

Day 1

Day 1
Assignment
Date:- 05-08-2025

1.

```
import 'dart:io';

void main() {
  stdout.write("Enter destination zone (XYZ / ABC / PQR): ");
  String? zone = stdin.readLineSync();

  stdout.write("Enter weight of the package (in kg): ");
  double weight = double.parse(stdin.readLineSync()!);

  double costPerKg;

  switch (zone) {
    case 'XYZ':
      costPerKg = 5.0;
      break;
    case 'ABC':
      costPerKg = 7.0;
      break;
    case 'PQR':
      costPerKg = 10.0;
      break;
    default:
      print("Error: Invalid destination zone.");
      return;
  }

  double totalCost = costPerKg * weight;
  print("Shipping cost: \${totalCost.toStringAsFixed(2)}");
}
```

2.

```
import 'dart:io';

void main() {
  stdout.write("Enter total bill amount: ");
  double bill = double.parse(stdin.readLineSync()!);

  stdout.write("Enter number of people: ");
  int people = int.parse(stdin.readLineSync()!);

  if (people == 0) {
    print("Error: Cannot divide by zero!");
  }
}
```

```

    return;
}

double splitAmount = bill / people;
print("Each person should pay: \${splitAmount.toStringAsFixed(2)}");
}

```

3.

```

void main() {
  List<int> a = [1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89];

  List<int> lessThanFive = a.where((num) => num < 5).toList();

  print("Elements less than 5: $lessThanFive");
}

```

4.

```

import 'dart:io';

void main() {
  stdout.write("Enter comma-separated numbers: ");
  String? input = stdin.readLineSync();

  List<String> items = input!.split(',').map((e) => e.trim()).toList();
  Set<String> itemSet = items.toSet();

  print("List: $items");
  print("Set: $itemSet");
}

```

Day 2

Day2

Assignment

Date:-06-08-2025



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

void main() {
  runApp(first_App() );
}

class first_App extends StatelessWidget {

  // This widget is the root of your application.
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      //Material App
      //Scaffold Widget
      home:Scaffold(
        backgroundColor:Colors.yellow,
        appBar:AppBar(
          title:const Text('Flutter Class'),
          backgroundColor:Colors.red,
        ),
        body: const Center(child:Text(
```

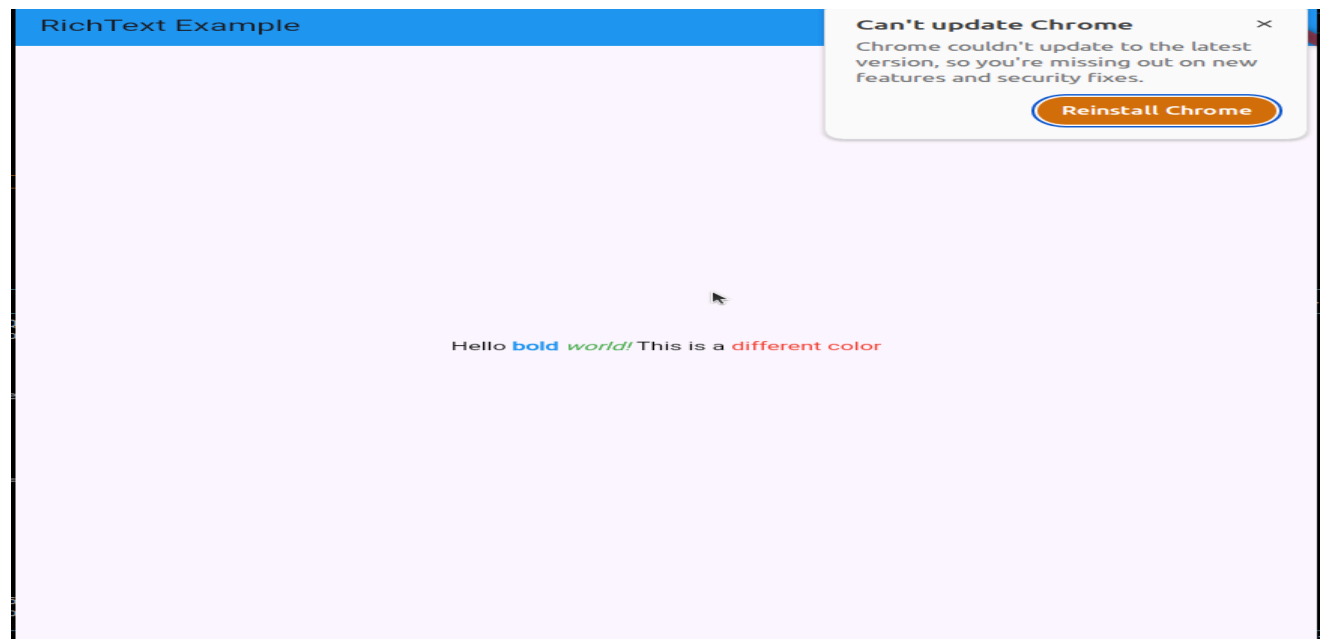
```
        'Hello, World',  
        style: TextStyle(fontSize: 20)),  
    ),  
);  
}  
}
```

```
void main() {  
  runApp(MyApp());  
}  
  
class MyApp extends StatelessWidget {  
  @override  
  Widget build(BuildContext context) {  
    return MaterialApp(  
      home: Scaffold(  
        appBar: AppBar(  
          title: const Text('RichText Example'),  
          backgroundColor: Colors.blue,  
        ),  
        body: Center(  
          child: RichText(  
            text: TextSpan(  
              style: const TextStyle(  
                fontSize: 16,  
                color: Colors.black, // default text color  
              ),  
              children: <TextSpan>[  
                const TextSpan(text: 'Hello '),  
                const TextSpan(  
                  text: 'bold ',  
                  style: TextStyle(  
                    fontWeight: FontWeight.bold,  
                    color: Colors.blue,  
                  ),  
                ),  
                const TextSpan(  
                  text: 'world! ',  
                  style: TextStyle(  
                    fontStyle: FontStyle.italic,  
                    color: Colors.green,  
                  ),  
                ),  
              ],  
            ),  
          ),  
        ),  
      ),  
    ),  
  ),  
}
```

```

    ),
  ),
  const TextSpan(
    text: 'This is a ',
    style: TextStyle(color: Colors.black),
  ),
  const TextSpan(
    text: 'different color',
    style: TextStyle(color: Colors.red),
  ),
],
),
),
),
),
),
);
}
}

```



Name: Jaidev Narayan Singh

USN: 1MS24AD029

Department: AI-DS

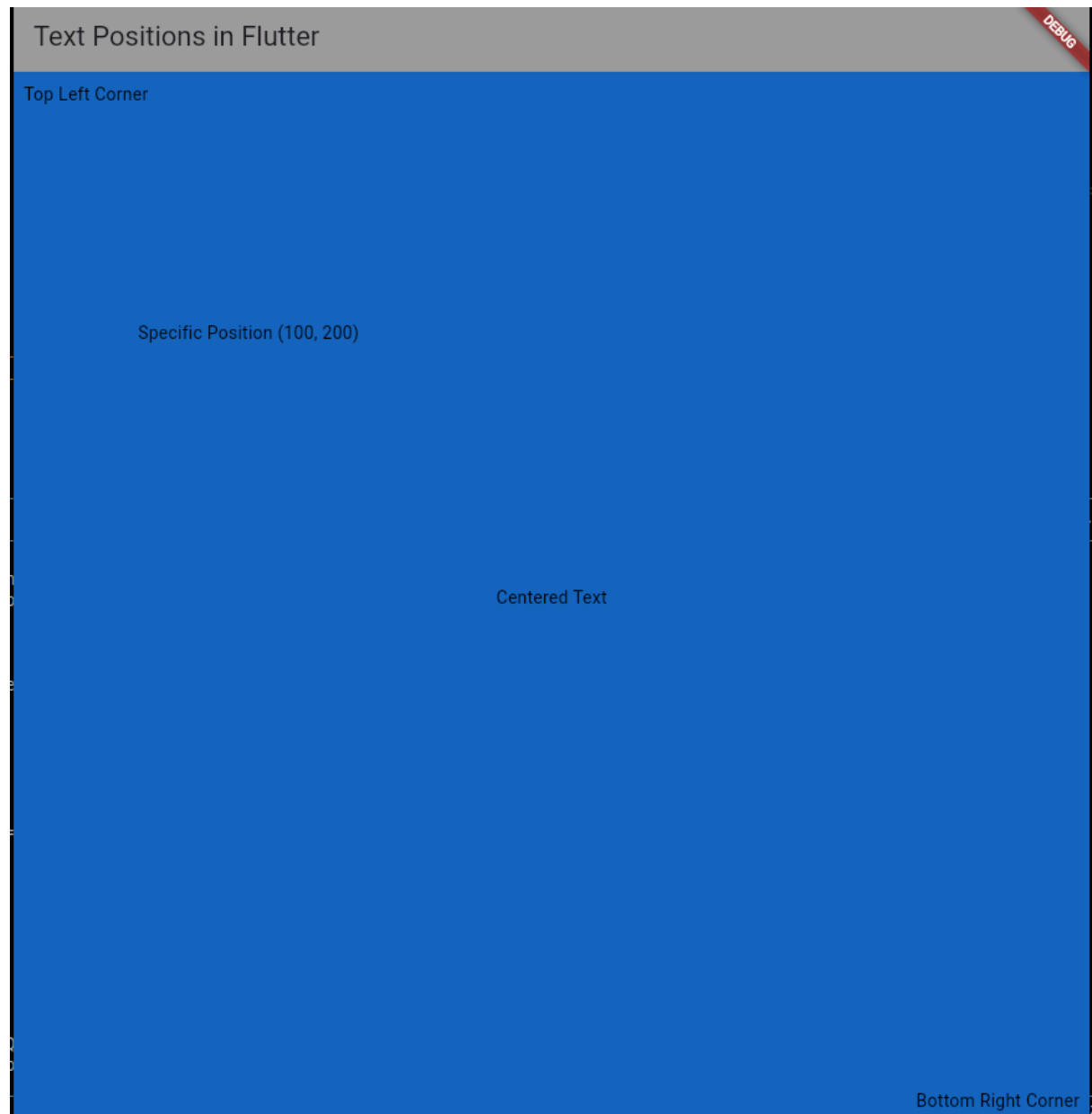
```
void main() {  
  runApp(MyApp());  
}  
  
class MyApp extends StatelessWidget {  
  @override  
  Widget build(BuildContext context) {  
    return MaterialApp(  
      home: Scaffold(  
        appBar: AppBar(  
          title: const Text('Jaidev Narayan Singh'),  
          backgroundColor: Colors.blue,  
        ),  
        body: Center(  
          child: Column(  
            mainAxisAlignment: MainAxisAlignment.min,  
            children: const [  
              Text(  
                'Name: Jaidev Narayan Singh',  
                style: TextStyle(fontSize: 18, fontWeight:  
FontWeight.w600),
```



```

        ),
        SizedBox(height: 8),
        Text('USN: 1MS24AD029', style: TextStyle(fontSize: 16)),
        SizedBox(height: 4),
        Text('Department: AI-DS', style: TextStyle(fontSize: 14)),
      ],
    ),
  ),
),
);
}
}

```



```
void main() {  
  runApp(const MyApp());  
}  
  
class MyApp extends StatelessWidget {  
  const MyApp({super.key});  
  
  @override  
  Widget build(BuildContext context) {  
    return MaterialApp(  
      title: 'Text Positions in Flutter',  
      home: Scaffold(  
        appBar: AppBar(  
          title: const Text('Text Positions in Flutter'),  
          backgroundColor: Colors.grey,  
        ),  
        body: Container(  
          color: Colors.blue[800],  
          child: Stack(  
            children: const [  
              Positioned(  
                top: 8,  
                left: 8,  
                child: Text(  
                  'Top Left Corner',  
                  style: TextStyle(color: Colors.black),  
                ),  
            ),  
              Positioned(  
                top: 200,  
                left: 100,  
                child: Text(  
                  'Specific Position (100, 200)',  
                  style: TextStyle(color: Colors.black),  
                ),  
            ),  
              Center(  
                child: Text(  
                  'Centered Text',  
                  style: TextStyle(color: Colors.black),  
                ),  
            ),  
              Positioned(  
                top: 300,  
                left: 100,  
                child: Text(  
                  'Bottom Left Corner',  
                  style: TextStyle(color: Colors.black),  
                ),  
            ),  
            ],  
          ),  
        ),  
      ),  
    );  
  }  
}
```

```
        bottom: 8,  
        right: 8,  
        child: Text(  
          'Bottom Right Corner',  
          style: TextStyle(color: Colors.black),  
        ),  
      ),  
    ],  
  ),  
),  
),  
),  
);  
}  
}
```

Different Font Types Example

DEBUG
VS

Text with TimesNew Roman

Text with Calibri

TEXT WITH STENCIL

TEXT WITH ALGERIAN

Text with Edwardian Script ITC

```
void main() {  
  runApp(const MyApp());  
}  
  
class MyApp extends StatelessWidget {  
  const MyApp({super.key});  
  
  @override  
  Widget build(BuildContext context) {  
    return MaterialApp(  
      title: 'Different Font Types Example',  
      home: Scaffold(  
        appBar: AppBar(  
          title: const Text('Different Font Types Example'),  
        ),  
      ),  
    );  
  }  
}
```

```
        backgroundColor: Colors.blue,
      ),
      body: Center(
        child: Column(
          mainAxisAlignment: MainAxisAlignment.min,
          children: const [
            Text(
              'Text with TimesNew Roman',
              style: TextStyle(
                fontFamily: 'Times New Roman',
                fontSize: 18,
                color: Colors.brown,
              ),
            ),
            SizedBox(height: 10),
            Text(
              'Text with Calibri',
              style: TextStyle(
                fontFamily: 'Calibri',
                fontSize: 18,
                color: Colors.black,
              ),
            ),
            SizedBox(height: 10),
            Text(
              'TEXT WITH STENCIL',
              style: TextStyle(
                fontFamily: 'Stencil',
                fontWeight: FontWeight.bold,
                fontSize: 18,
              ),
            ),
            SizedBox(height: 10),
            Text(
              'TEXT WITH ALGERIAN',
              style: TextStyle(fontFamily: 'Algerian', fontSize: 18),
            ),
            SizedBox(height: 10),
            Text(
              'Text with Edwardian Script ITC',
              style: TextStyle(
                fontFamily: 'Edwardian Script ITC',
                fontSize: 18,
```

```

        fontStyle: FontStyle.italic,
      ),
    ),
  ],
),
),
),
);
}
}

```

Assignment

1.

```

import 'dart:math';

String generatePassword(int length) {
  const chars =
'abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789!@#\$%^&
*()_+';
  final rand = Random();
  return List.generate(length, (index) =>
chars[rand.nextInt(chars.length)]).join();
}

void main() {
  print('Generated Password: ${generatePassword(12)}'); // Example:
12-character password
}

```

Generated Password: bcG2*sB9*sUk

2.

```

void main() {
  List<int> numbers = [10, 23, 4, 17, 8, 2]; // Example list

  // Anonymous function inside reduce
  int sumEven = numbers.where((num) => num % 2 == 0).fold(0, (sum, num)
=> sum + num);

  print('Sum of even numbers: $sumEven');
}
Sum of even numbers: 24

```

3.

```
class Book {
  String name;
  String author;
  double price;

  // Constructor
  Book(this.name, this.author, this.price);

  // Method to display book details
  void display() {
    print('Name: $name');
    print('Author: $author');
    print('Price: \${price.toStringAsFixed(2)}');
  }
}

void main() {
  // Create a Book object
  Book myBook = Book('The Alchemist', 'Paulo Coelho', 15.99);
  // Display the book details
  myBook.display();
}

import 'package:flutter/material.dart';

void main() {
  runApp(Myapplication());
}

class Myapplication extends StatelessWidget {
  const Myapplication({super.key});

  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(title: const Text('First Flutter Application')),
      ),
    ),
  }
}
```

```
);  
}  
}
```

First Flutter Application

DEBUG

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

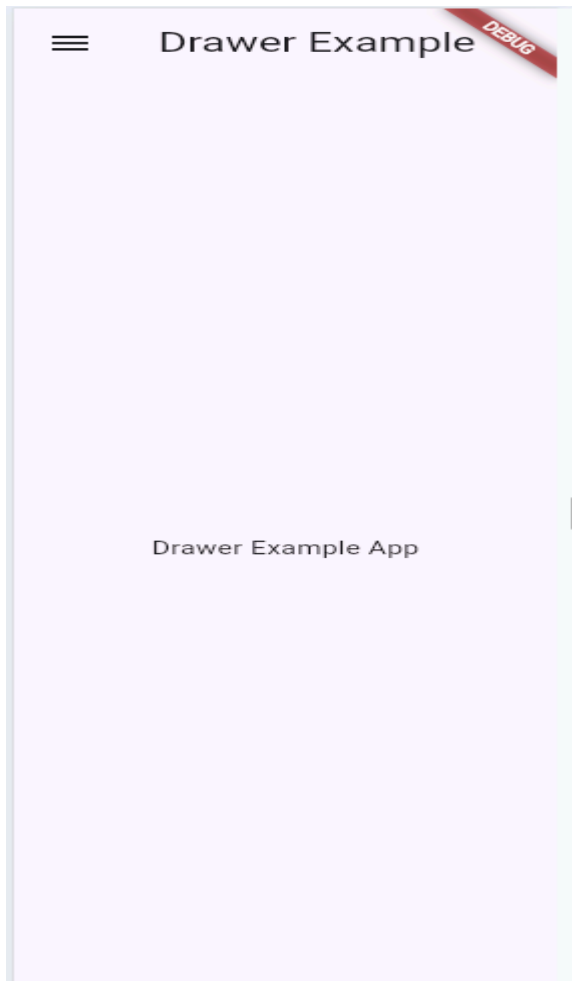
```
void main() => runApp(MyApp());  
  
class MyApp extends StatelessWidget {  
  @override  
  Widget build(BuildContext context) {  
    return MaterialApp(  
      home: Scaffold(  
        appBar: AppBar(title: Text('Drawer Example')),  
        drawer: Drawer(  
          child: ListView(  
            padding: EdgeInsets.zero,  
            children: <Widget>[  
              DrawerHeader(  
                decoration: BoxDecoration(  
                  gradient: LinearGradient(  
                    colors: [Colors.pink, Colors.purple],  
                    begin: Alignment.topLeft,  
                    end: Alignment.bottomRight,  
                  ),  
                child: Text('Drawer Header'),  
              ),  
            ],  
          ),  
        ),  
      ),  
    );  
  }  
}
```



```

        color: const Color.fromARGB(255, 89, 187, 110),
      ),
      child: Text(
        'Drawer Header',
        style: TextStyle(color: Colors.white, fontSize: 24),
      ),
    ),
    ListTile(
      leading: Icon(Icons.home),
      title: Text('Home'),
      onTap: () => Navigator.pop(context),
    ),
    ListTile(
      leading: Icon(Icons.settings),
      title: Text('Settings'),
      onTap: () => Navigator.pop(context),
    ),
  ],
),
),
body: Center(child: Text('Drawer Example App')),
),
);
}
}

```



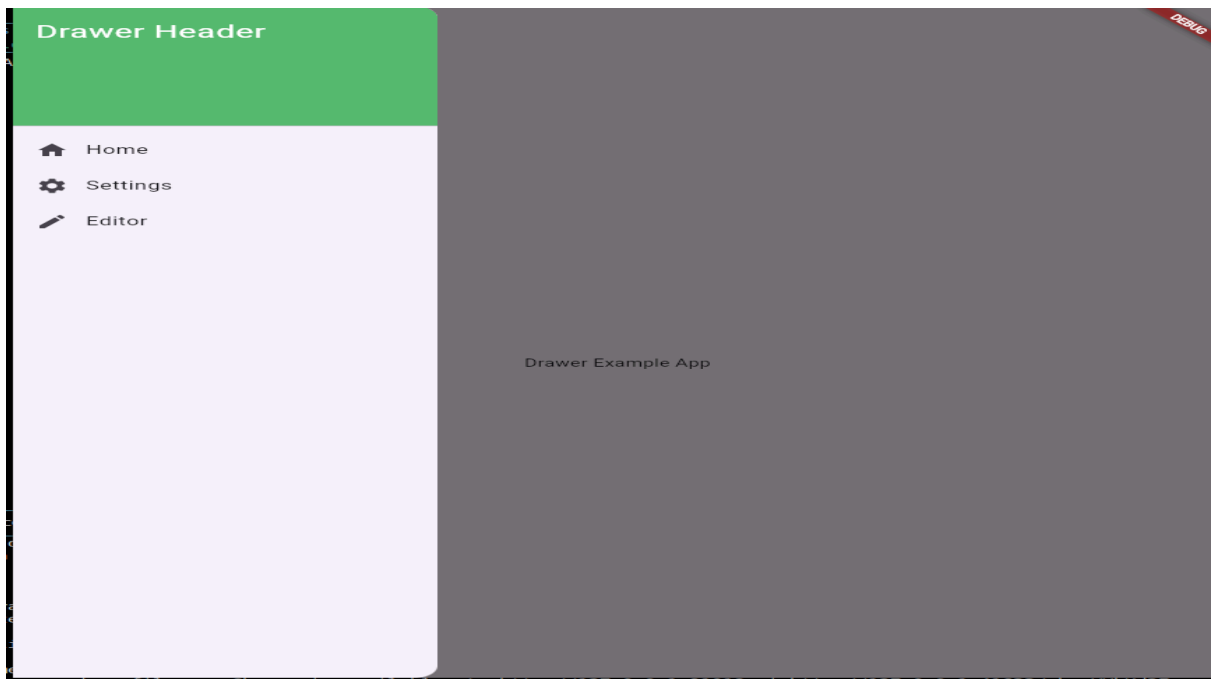
```
import  
'package:flutter/material.dart'
```

```
void main() => runApp(MyApp());  
  
class MyApp extends StatelessWidget {  
  @override  
  Widget build(BuildContext context) {  
    return MaterialApp(  
      home: Scaffold(  
        appBar: AppBar(title: Text('Drawer Example')),  
        drawer: Drawer(  
          child: ListView(  
            padding: EdgeInsets.zero,  
            children: <Widget>[  
              DrawerHeader(  
                decoration: BoxDecoration(  
                  color: const Color.fromARGB(255, 89, 187, 110),  
                ),  
                child: Text(  
                  'Drawer Header',
```

```

        style: TextStyle(color: Colors.white, fontSize: 24),
      ),
    ),
    ListTile(
      leading: Icon(Icons.home),
      title: Text('Home'),
      onTap: () => Navigator.pop(context),
    ),
    ListTile(
      leading: Icon(Icons.settings),
      title: Text('Settings'),
      onTap: () => Navigator.pop(context),
    ),
    ListTile(
      leading: Icon(Icons.edit), // corrected icon here
      title: Text('Editor'), // corrected Text widget
      onTap: () => Navigator.pop(context),
    ),
  ],
),
),
body: Center(child: Text('Drawer Example App')),
),
);
}
}

```



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

```
void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(
          title: Text('FloatingActionButton Example'),
        ),
        body: Center(
          child: Text('Press the button below!'),
        ),
        floatingActionButton: FloatingActionButton(
          onPressed: () {
            // Action to perform when the button is pressed
            print('Button Pressed!');
          },
          child: Icon(Icons.add),
          backgroundColor: Colors.blue,
        ),
      ),
    );
  }
}
```

FloatingActionButton Example

Press the button below!



Button Pressed!

Button Pressed!

Button Pressed!

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

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(title: Text('Container Example')),
        body: Center(
          child: Container(
            padding: EdgeInsets.all(35),
            margin: EdgeInsets.all(20),
            alignment: Alignment.bottomRight,
            transform: Matrix4.rotationZ(0.1),
            child: Text(
              "Hello! I am in the container widget",
              style: TextStyle(fontSize: 25),
            ),
          ),
        ),
      ),
    );
  }
}
```

```

    ),
  ),
);
}
}

```

Container Example



Hello! I am in the container widget.

```

import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(
          title: Text('Constraints Example'),
        ),
        body: Center(
          child: Container(
            constraints: BoxConstraints(
              minWidth: 100,
              maxWidth: 200,
              minHeight: 100,
              maxHeight: 200,
            ),
            color: Colors.blue,
            child: Center(
              child: Text(
                'Constrained Container',
                style: TextStyle(

```

```
        color: Colors.white,  
        fontSize: 18,  
      ),  
    ),  
  ),  
),  
),  
),  
),  
),  
);  
}  
}
```

Constraints Example

DEBUG

Constrained Container



Exercise 1

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

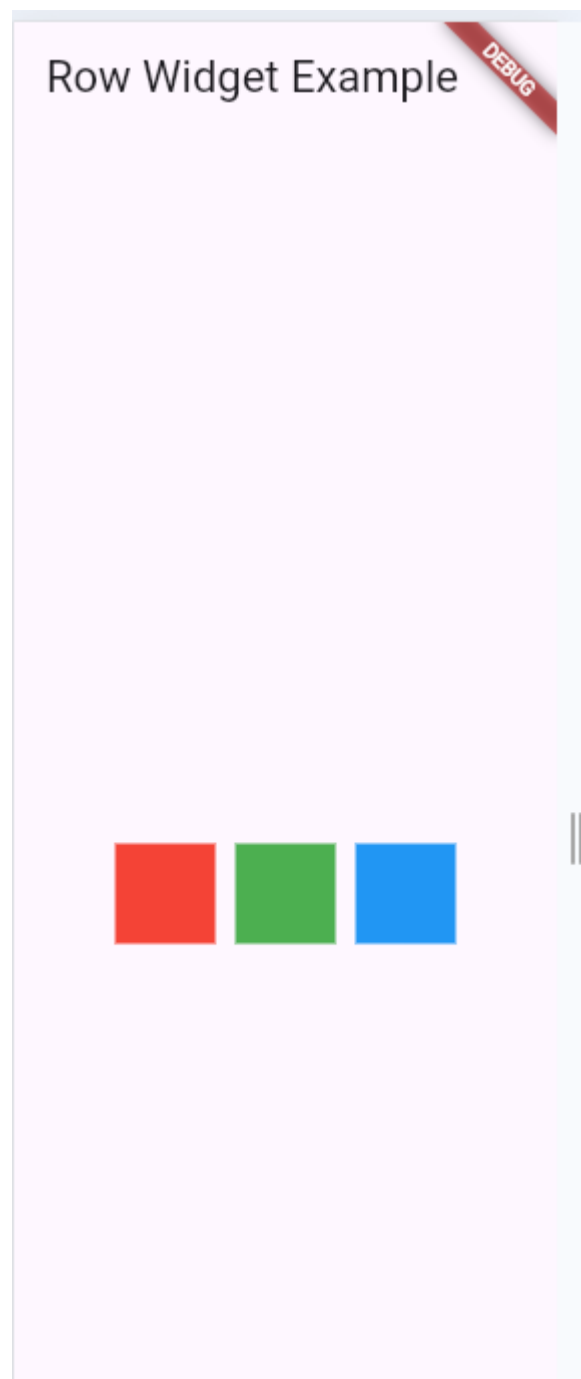
void main() {
  runApp(MyApp());
}

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

  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Row Widget Example',
      home: Scaffold(
        appBar: AppBar(
          title: const Text('Row Widget Example'),
        ),
        body: Center(
          child: Row(
            mainAxisAlignment: MainAxisAlignment.center, // Center
horizontally
            children: <Widget>[
              Container(
                width: 50,
                height: 50,
                color: Colors.red,
              ),
              const SizedBox(width: 10), // spacing between boxes
              Container(
                width: 50,
                height: 50,
                color: Colors.green,
              ),
              const SizedBox(width: 10), // spacing between boxes
              Container(
                width: 50,
                height: 50,
                color: Colors.blue,
              ),
            ],
          ),
        ),
      ),
    );
  }
}
```



```
    ),  
    );  
}  
}
```

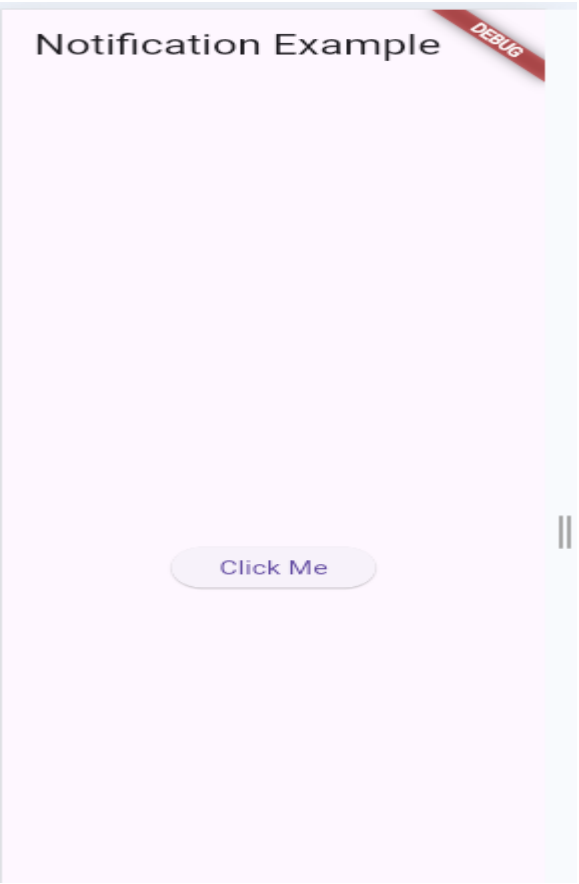


Exercise 03

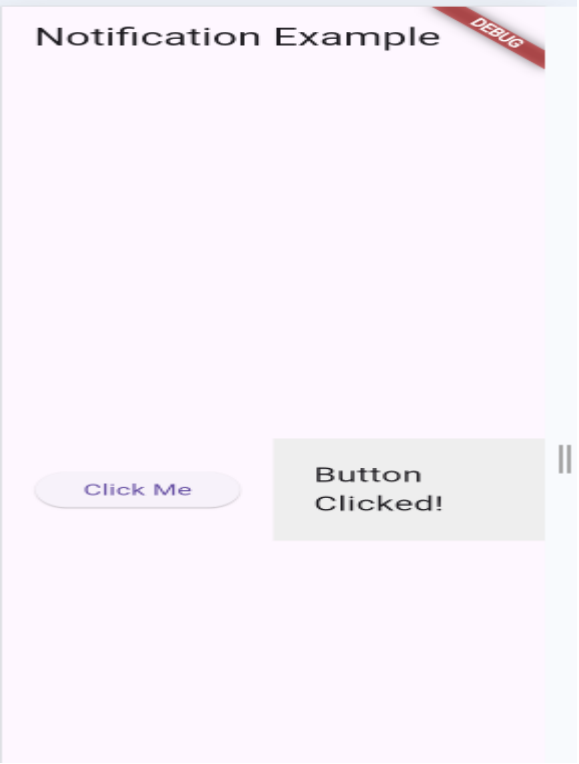
```
import 'package:flutter/material.dart';

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

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Notification Example',
      home: Scaffold(
        appBar: AppBar(title: Text('Notification Example')),
        body: Center(
          child: ElevatedButton(
            onPressed: () {
              print("Button Clicked!");
            },
            child: Text('Click Me'),
          ),
        ),
      ),
    );
  }
}
```



Button Clicked!



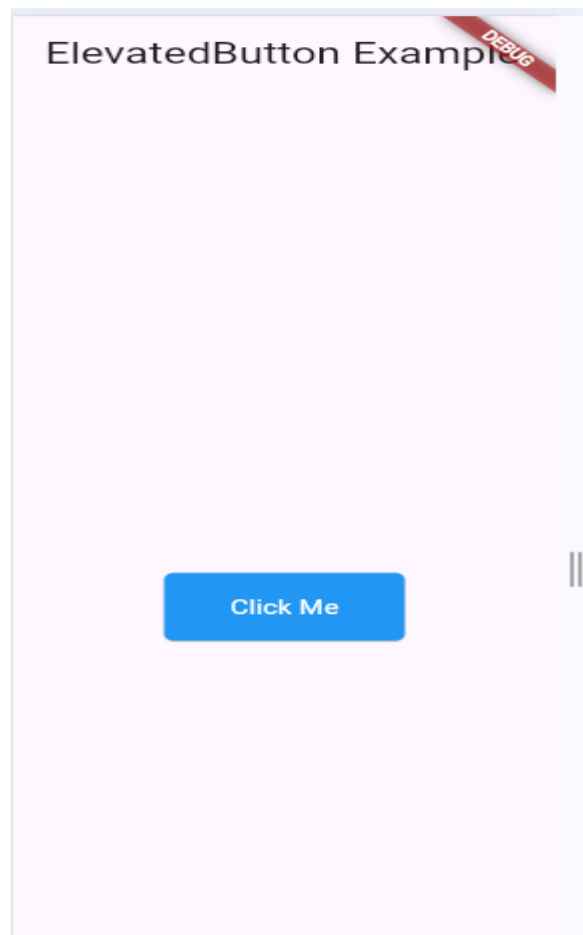
4)

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

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

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(home: ElevatedButtonExample());
  }
}

class ElevatedButtonExample extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(title: Text('ElevatedButton Example')),
      body: Center(
        child: SizedBox(
          width: 120, // Button width
          height: 50, // Button height
          child: ElevatedButton(
            onPressed: () {
              print('Button Clicked!');
            },
            style: ElevatedButton.styleFrom(
              shape: RoundedRectangleBorder(
                borderRadius: BorderRadius.circular(5), // Rounded
corners
              ),
              backgroundColor: Colors.blue, // Background color
              foregroundColor: Colors.white, // Text color
            ),
            child: Text('Click Me'),
          ),
        ),
      ),
    );
  }
}
```



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

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(home: MyHomePage());
  }
}

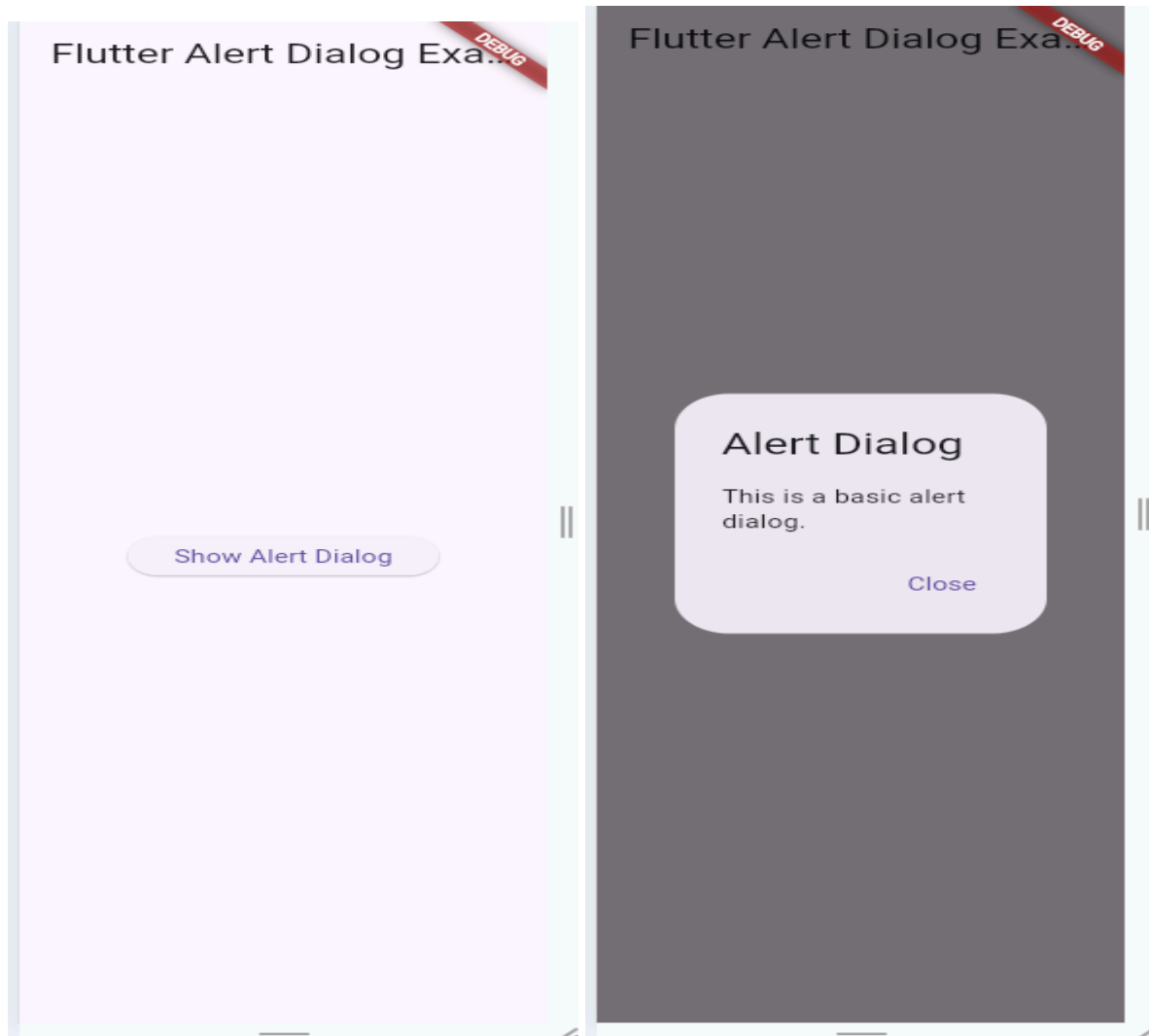
class MyHomePage extends StatelessWidget {
  void _showAlertDialog(BuildContext context) {
    showDialog(
      context: context,
      builder: (BuildContext context) {
```

```

return AlertDialog(
  title: Text("Alert Dialog"),
  content: Text("This is a basic alert dialog."),
  actions: <Widget>[
    TextButton(
      child: Text("Close"),
      onPressed: () {
        Navigator.of(context).pop();
      },
    ),
  ],
);
},
);
}

@override
Widget build(BuildContext context) {
  return Scaffold(
    appBar: AppBar(title: Text("Flutter Alert Dialog Example")),
    body: Center(
      child: ElevatedButton(
        onPressed: () {
          _showAlertDialog(context);
        },
        child: Text("Show Alert Dialog"),
      ),
    ),
  );
}
}

```



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

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: MyHomePage(),
    );
  }
}

class MyHomePage extends StatelessWidget {
  @override
```

```

Widget build(BuildContext context) {
  return Scaffold(
    appBar: AppBar(
      title: Text("Flutter Icons Example"),
    ),
    body: Center(
      child: Column(
        mainAxisAlignment: MainAxisAlignment.center,
        children: <Widget>[
          Icon(
            Icons.star,
            size: 100.0,
            color: Colors.yellow,
          ),
          Text("Star Icon", style: TextStyle(fontSize: 20.0)),
          SizedBox(height: 20.0),
          Icon(
            Icons.favorite,
            size: 100.0,
            color: Colors.red,
          ),
          Text("Favorite Icon", style: TextStyle(fontSize: 20.0)),
          SizedBox(height: 20.0),
          Icon(
            Icons.local_florist,
            size: 100.0,
            color: Colors.green,
          ),
          Text("Florist Icon", style: TextStyle(fontSize: 20.0)),
        ],
      ),
    ),
  );
}

import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(home: MyHomePage());
  }
}

```



```

}
}

class MyHomePage extends StatelessWidget {
  final List<String> items = ['Item 1', 'Item 2', 'Item 3', 'Item 4',
'Item 5'];

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(title: Text("Flutter List Example")),
      body: ListView.builder(
        itemCount: items.length,
        itemBuilder: (BuildContext context, int index) {
          return ListTile(title: Text(items[index]));
        },
      ),
    );
  }
}

```



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

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

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      theme: ThemeData(
        scaffoldBackgroundColor: Colors.black, // Set background color
to black
        primaryColor: Colors.yellow, // Set text color to yellow
      ),
      home: MyHomePage(),
    );
  }
}

class MyHomePage extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(title: Text('Flutter Theme Example')),
      body: Center(
        child: Text(
          'Welcome to Flutter Themes',
          style: TextStyle(
            fontSize: 24,
            color: Colors.yellow, // Set text color explicitly
          ),
        ),
      ),
    );
  }
}
```

Flutter Theme Example

DEBUG

Welcome to Flutter
Themes

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

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

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: MyHomePage(),
    );
  }
}
```

```

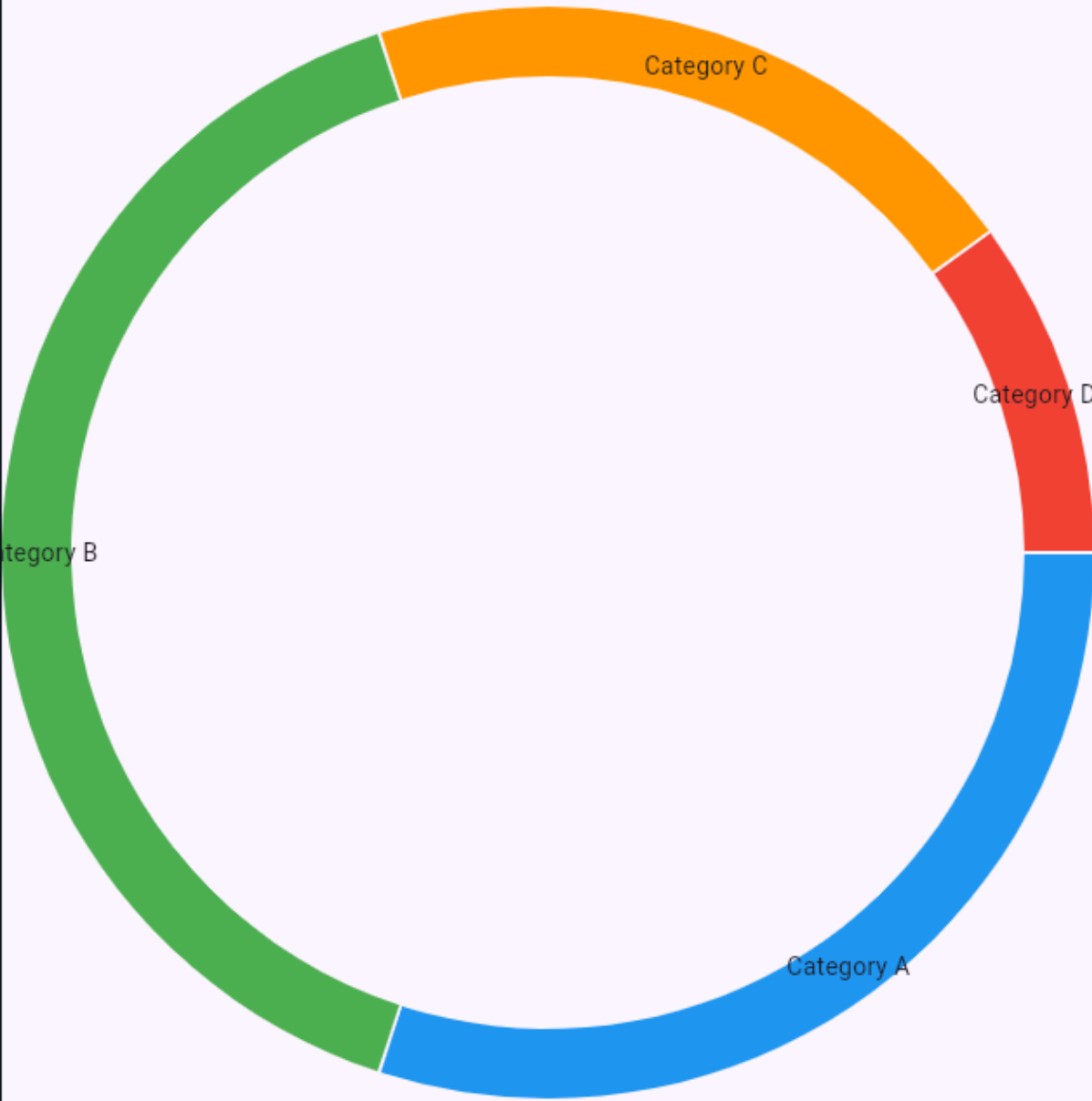
}

class MyHomePage extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('Flutter Pie Chart Demo'),
      ),
      body: Center(
        child: PieChart(
          PieChartData(
            sections: [
              PieChartSectionData(
                color: Colors.blue,
                value: 30,
                title: 'Category A',
              ),
              PieChartSectionData(
                color: Colors.green,
                value: 40,
                title: 'Category B',
              ),
              PieChartSectionData(
                color: Colors.orange,
                value: 20,
                title: 'Category C',
              ),
              PieChartSectionData(
                color: Colors.red,
                value: 10,
                title: 'Category D',
              ),
            ],
          ),
        ),
      ),
    );
  }
}

```

Flutter Pie Chart Demo

DEBUG



Day 3

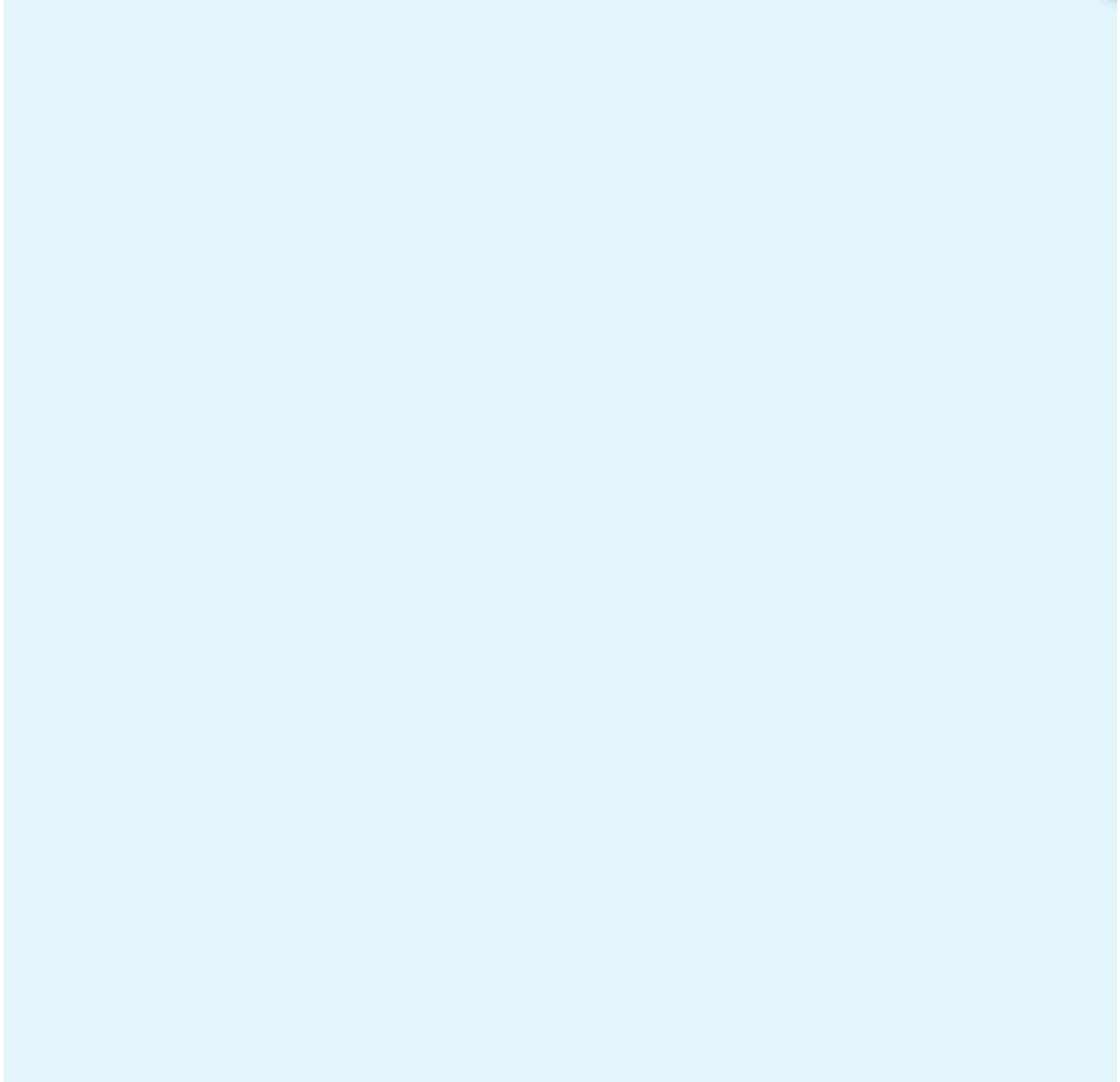
Day 3

Date:- 07-08-2025

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

void main() {
  runApp(Myapplication());
}

class Myapplication extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        backgroundColor: Colors.lightBlue[50],
        appBar: AppBar(
          title: const Text(
            'First Flutter Application',
            style: TextStyle(color: Colors.yellow),
          ),
          backgroundColor: Colors.blue,
        ),
      ),
    );
  }
}
```



Drawer Header

- 🏠 Home
- ⚙️ Settings
- 👤* Emergency contact

Drawer Example App

DEBUG

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

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(
          title: Text('Drawer Example'),
        ),
        drawer: Drawer(
```

```

    child: ListView(
      padding: EdgeInsets.zero,
      children: <Widget>[
        DrawerHeader(
          decoration: BoxDecoration(
            color: Colors.blue,
          ),
          child: Text(
            'Drawer Header',
            style: TextStyle(
              color: Colors.white,
              fontSize: 24,
            ),
          ),
        ),
        ListTile(
          leading: Icon(Icons.home),
          title: Text('Home'),
          onTap: () => Navigator.pop(context),
        ),
        ListTile(
          leading: Icon(Icons.settings),
          title: Text('Settings'),
          onTap: () => Navigator.pop(context),
        ),
        ListTile(
          leading: Icon(Icons.contact_emergency),
          title: Text('Emergency contact'),
          onTap: () => Navigator.pop(context),
        ),
      ],
    ),
  ),
  body: Center(
    child: Text('Drawer Example App'),
  ),
),
);
}
}

```

FloatingActionButton Example

DEBUG

Press the button below!



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

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(
          title: Text('FloatingActionButton Example'),
        ),
        body: Center(
```

```

        child: Text('Press the button below!'),
      ),
      /*floatingActionButton: FloatingActionButton(
        onPressed: () {
          // Action to perform when the button is pressed
          print('Button Pressed!');
        },
        child: Icon(Icons.add),
        backgroundColor: Colors.blue,
      ),*/
      floatingActionButton: FloatingActionButton(
        onPressed: () {
          print("Voila");
        },
        child: Icon(Icons.query_stats),
        backgroundColor: Colors.yellow,
      ),
    ),
  );
}
}

```

Container Example

DEBUG

Hello! I am in the container widget

```
void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(
          title: Text('Container Example'),
        ),
        body: Center(
          child: Container(
            padding: EdgeInsets.all(35),
```

```
margin: EdgeInsets.all(20),
color: Colors.yellow,
alignment: Alignment.bottomRight,
transform: Matrix4.rotationZ(0.1),
child: Text(
  "Hello! I am in the container widget",
  style: TextStyle(fontSize: 25),
),
),
),
),
);
}
}
```

Constraints Example

Can't update Chrome



Chrome couldn't update to the latest version, so you're missing out on new features and security fixes.

Reinstall Chrome

Constrained Container

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

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(
          title: Text('Constraints Example'),
        ),
        body: Center(
```

```
child: Container(  
  constraints: BoxConstraints(  
    minWidth: 400,  
    maxWidth: 500,  
    minHeight: 300,  
    maxHeight: 700,  
  ),  
  color: Colors.blue,  
  child: Center(  
    child: Text(  
      'Constrained Container',  
      style: TextStyle(  
        color: Colors.white,  
        fontSize: 18,  
      ),  
    ),  
  ),  
),  
),  
),  
),  
),  
),  
),  
);  
}  
}
```


Row & Column Ex...

DEBUG



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

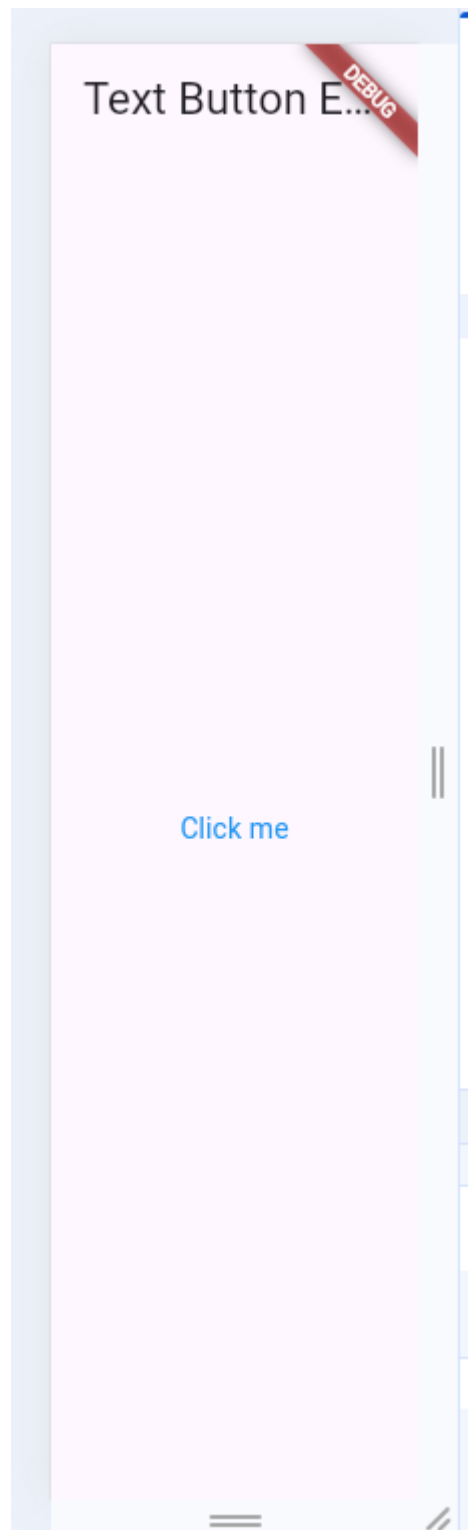
void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
```

```

return MaterialApp(
  home: Scaffold(
    appBar: AppBar(title: Text('Row & Column Example')),
    body: Center(
      child: Column(
        mainAxisAlignment: MainAxisAlignment.center,
        children: [
          Row(
            mainAxisAlignment: MainAxisAlignment.center,
            children: [
              Container(
                width: 50,
                height: 50,
                color: Colors.red,
              ),
              SizedBox(width: 20),
              Container(
                width: 50,
                height: 50,
                color: Colors.green,
              ),
              SizedBox(width: 20),
              Container(
                width: 50,
                height: 50,
                color: Colors.blue,
              ),
              SizedBox(width: 20),
            ],
          ),
        ],
      ),
    );
}

```



```
The Flutter DevTools debug
Text button clicked!
Application finished.
```

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

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

```
}

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(
          title: Text('Text Button Example'),
        ),
        body: Center(
          child: TextButton(
            onPressed: () {
              print('Text button clicked!');
            },
            child: Text(
              'Click me',
              style: TextStyle(color: Colors.blue),
            ),
          ),
        ),
      ),
    );
  }
}
```

Elevated Butt...

DEBUG

Click me

Button pressed!
Application finished.

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

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

```

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(
          title: Text('Elevated Button Example'),
        ),
        body: Center(
          child: ElevatedButton(
            onPressed: () {
              print('Button pressed!');
            },
            style: ElevatedButton.styleFrom(
              backgroundColor: Colors.blue,
              padding: EdgeInsets.symmetric(horizontal: 24, vertical:
12),
            ),
            child: Text(
              'Click me',
              style: TextStyle(color: Colors.white),
            ),
          ),
        ),
      ),
    );
  }
}

```

```

import 'package:flutter/material.dart';

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

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Chairman Profile',
      home: ChairmanProfileScreen(),
      debugShowCheckedModeBanner: false,
    );
  }
}

```

```

    }
}

class ChairmanProfileScreen extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('Ramaiah Chairman Profile'),
        backgroundColor: Colors.blue[900],
      ),
      body: Center(
        child: Padding(
          padding: const EdgeInsets.symmetric(horizontal: 20.0,
vertical: 40.0),
          child: Column(
            mainAxisAlignment: MainAxisAlignment.min,
            children: [
              CircleAvatar(
                radius: 50,
                backgroundImage:
AssetImage('assets/images/chairman.jpg'),
              ),
              SizedBox(height: 20),
              Text(
                'Dr. M.S. Ramaiah',
                style: TextStyle(
                  fontSize: 22,
                  fontWeight: FontWeight.bold,
                  color: Colors.blue[900],
                ),
              ),
              SizedBox(height: 8),
              Text(
                'Founder Chairman',
                style: TextStyle(
                  fontSize: 16,
                  fontStyle: FontStyle.italic,
                  color: Colors.grey[700],
                ),
              ),
              SizedBox(height: 16),
              Text(

```

```
        'Mathikere Sampangi Ramaiah was born on 20 April 1922 in  
Madhugiri in Tumkur District and Karnataka.',  
        style: TextStyle(  
          fontSize: 14,  
          color: Colors.black87,  
        ),  
        textAlign: TextAlign.center,  
      ),  
    ],  
  ),  
),  
bottomNavigationBar: BottomAppBar(  
  child: Padding(  
    padding: const EdgeInsets.all(12.0),  
    child: Text(  
      'Dept. of CS&E, MSRIT',  
      textAlign: TextAlign.center,  
      style: TextStyle(color: Colors.grey[600]),  
    ),  
  ),  
),  
);  
}
```




Dr. M.S. Ramaiah

Founder Chairman

Mathikere Sampangi Ramalah
was born on 20 April 1922 in
Madhugiri in Tumkur District
and Karnataka.

Dept. of CS&E, MSRIT





```
void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: MyHomePage(),
    );
  }
}

class MyHomePage extends StatelessWidget {
  void _showAlertDialog(BuildContext context) {
    showDialog(
```

```

    context: context,
    builder: (BuildContext context) {
      return AlertDialog(
        title: Text("Alert Dialog"),
        content: Text("This is a basic alert dialog."),
        actions: <Widget>[
          TextButton(
            child: Text("Close"),
            onPressed: () {
              Navigator.of(context).pop();
            },
          ),
        ],
      );
    },
  );
}

```

```

@override
Widget build(BuildContext context) {
  return Scaffold(
    appBar: AppBar(
      title: Text("Flutter Alert Dialog Example"),
    ),
    body: Center(
      child: ElevatedButton(
        onPressed: () {
          _showAlertDialog(context);
        },
        child: Text("Show Alert Dialog"),
      ),
    ),
  );
}
}

```

Flutter Icons Example



Star Icon



Favorite Icon



Florist Icon

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

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: MyHomePage(),
    );
  }
}

class MyHomePage extends StatelessWidget {
```

```

@override
Widget build(BuildContext context) {
  return Scaffold(
    appBar: AppBar(
      title: Text("Flutter Icons Example"),
    ),
    body: Center(
      child: Column(
        mainAxisAlignment: MainAxisAlignment.center,
        children: <Widget>[
          Icon(
            Icons.star,
            size: 100.0,
            color: Colors.yellow,
          ),
          Text("Star Icon", style: TextStyle(fontSize: 20.0)),
          SizedBox(height: 20.0),
          Icon(
            Icons.favorite,
            size: 100.0,
            color: Colors.red,
          ),
          Text("Favorite Icon", style: TextStyle(fontSize: 20.0)),
          SizedBox(height: 20.0),
          Icon(
            Icons.local_florist,
            size: 100.0,
            color: Colors.green,
          ),
          Text("Florist Icon", style: TextStyle(fontSize: 20.0)),
        ],
      ),
    ),
  );
}

```

Flutter List Example

DEBUG

Item 1

Item 2

Item 3

Item 4

Item 5

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

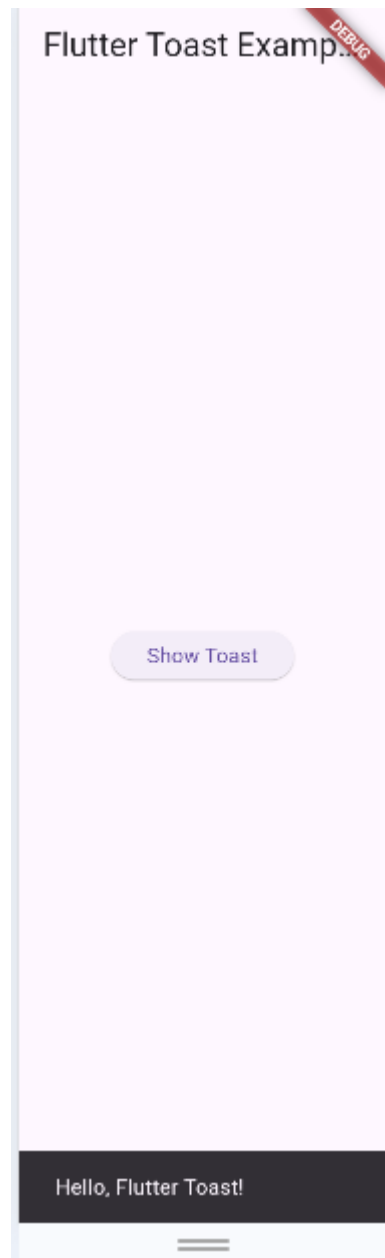
void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: MyHomePage(),
    );
  }
}

class MyHomePage extends StatelessWidget {
```

```
final List<String> items = [
  'Item 1',
  'Item 2',
  'Item 3',
  'Item 4',
  'Item 5',
];

@override
Widget build(BuildContext context) {
  return Scaffold(
    appBar: AppBar(
      title: Text("Flutter List Example"),
    ),
    body: ListView.builder(
      itemCount: items.length,
      itemBuilder: (BuildContext context, int index) {
        return ListTile(
          title: Text(items[index]),
        );
      },
    ),
  );
}
```



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

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

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: MyHomePage(),
    );
  }
}
```



```
class MyHomePage extends StatelessWidget {
  void showToast(BuildContext context) {
    ScaffoldMessenger.of(context).showSnackBar(
      SnackBar(
        content: Text('Hello, Flutter Toast!'),
        duration: Duration(seconds: 2),
      ),
    );
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('Flutter Toast Example'),
      ),
      body: Center(
        child: ElevatedButton(
          onPressed: () => showToast(context),
          child: Text('Show Toast'),
        ),
      ),
    );
  }
}
```

Flutter Theme Exam...

DEBUG

Welcome to Flutter
Themes

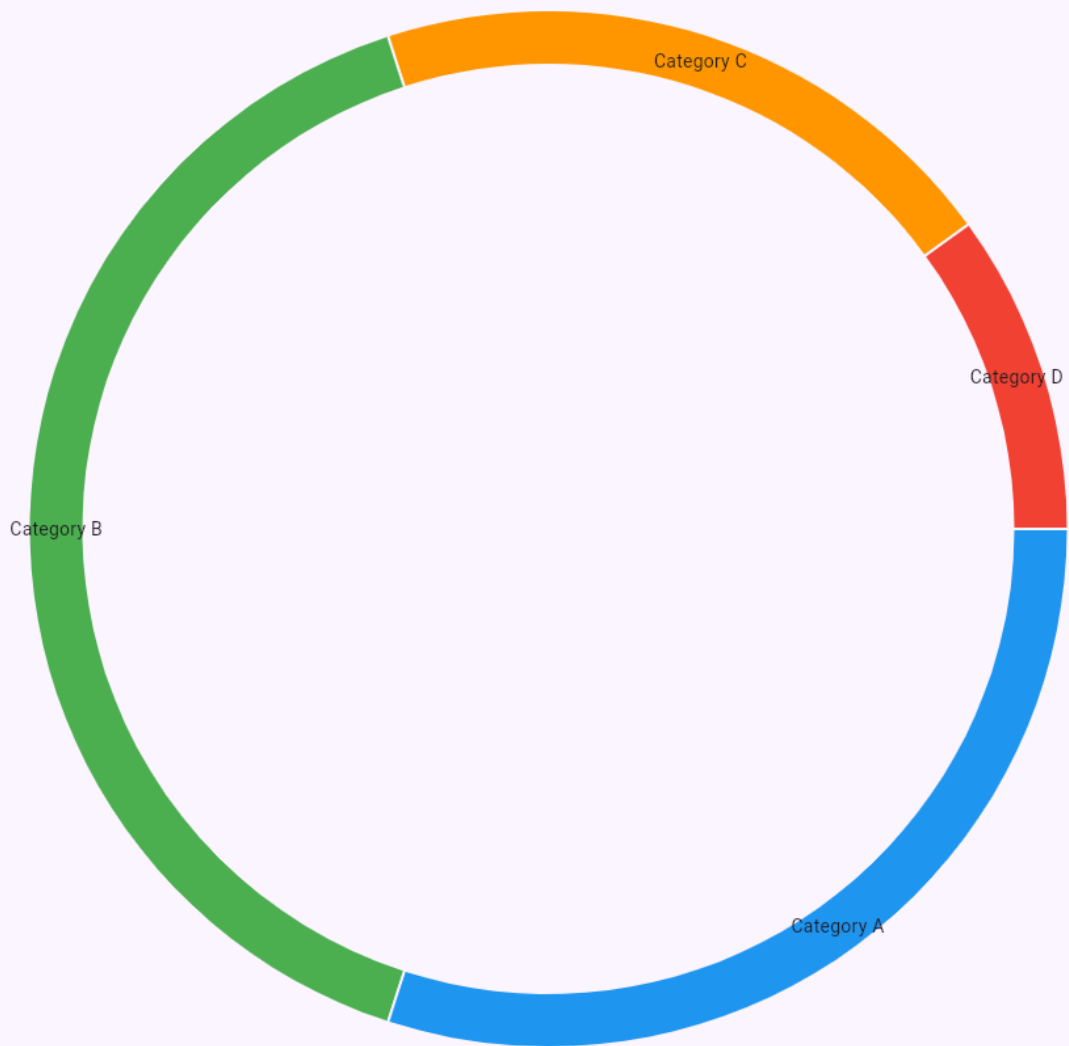
```
import 'package:flutter/material.dart';

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

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      theme: ThemeData(
        scaffoldBackgroundColor: Colors.black, // Set background color
        to black
        primaryColor: Colors.yellow, // Set text color to yellow
      ),
    );
  }
}
```

```
    ),  
    home: MyHomePage(),  
  );  
}  
}  
  
class MyHomePage extends StatelessWidget {  
  @override  
  Widget build(BuildContext context) {  
    return Scaffold(  
      appBar: AppBar(  
        title: Text('Flutter Theme Example'),  
      ),  
      body: Center(  
        child: Text(  
          'Welcome to Flutter Themes',  
          style: TextStyle(  
            fontSize: 24,  
            color: Colors.yellow, // Set text color explicitly  
          ),  
        ),  
      ),  
    );  
  }  
}
```

Flutter Pie Chart Demo



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

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

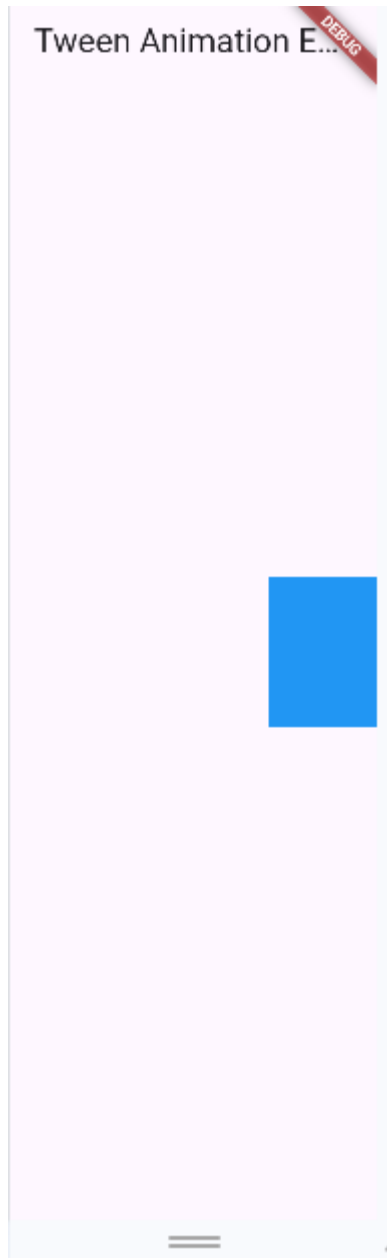
class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: MyHomePage(),
    );
  }
}
```

```
class MyHomePage extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('Flutter Pie Chart Demo'),
      ),
      body: Center(
        child: PieChart(
          PieChartData(
            sections: [
              PieChartSectionData(
                color: Colors.blue,
                value: 30,
                title: 'Category A',
              ),
              PieChartSectionData(
                color: Colors.green,
                value: 40,
                title: 'Category B',
              ),
              PieChartSectionData(
                color: Colors.orange,
                value: 20,
                title: 'Category C',
              ),
              PieChartSectionData(
                color: Colors.red,
                value: 10,
                title: 'Category D',
              ),
            ],
          ),
        ),
      ),
    );
  }
}
```

Day 4

Day 4

Date- 09-08-2025



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

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

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: TweenAnimationExample(),
    );
  }
}

class TweenAnimationExample extends StatefulWidget {
```

Assignment

```
@override
_TweenAnimationExampleState createState() =>
_TweenAnimationExampleState();
}

class _TweenAnimationExampleState extends State<TweenAnimationExample>
with SingleTickerProviderStateMixin {
  late AnimationController _controller;
  late Animation<Offset> _animation;

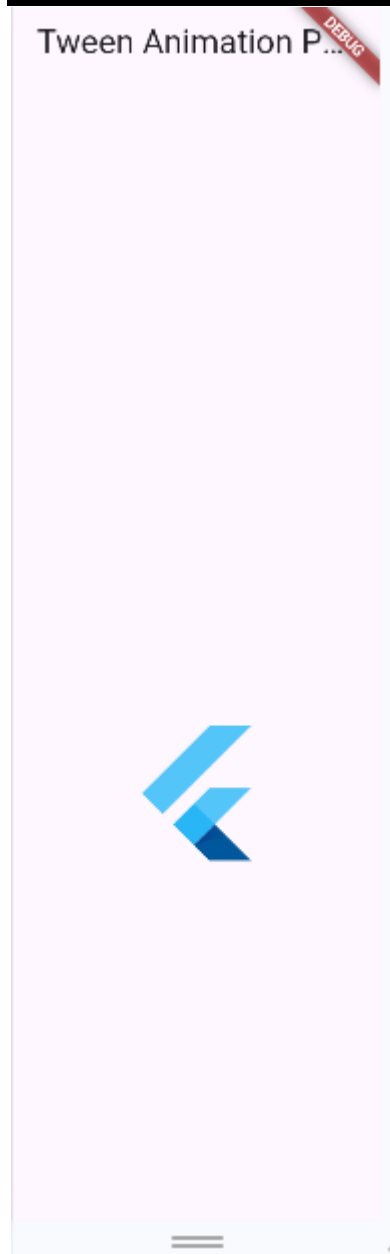
  @override
  void initState() {
    super.initState();
    // Initialize AnimationController
    _controller = AnimationController(
      duration: Duration(seconds: 3),
      vsync: this,
    );
    // Create a Tween for Offset (move along x-axis)
    _animation = Tween<Offset>(
      begin: Offset(0, 0), // start position
      end: Offset(1, 0), // end position (move to the right)
    ).animate(CurvedAnimation(
      parent: _controller,
      curve: Curves.easeInOut, // smooth transition curve
    ));
    // Start the animation
    _controller.forward();
  }

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

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('Tween Animation Example'),
      ),
      body: Center(
        child: SlideTransition(
          position: _animation, // Use the Tween animation here
          child: Container(
```


Assignment

```
width: 100,  
height: 100,  
color: Colors.blue,  
,  
,  
,  
,  
};  
}  
}
```



```
import 'package:flutter/material.dart';  
void main() {  
  runApp(MyApp());  
}  
class MyApp extends StatelessWidget {
```

Assignment

```
@override
Widget build(BuildContext context) {
  return MaterialApp(
    title: 'Tween Animation Example',
    theme: ThemeData(
      primarySwatch: Colors.blue,
    ),
    home: TweenAnimationPage(title: 'Tween Animation Page'),
  );
}

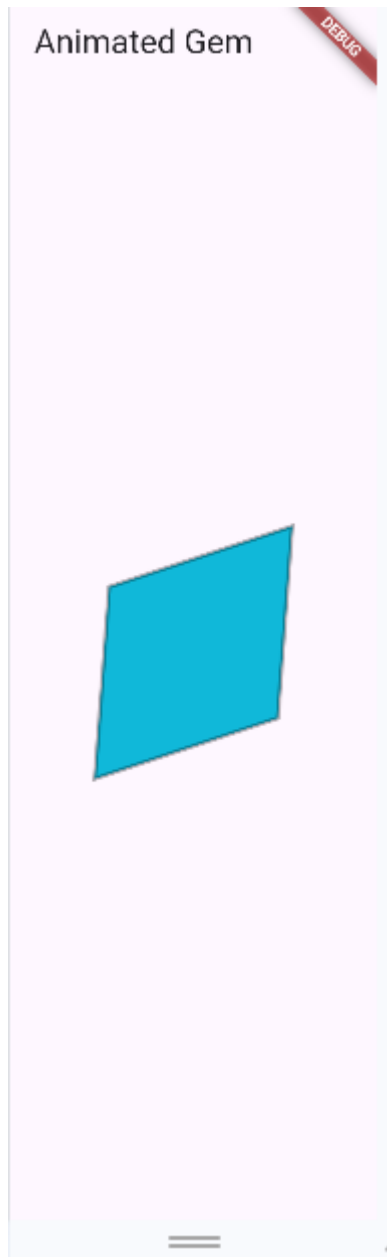
class TweenAnimationPage extends StatefulWidget {
  TweenAnimationPage({Key? key, required this.title}) : super(key: key);
  final String title;
  @override
  _TweenAnimationPageState createState() => _TweenAnimationPageState();
}

class _TweenAnimationPageState extends State<TweenAnimationPage>
  with TickerProviderStateMixin {
  late AnimationController _simpleAnimController;
  late Animation<double> _simpleAnim;
  @override
  void initState() {
    super.initState();
    _simpleAnimController = AnimationController(vsync: this, duration:
      Duration(milliseconds: 1000))
      ..addListener(() => setState(() {}))
      ..addStatusListener((animStatus) {
        if (animStatus == AnimationStatus.completed)
          _simpleAnimController.reverse();
        if (animStatus == AnimationStatus.dismissed)
          _simpleAnimController.forward();
      });
    _simpleAnim = Tween<double>(
      begin: 50,
      end: 300,
    ).animate(_simpleAnimController);

    _simpleAnimController.forward();
  }
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text(widget.title),
      ),
      body: Stack(children: <Widget>[
        Center(
```

Assignment

```
child: Padding(  
  padding: EdgeInsets.only(top: _simpleAnim.value),  
  child: Container(  
    width: 100,  
    height: 100,  
    child: FlutterLogo(),  
  ),  
),  
),  
),  
]),  
);  
}  
}
```



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

Assignment

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

```
class MyApp extends StatelessWidget {  
  const MyApp({super.key});
```

```
  @override  
  Widget build(BuildContext context) {  
    return MaterialApp(  
      title: 'Animated Gem',  
      theme: ThemeData(  
        primarySwatch: Colors.blue,  
        visualDensity: VisualDensity.adaptivePlatformDensity,  
      ),  
      home: const DiamondAnimationPage(),  
    );  
  }  
}
```

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

```
  @override  
  _DiamondAnimationPageState createState() => _DiamondAnimationPageState();  
}
```

```
class _DiamondAnimationPageState extends State<DiamondAnimationPage>  
  with TickerProviderStateMixin {  
  late AnimationController _controller;  
  late Animation<double> _sizeAnimation;  
  late Animation<double> _rotationAnimation;  
  late Animation<Color?> _colorAnimation;
```

```
  @override  
  void initState() {  
    super.initState();
```

```
    _controller = AnimationController(  
      vsync: this,  
      duration: const Duration(seconds: 2),  
    )  
    ..addListener(() {  
      setState(() {});  
    })  
    ..addStatusListener((status) {  
      if (status == AnimationStatus.completed) {  
        _controller.reverse();
```

Assignment

```
    } else if (status == AnimationStatus.dismissed) {
      _controller.forward();
    }
  });

  _sizeAnimation = Tween<double>(begin: 1.0, end: 1.5).animate(
    CurvedAnimation(
      parent: _controller,
      curve: Curves.easeInOut,
    ),
  );

  _rotationAnimation = Tween<double>(begin: 0, end: 0.7854).animate(
    CurvedAnimation(
      parent: _controller,
      curve: Curves.easeInOut,
    ),
  );

  _colorAnimation = ColorTween(
    begin: Colors.blue.shade300,
    end: Colors.cyanAccent.shade700,
  ).animate(
    CurvedAnimation(
      parent: _controller,
      curve: Curves.easeInOut,
    ),
  );

  _controller.forward();
}

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

@override
Widget build(BuildContext context) {
  return Scaffold(
    appBar: AppBar(
      title: const Text('Animated Gem'),
    ),
    body: Center(
      child: Transform.rotate(
        angle: _rotationAnimation.value,
        child: Transform.scale(
```

Assignment

```
        scale: _sizeAnimation.value,
        child: CustomPaint(
          size: const Size(100, 150), // Width 100, Height 150 for a taller diamond
          painter: DiamondPainter(_colorAnimation.value!),
        ),
      ),
    ),
  );
}
```

```
class DiamondPainter extends CustomPainter {
  final Color color;
```

```
  DiamondPainter(this.color);
```

```
  @override
```

```
  void paint(Canvas canvas, Size size) {
```

```
    final Paint fillPaint = Paint()
```

```
      ..color = color
```

```
      ..style = PaintingStyle.fill;
```

```
    final Path path = Path();
```

```
    path.moveTo(size.width / 2, 0); // Top point
```

```
    path.lineTo(size.width, size.height / 2); // Right point
```

```
    path.lineTo(size.width / 2, size.height); // Bottom point
```

```
    path.lineTo(0, size.height / 2); // Left point
```

```
    path.close();
```

```
    canvas.drawPath(path, fillPaint);
```

```
    // Optional: Add a subtle border for definition
```

```
    final Paint borderPaint = Paint()
```

```
      ..color = Colors.black.withOpacity(0.3)
```

```
      ..style = PaintingStyle.stroke
```

```
      ..strokeWidth = 2.0;
```

```
    canvas.drawPath(path, borderPaint);
```

```
  }
```

```
  @override
```

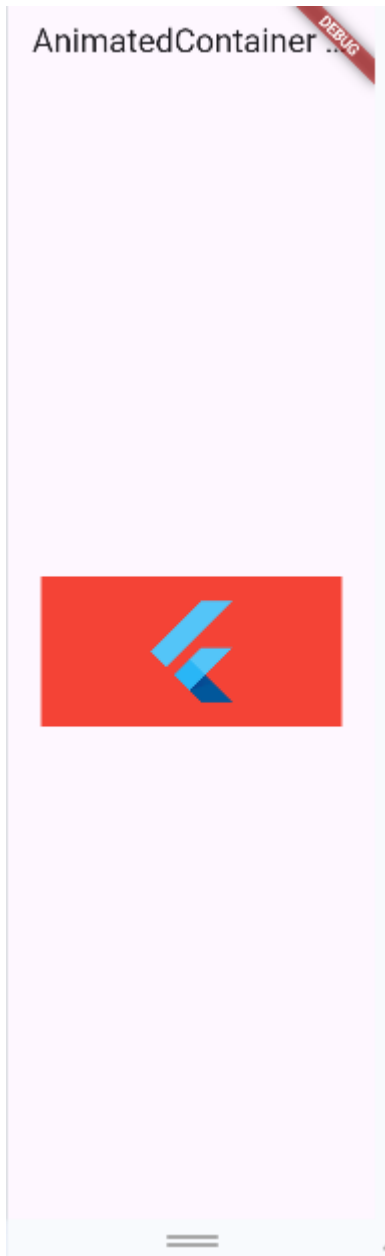
```
  bool shouldRepaint(covariant DiamondPainter oldDelegate) {
```

```
    return oldDelegate.color != color;
```

```
  }
```

```
}
```

Assignment



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

/// Flutter code sample for [AnimatedContainer].
void main() => runApp(const AnimatedContainerExampleApp());

class AnimatedContainerExampleApp extends StatelessWidget {
  const AnimatedContainerExampleApp({super.key});

  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(title: const Text('AnimatedContainer Sample')),
        body: const AnimatedContainerExample(),
      ),
    );
  }
}
```

Assignment

```
);  
}  
}
```

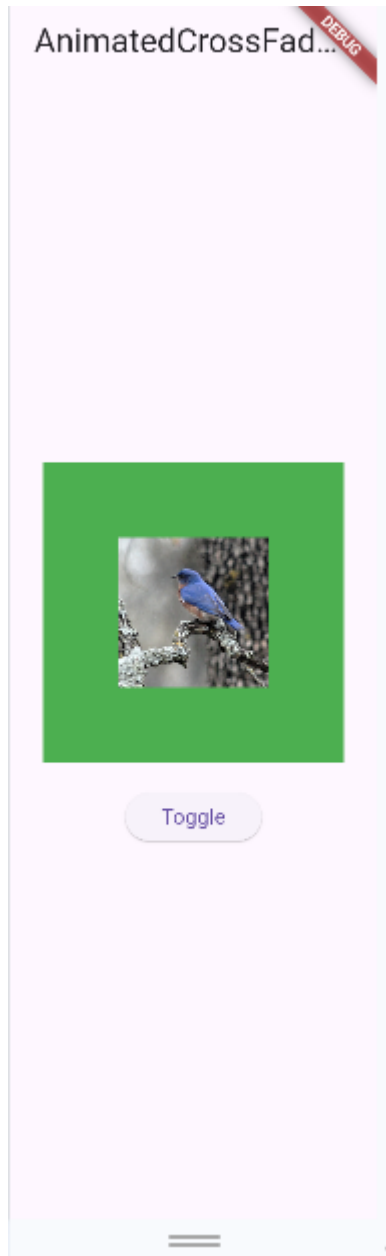
```
class AnimatedContainerExample extends StatefulWidget {  
  const AnimatedContainerExample({super.key});
```

```
  @override  
  State<AnimatedContainerExample> createState() => _AnimatedContainerExampleState();  
}
```

```
class _AnimatedContainerExampleState extends State<AnimatedContainerExample> {  
  bool selected = false;
```

```
  @override  
  Widget build(BuildContext context) {  
    return GestureDetector(  
      onTap: () {  
        setState(() {  
          selected = !selected;  
        });  
      },  
      child: Center(  
        child: AnimatedContainer(  
          width: selected ? 200.0 : 100.0,  
          height: selected ? 100.0 : 200.0,  
          color: selected ? Colors.red : Colors.blue,  
          alignment: selected ? Alignment.center : AlignmentDirectional.topCenter,  
          duration: const Duration(seconds: 2),  
          curve: Curves.fastOutSlowIn,  
          child: const FlutterLogo(size: 75),  
        ),  
      ),  
    );  
  }  
}
```


Assignment



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

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

```
class MyApp extends StatelessWidget {  
  const MyApp({super.key});
```

```
  @override  
  Widget build(BuildContext context) {  
    return MaterialApp(  
      title: 'CrossFade Transition',  
      theme: ThemeData(  
        primarySwatch: Colors.blue,
```

Assignment

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

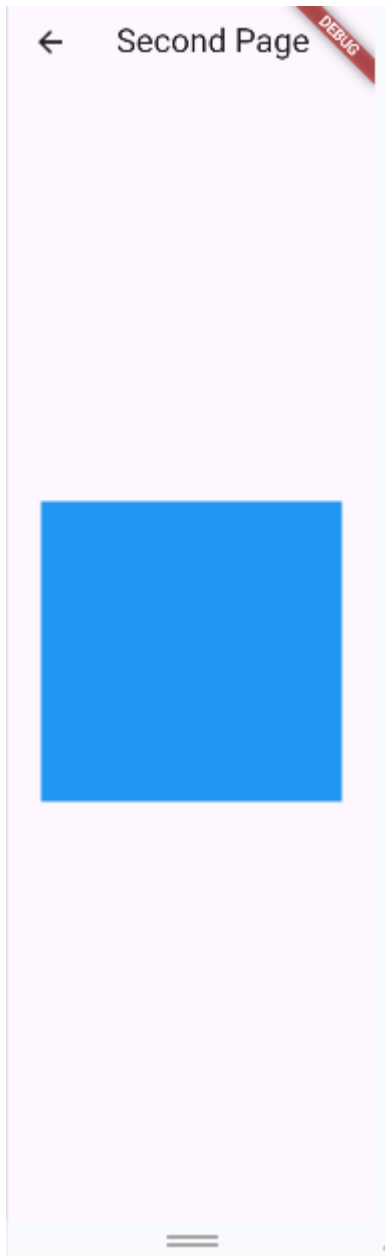
```
class AnimatedCrossFadePage extends StatefulWidget {  
  const AnimatedCrossFadePage({super.key});  
  
  @override  
  _AnimatedCrossFadePageState createState() => _AnimatedCrossFadePageState();  
}
```

```
class _AnimatedCrossFadePageState extends State<AnimatedCrossFadePage> {  
  bool _showText = true; // Variable to toggle between text and image  
  
  @override  
  Widget build(BuildContext context) {  
    return Scaffold(  
      appBar: AppBar(  
        title: const Text('AnimatedCrossFade Example'),  
      ),  
      body: Center(  
        child: Column(  
          mainAxisAlignment: MainAxisAlignment.center,  
          children: <Widget>[  
            AnimatedCrossFade(  
              firstChild: Container(  
                color: Colors.blue,  
                width: 200,  
                height: 200,  
                child: const Center(  
                  child: Text(  
                    'Hello, Flutter!',  
                    style: TextStyle(color: Colors.white, fontSize: 20),  
                  ),  
                ),  
              ),  
              secondChild: Container(  
                color: Colors.green,  
                width: 200,  
                height: 200,  
                child: Center(  
                  child: Image.network(  
                    'https://www.gstatic.com/flutter-onestack-prototype/genui/example_1.jpg',  
                    width: 100,  
                    height: 100,  
                  ),  
                ),  
              ),  
            ],  
          ),  
        ),  
      ),  
    );  
  }  
}
```

Assignment

```
    ),
  ),
  crossFadeState:
    _showText ? CrossFadeState.showFirst : CrossFadeState.showSecond,
  duration: const Duration(seconds: 1),
),
const SizedBox(height: 20),
ElevatedButton(
  onPressed: () {
    setState(() {
      _showText = !_showText;
    });
  },
  child: const Text('Toggle'),
),
],
),
),
);
}
```

Assignment



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

```
/// Flutter code sample for [Hero].
```

```
void main() => runApp(const HeroApp());
```

```
class HeroApp extends StatelessWidget {  
  const HeroApp({super.key});
```

```
  @override  
  Widget build(BuildContext context) {  
    return const MaterialApp(home: HeroExample());  
  }  
}
```

```
class HeroExample extends StatelessWidget {
```

Assignment

```
const HeroExample({super.key});
```

```
@override
```

```
Widget build(BuildContext context) {  
  return Scaffold(  
    appBar: AppBar(title: const Text('Hero Sample')),  
    body: Column(  
      crossAxisAlignment: CrossAxisAlignment.start,  
      children: <Widget>[  
        const SizedBox(height: 20.0),  
        ListTile(  
          leading: const Hero(  
            tag: 'hero-rectangle',  
            child: BoxWidget(size: Size(50.0, 50.0)),  
          ),  
          onTap: () => _gotoDetailsPage(context),  
          title: const Text('Tap on the icon to view hero animation transition.'),  
        ),  
      ],  
    ),  
  );  
}
```

```
void _gotoDetailsPage(BuildContext context) {  
  Navigator.of(context).push<void>(  
    MaterialPageRoute<void>(  
      builder: (BuildContext context) => Scaffold(  
        appBar: AppBar(title: const Text('Second Page')),  
        body: const Center(  
          child: Hero(  
            tag: 'hero-rectangle',  
            child: BoxWidget(size: Size(200.0, 200.0)),  
          ),  
        ),  
      ),  
    ),  
  );  
}
```

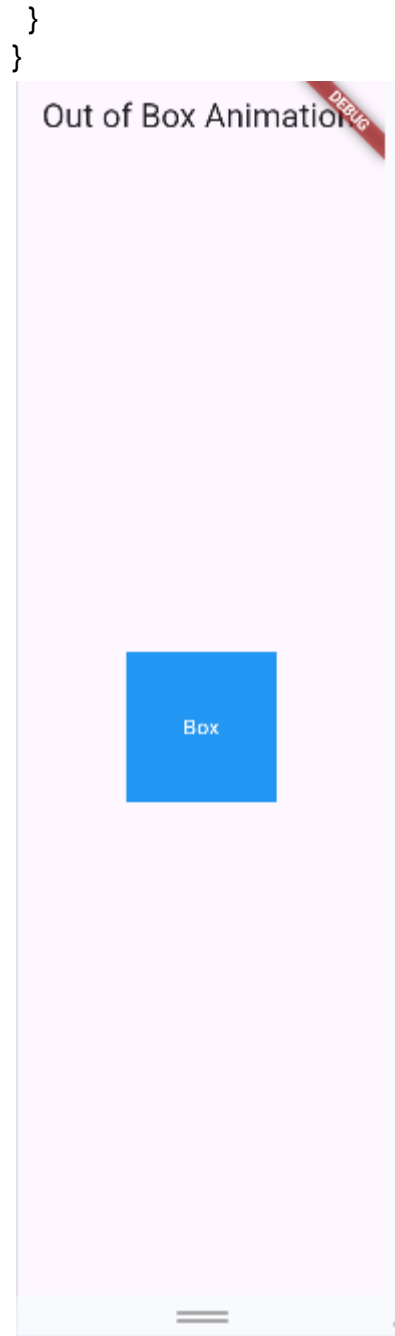
```
class BoxWidget extends StatelessWidget {  
  const BoxWidget({super.key, required this.size});
```

```
  final Size size;
```

```
@override
```

```
Widget build(BuildContext context) {  
  return Container(width: size.width, height: size.height, color: Colors.blue);
```

Assignment



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

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

```
class MyApp extends StatelessWidget {  
  @override  
  Widget build(BuildContext context) {  
    return MaterialApp(  
      home: OutOfBoxAnimationPage(),  
    );  
  }  
}
```

Assignment

```
}
```

```
class OutOfBoxAnimationPage extends StatefulWidget {  
  @override  
  _OutOfBoxAnimationPageState createState() => _OutOfBoxAnimationPageState();  
}
```

```
class _OutOfBoxAnimationPageState extends State<OutOfBoxAnimationPage> {  
  double _leftPosition = 50.0; // Starting position of the box  
  bool _isOutOfBox = false;  
  
  void _moveOutOfBox() {  
    setState(() {  
      _isOutOfBox = !_isOutOfBox;  
      if (_isOutOfBox) {  
        // Move the box out of the container to the right edge  
        _leftPosition = MediaQuery.of(context).size.width;  
      } else {  
        // Bring the box back inside the container  
        _leftPosition = 50.0;  
      }  
    });  
  }  
}
```

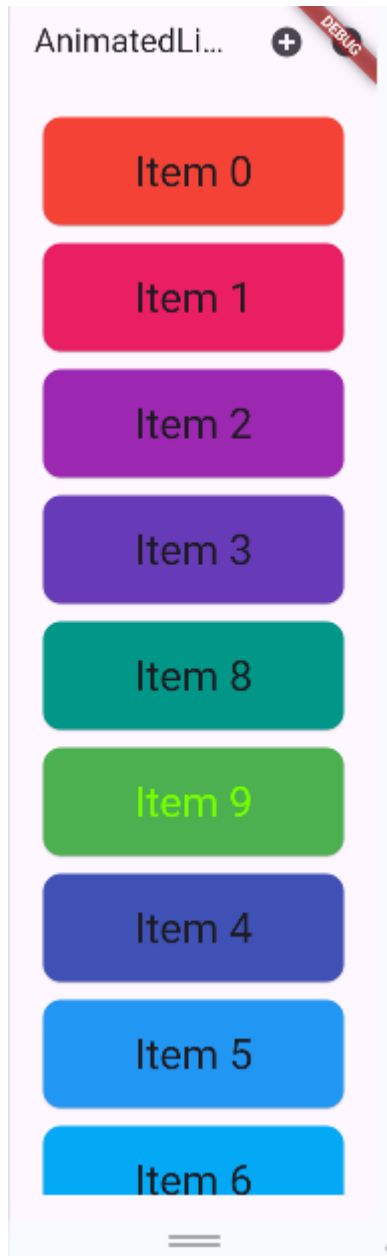
```
@override  
Widget build(BuildContext context) {  
  return Scaffold(  
    appBar: AppBar(  
      title: Text('Out of Box Animation'),  
    ),  
    body: Center(  
      child: GestureDetector(  
        onTap: _moveOutOfBox,  
        child: SizedBox(  
          width: double.infinity,  
          height: 400, // enough height for positioning  
          child: Stack(  
            children: [  
              AnimatedPositioned(  
                duration: Duration(seconds: 2),  
                curve: Curves.easeInOut,  
                left: _leftPosition,  
                top: 150.0,  
                child: Container(  
                  width: 100,  
                  height: 100,  
                  color: Colors.blue,  
                  child: Center(  

```

Assignment

```
      child: Text(  
        'Box',  
        textAlign: TextAlign.center,  
        style: TextStyle(color: Colors.white),  
      ),  
    ),  
  ),  
),  
],  
),  
),  
),  
),  
),  
);  
}  
}
```


Assignment



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

```
/// Flutter code sample for [AnimatedList].
```

```
void main() {  
  runApp(const AnimatedListSample());  
}
```

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

```
  @override  
  State<AnimatedListSample> createState() => _AnimatedListSampleState();  
}
```

```
class _AnimatedListSampleState extends State<AnimatedListSample> {
```

Assignment

```
final GlobalKey<AnimatedListState> _listKey = GlobalKey<AnimatedListState>();
late ListModel<int> _list;
int? _selectedItem;
late int _nextItem; // The next item inserted when the user presses the '+' button.

@override
void initState() {
  super.initState();
  _list = ListModel<int>(
    listKey: _listKey,
    initialItems: <int>[0, 1, 2],
    removedItemBuilder: _buildRemovedItem,
  );
  _nextItem = 3;
}

// Used to build list items that haven't been removed.
Widget _buildItem(BuildContext context, int index, Animation<double> animation) {
  return CardItem(
    animation: animation,
    item: _list[index],
    selected: _selectedItem == _list[index],
    onTap: () {
      setState(() {
        _selectedItem = _selectedItem == _list[index] ? null : _list[index];
      });
    },
  );
}

/// The builder function used to build items that have been removed.
///
/// Used to build an item after it has been removed from the list. This method
/// is needed because a removed item remains visible until its animation has
/// completed (even though it's gone as far as this ListModel is concerned).
/// The widget will be used by the [AnimatedListState.removeItem] method's
/// [AnimatedRemovedItemBuilder] parameter.
Widget _buildRemovedItem(int item, BuildContext context, Animation<double> animation) {
  return CardItem(
    animation: animation,
    item: item,
    // No gesture detector here: we don't want removed items to be interactive.
  );
}

// Insert the "next item" into the list model.
void _insert() {
  final int index = _selectedItem == null ? _list.length : _list.indexOf(_selectedItem!);
```

Assignment

```
    _list.insert(index, _nextItem);
    _nextItem++;
}

// Remove the selected item from the list model.
void _remove() {
    if (_selectedItem != null) {
        _list.removeAt(_list.indexOf(_selectedItem!));
        setState(() {
            _selectedItem = null;
        });
    }
}
```

```
@override
Widget build(BuildContext context) {
    return MaterialApp(
        home: Scaffold(
            appBar: AppBar(
                title: const Text('AnimatedList Example'),
                actions: <Widget>[
                    IconButton(
                        icon: const Icon(Icons.add_circle),
                        onPressed: _insert,
                        tooltip: 'Insert a new item',
                    ),
                    IconButton(
                        icon: const Icon(Icons.remove_circle),
                        onPressed: _remove,
                        tooltip: 'Remove the selected item',
                    ),
                ],
            ),
            body: Padding(
                padding: const EdgeInsets.all(16.0),
                child: AnimatedList(
                    key: _listKey,
                    initialItemCount: _list.length,
                    itemBuilder: _buildItem,
                ),
            ),
        ),
    );
}
```

```
typedef RemovedItemBuilder<T> = Widget Function(T item, BuildContext context,
    Animation<double> animation);
```

Assignment

```
/// Keeps a Dart [List] in sync with an [AnimatedList].
///
/// The [insert] and [removeAt] methods apply to both the internal list and
/// the animated list that belongs to [listKey].
///
/// This class only exposes as much of the Dart List API as is needed by the
/// sample app. More list methods are easily added, however methods that
/// mutate the list must make the same changes to the animated list in terms
/// of [AnimatedListState.insertItem] and [AnimatedListState.removeItem].
class ListModel<E> {
  ListModel({
    required this.listKey,
    required this.removedItemBuilder,
    Iterable<E>? initialItems,
  }) : _items = List<E>.from(initialItems ?? <E>[]);

  final GlobalKey<AnimatedListState> listKey;
  final RemovedItemBuilder<E> removedItemBuilder;
  final List<E> _items;

  AnimatedListState? get _animatedList => listKey.currentState;

  void insert(int index, E item) {
    _items.insert(index, item);
    _animatedList!.insertItem(index);
  }

  E removeAt(int index) {
    final E removedItem = _items.removeAt(index);
    _animatedList!.removeItem(
      index,
      (BuildContext context, Animation<double> animation) {
        return removedItemBuilder(removedItem, context, animation);
      },
    );
    return removedItem;
  }

  int get length => _items.length;

  E operator [](int index) => _items[index];

  int indexOf(E item) => _items.indexOf(item);
}

/// Displays its integer item as 'item N' on a Card whose color is based on
/// the item's value.
```

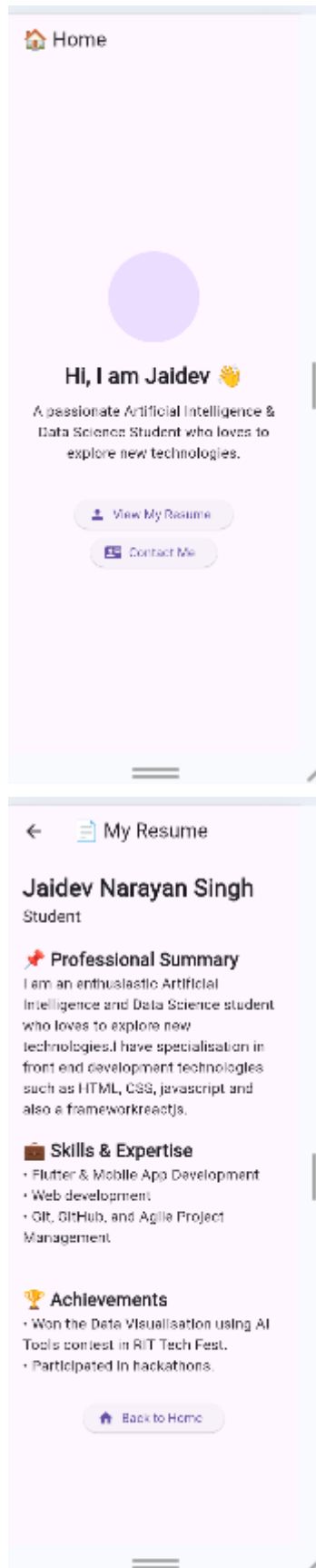
Assignment

```
///
/// The text is displayed in bright green if [selected] is
/// true. This widget's height is based on the [animation] parameter, it
/// varies from 0 to 128 as the animation varies from 0.0 to 1.0.
class CardItem extends StatelessWidget {
  const CardItem({
    super.key,
    this.onTap,
    this.selected = false,
    required this.animation,
    required this.item,
  }) : assert(item >= 0);

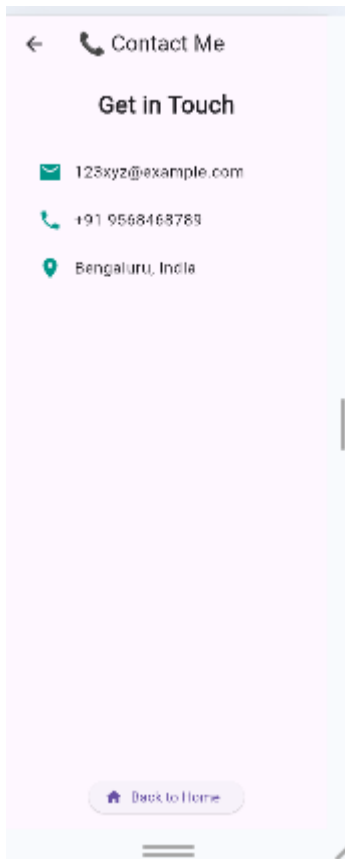
  final Animation<double> animation;
  final VoidCallback? onTap;
  final int item;
  final bool selected;

  @override
  Widget build(BuildContext context) {
    TextStyle textStyle = Theme.of(context).textTheme.headlineMedium!;
    if (selected) {
      textStyle = textStyle.copyWith(color: Colors.lightGreenAccent[400]);
    }
    return Padding(
      padding: const EdgeInsets.all(2.0),
      child: SizeTransition(
        sizeFactor: animation,
        child: GestureDetector(
          behavior: HitTestBehavior.opaque,
          onTap: onTap,
          child: SizedBox(
            height: 80.0,
            child: Card(
              color: Colors.primaryes[item % Colors.primaryes.length],
              child: Center(
                child: Text(
                  'Item $item',
                  style: textStyle,
                ),
              ),
            ),
          ),
        ),
      );
  }
}
```

Assignment



Assignment



main.dart

```
import 'package:flutter/material.dart';
import 'home_screen.dart';
import 'about_screen.dart';
import 'contact_screen.dart';

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

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
      title: 'Jaidev',
      theme: ThemeData(primarySwatch: Colors.teal),

      // Step 1: Set initial route
      initialRoute: '/',
    );
  }
}
```

Assignment

```
// Step 2: Define all named routes
routes: {
  '/': (context) => HomeScreen(),
  '/about': (context) => AboutScreen(),
  '/contact': (context) => ContactScreen(),
},
);
}
}
```

home_screen.dart

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

class HomeScreen extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(title: Text('🏠 Home')),
      body: Padding(
        padding: const EdgeInsets.all(16.0),
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: [
            CircleAvatar(
              radius: 50,
              backgroundImage: AssetImage('assets/profile.jpg'), //
Optional profile photo
            ),
            SizedBox(height: 20),
            Text(
              "Hi, I am Jaidev 🙋",
              style: TextStyle(fontSize: 24, fontWeight:
FontWeight.bold),
            ),
            SizedBox(height: 10),
            Text(
              "A passionate Artificial Intelligence & Data Science
Student who loves to explore new technologies.",
              style: TextStyle(fontSize: 16),
              textAlign: TextAlign.center,
            ),
          ],
        ),
      ),
    );
  }
}
```


Assignment

```
        SizedBox(height: 40),
        ElevatedButton.icon(
          onPressed: () => Navigator.pushNamed(context, '/about'),
          icon: Icon(Icons.person),
          label: Text("View My Resume"),
        ),
        SizedBox(height: 10),
        ElevatedButton.icon(
          onPressed: () => Navigator.pushNamed(context, '/contact'),
          icon: Icon(Icons.contact_mail),
          label: Text("Contact Me"),
        ),
      ],
    ),
  ),
);
}
```

about_Screen.dart

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

class AboutScreen extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(title: Text('📄 My Resume')),
      body: Padding(
        padding: const EdgeInsets.all(16.0),
        child: SingleChildScrollView(
          child: Column(
            crossAxisAlignment: CrossAxisAlignment.start,
            children: [
              Text("Jaidev Narayan Singh", style: TextStyle(fontSize: 26,
fontWeight: FontWeight.bold)),
              Text("Student", style: TextStyle(fontSize: 18)),
              SizedBox(height: 20),

              Text("💡 Professional Summary", style: TextStyle(fontSize:
20, fontWeight: FontWeight.bold)),
              Text(
```

Assignment

```
        "I am an enthusiastic Artificial Intelligence and Data  
Science student who loves to explore new technologies."  
        "I have specialisation in front end development  
technologies such as HTML, CSS, javascript and also a framework"  
        "reactjs.",  
        style: TextStyle(fontSize: 16),  
    ),  
    SizedBox(height: 20),  
  
    Text("👛 Skills & Expertise", style: TextStyle(fontSize:  
20, fontWeight: FontWeight.bold)),  
    Text(  
        "• Flutter & Mobile App Development\n"  
        "• Web development\n"  
        "• Git, GitHub, and Agile Project Management\n",  
        style: TextStyle(fontSize: 16),  
    ),  
    SizedBox(height: 20),  
  
    Text("🏆 Achievements", style: TextStyle(fontSize: 20,  
fontWeight: FontWeight.bold)),  
    Text(  
        "• Won the Data Visualisation using AI Tools contest in  
RIT Tech Fest.\n"  
        "• Participated in hackathons.",  
        style: TextStyle(fontSize: 16),  
    ),  
    SizedBox(height: 30),  
  
    Center(  
        child: ElevatedButton.icon(  
            onPressed: () => Navigator.pop(context),  
            icon: Icon(Icons.home),  
            label: Text("Back to Home"),  
        ),  
    ),  
),  
],  
),  
),  
),  
),
```

Assignment

```
);  
}  
}
```

contact_screen.dart

```
import 'package:flutter/material.dart';  
  
class ContactScreen extends StatelessWidget {  
  @override  
  Widget build(BuildContext context) {  
    return Scaffold(  
      appBar: AppBar(title: Text('☎ Contact Me')),  
      body: Padding(  
        padding: const EdgeInsets.all(16.0),  
        child: Column(  
          children: [  
            Text(  
              "Get in Touch",  
              style: TextStyle(fontSize: 24, fontWeight:  
FontWeight.bold),  
            ),  
            Divider(),  
            SizedBox(height: 10),  
            ListTile(  
              leading: Icon(Icons.email, color: Colors.teal),  
              title: Text("123xyz@example.com"),  
            ),  
            ListTile(  
              leading: Icon(Icons.phone, color: Colors.teal),  
              title: Text("+91 9568468789"),  
            ),  
            ListTile(  
              leading: Icon(Icons.location_on, color: Colors.teal),  
              title: Text("Bengaluru, India"),  
            ),  
            Spacer(),  
            ElevatedButton.icon(  
              onPressed: () => Navigator.pop(context),  
              icon: Icon(Icons.home),  
              label: Text("Back to Home"),  
            ),  
          ],  
        ),  
      ),  
    );  
  }  
}
```

Assignment

```
    ),  
    ),  
    );  
}  
}
```