRRect(
                  borderRadius: BorderRadius.circular(12.0),
                  child: Image.network(
                    'assets/abc.jpg',
                    height: 700.0,
                    width: double.infinity,
                    fit: BoxFit.cover,
```

```
            ),
          ),
          const SizedBox(height: 24.0),
          const Text(
            'About the Department',
            style: TextStyle(fontSize: 20.0, fontWeight: FontWeight.bold),
          ),
          const SizedBox(height: 8.0),
          const Text(
            'The Department of Computer Applications was established in 2005 with the aim of providing quality education in the field of computer applications. The department offers undergraduate and postgraduate programs that focus on the latest technologies and industry trends.',
            style: TextStyle(fontSize: 16.0),
          ),
          const SizedBox(height: 24.0),
          _buildInfoCard(
            context,
            title: 'Programs Offered',
            content: [
              'Master of Computer Applications (MCA)',
              'Bachelor of Computer Applications (BCA)',
              'PhD in Computer Applications',
            ],
            icon: Icons.school,
          ),
          const SizedBox(height: 16.0),
          _buildInfoCard(
            context,
            title: 'Facilities',
            content: [
              'State-of-the-art Computer Labs',
              'Research Center',
              'Digital Library',
              'Smart Classrooms',
              'Innovation Hub',
            ],
            icon: Icons.computer,
          ),
          const SizedBox(height: 16.0),
          _buildInfoCard(
            context,
            title: 'Key Highlights',
            content: [
              '100% Placement Record',
              'Industry-focused Curriculum',
              'Experienced Faculty Members',
              'Regular Industry Interactions',
              'Active Research Groups',
            ],
            icon: Icons.star,
          ),
          const SizedBox(height: 24.0),
          const Text(
            'Contact Us',
            style: TextStyle(fontSize: 20.0, fontWeight: FontWeight.bold),
```

```
            ),
            const SizedBox(height: 8.0),
            const ListTile(
              leading: Icon(Icons.email),
              title: Text('Email'),
              subtitle: Text('mca.department@example.edu'),
            ),
            const ListTile(
              leading: Icon(Icons.phone),
              title: Text('Phone'),
              subtitle: Text('+91 123 456 7890'),
            ),
            const ListTile(
              leading: Icon(Icons.location_on),
              title: Text('Address'),
              subtitle: Text(
                'Department of Computer Applications,\nCollege of
Engineering,\nExample City - 123456',
              ),
            ),
          ],
        ),
      ),

      // Announcements Tab
      ListView.builder(
        itemCount: 10,
        itemBuilder: (context, index) {
          return Card(
            margin: const EdgeInsets.symmetric(
              vertical: 8.0,
              horizontal: 16.0,
            ),
            child: ListTile(
              leading: const CircleAvatar(
                backgroundColor: Colors.blue,
                child: Icon(Icons.notifications, color: Colors.white),
              ),
              title: Text('Important Announcement ${index + 1}'),
              subtitle: Text(
                'Posted on ${DateTime.now().subtract(Duration(days:
index)).toString().substring(0, 10)}',
              ),
              trailing: const Icon(Icons.arrow_forward_ios),
              onTap: () {
                // Navigate to announcement details
              },
            ),
          );
        },
      ),

      // Events Tab
      ListView.builder(
        itemCount: 5,
        itemBuilder: (context, index) {
```

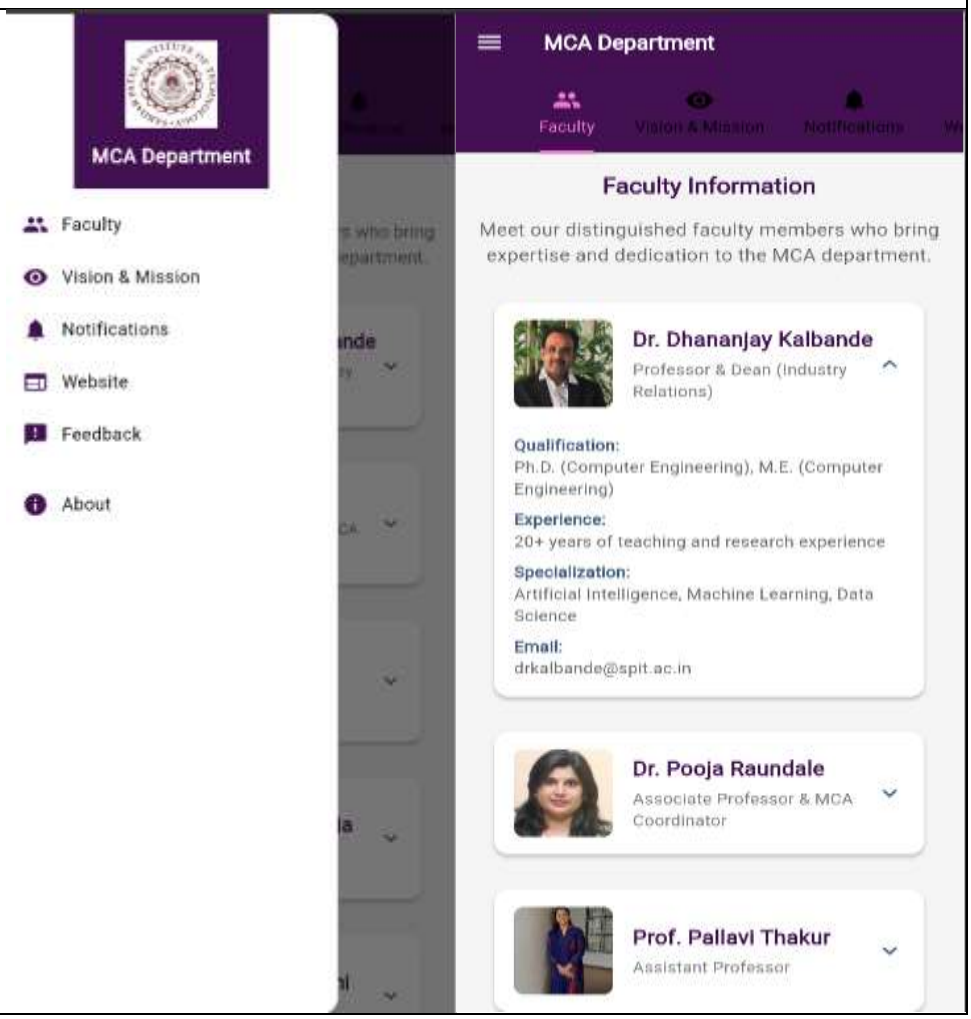
```
return Card(
  margin: const EdgeInsets.symmetric(
    vertical: 8.0,
    horizontal: 16.0,
  ),
  elevation: 4.0,
  child: Column(
    crossAxisAlignment: CrossAxisAlignment.start,
    children: [
      Container(
        height: 120,
        width: double.infinity,
        color: Colors.grey[300],
        child: Center(
          child: Icon(
            [
              Icons.code,
              Icons.people,
              Icons.school,
              Icons.lightbulb,
              Icons.science,
            ][index % 5],
            size: 48,
            color: Colors.blue,
          ),
        ),
      ),
      Padding(
        padding: const EdgeInsets.all(16.0),
        child: Column(
          crossAxisAlignment: CrossAxisAlignment.start,
          children: [
            Text(
              [
                'Tech Symposium',
                'Industry Connect',
                'Alumni Meet',
                'Hackathon',
                'Research Workshop',
              ][index % 5],
              style: const TextStyle(
                fontSize: 18.0,
                fontWeight: FontWeight.bold,
              ),
            ),
            const SizedBox(height: 8.0),
            Text(
              'Date: ${DateTime.now().add(Duration(days: (index + 1) *
7)).toString().substring(0, 10)}',
              style: TextStyle(color: Colors.grey[700]),
            ),
            const SizedBox(height: 16.0),
            const Text(
              'Join us for this exciting event and enhance your skills and
knowledge in the field of computer applications.',
            ),
```

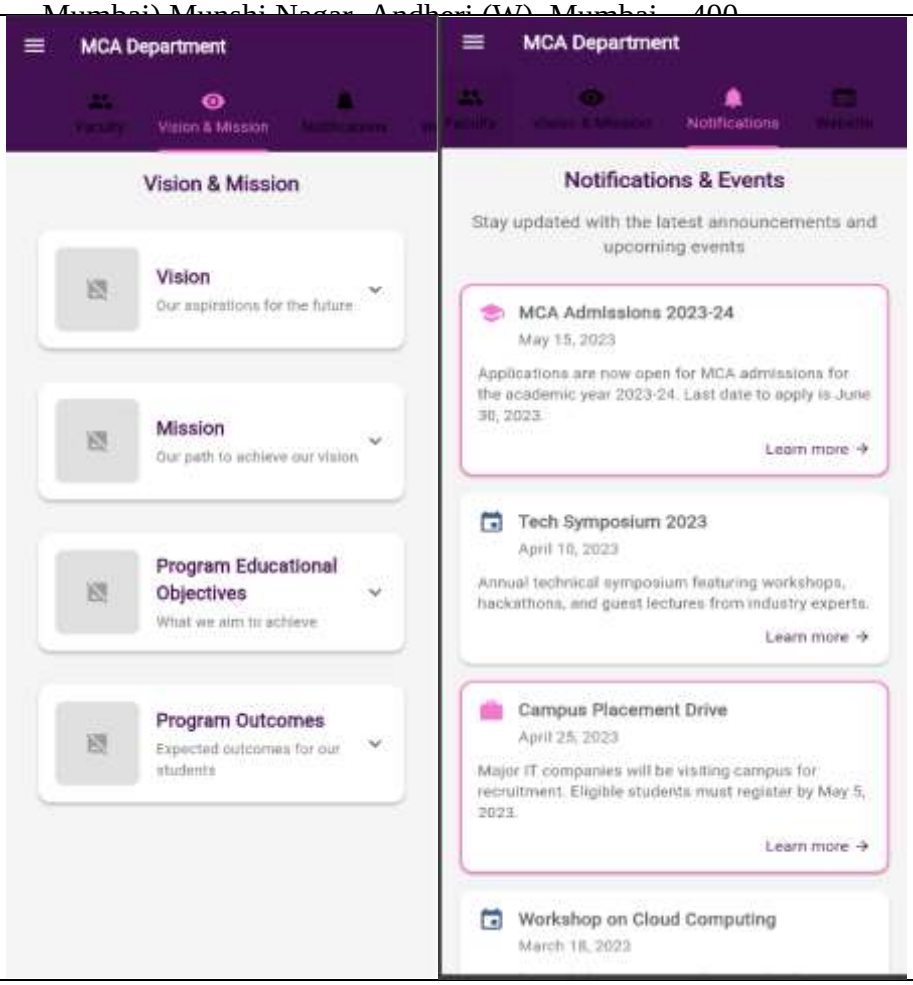
```
                    const SizedBox(height: 16.0),
                    ElevatedButton(
                      onPressed: () {},
                      child: const Text('Register Now'),
                    ),
                  ],
                ),
              ),
            ),
          ],
        ),
      );
    },
  ),
 ],
 ),
 );
}

Widget _buildInfoCard(
 BuildContext context, {
 required String title,
 required List<String> content,
 required IconData icon,
}) {
 return Card(
  elevation: 3.0,
  shape: RoundedRectangleBorder(borderRadius:
BorderRadius.circular(12.0)),
  child: Padding(
   padding: const EdgeInsets.all(16.0),
   child: Column(
    crossAxisAlignment: CrossAxisAlignment.start,
    children: [
     Row(
      children: [
       Icon(icon, color: Theme.of(context).primaryColor),
       const SizedBox(width: 8.0),
       Text(
        title,
        style: const TextStyle(
         fontSize: 18.0,
         fontWeight: FontWeight.bold,
        ),
       ),
      ],
     ),
     const SizedBox(height: 12.0),
     ...content.map(
      (item) => Padding(
       padding: const EdgeInsets.only(bottom: 8.0),
       child: Row(
        crossAxisAlignment: CrossAxisAlignment.start,
        children: [
         const Icon(
          Icons.check_circle,
          size: 16,
```

```
                color: Colors.green,
              ),
              const SizedBox(width: 8.0),
              Expanded(child: Text(item)),
            ],
          ),
        ),
      ),
    ),
  ],
 ),
 ),
 );
 }
}
```

Screenshots

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Vision & Mission
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Our path to achieve our vision
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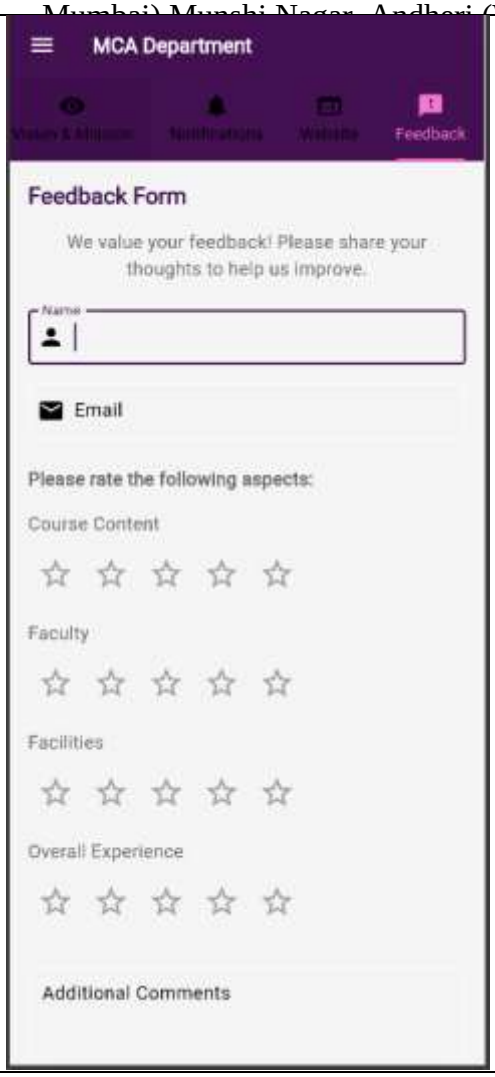
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Question and Answers	Answer the following Questions: **1. How to create SideDrawer and Tabs Navigation both?** To create both SideDrawer and Tabs Navigation in a Flutter app, use the Scaffold widget with a Drawer for the SideDrawer and a TabBar or BottomNavigationBar for tab navigation. Implement TabController for managing tab selection and wrap the content inside a TabBarView to switch between screens seamlessly. **2. How did you use 60-30-10 rule in your application?** The 60-30-10 rule in UI design ensures a balanced color scheme by using 60% as the primary color (background or dominant elements), 30% as the secondary color (buttons, cards, sections), and 10% as an accent color (highlights, calls to action) to create contrast and visual interest. **3. Which new elements did you use for creating UI components?** New UI components used in an application may include ElevatedButton, BottomNavigationBar, ExpansionTile, PageView, SliverAppBar, GridView, and Stack, enhancing interactivity, layout structure, and user experience. **4. In pubspec.yaml file, what dependencies need to be there?** The pubspec.yaml file should include dependencies such as flutter, cupertino_icons for iOS-style icons, http for API requests, provider or riverpod for state management, webview_flutter for embedding web pages, and shared_preferences for local storage. **5. How to create Expandable view?** To create an Expandable View, use widgets like ExpansionTile for expandable lists or AnimatedContainer and Visibility combined with setState to dynamically toggle the height and visibility of UI elements. **6. How to create Webview?** To create a WebView in Flutter, use the webview_flutter package, initialize a WebViewController, and display web content within a WebView widget inside a Scaffold to enable browsing functionalities.
Conclusion	**Your Learning from the session.** The session provided insights into implementing essential UI navigation patterns in Flutter, such as integrating both SideDrawer and Tabs Navigation effectively. It also reinforced the importance of UI design principles like the 60-30-10 color rule to maintain a visually appealing interface. Exploring new UI components enhanced the understanding of creating interactive and user-friendly applications. Understanding dependencies in the pubspec.yaml file highlighted the significance of managing external packages for added functionalities. Additionally, learning to create expandable views and WebView implementations expanded knowledge of dynamic UI elements and embedding web content within Flutter apps.