		Marwadi University **Faculty of Technology** **Department of Information and Communication Technology**
Subject: Cross-Platform Mobile Application Development (01CT1517)		**Aim:** To design Flutter UI by including common widgets, Design BMI Calculator as per given screenshot
Experiment No:- 03	**Date:-** 26-09-2024	**Enrollment No:-** 92200133030

Objective:- To design Flutter UI by including common widgets, Design BMI Calculator as per given screenshot.

Code :-

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

void main() {
  runApp(const MyApp()); // Entry point of the app
}

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

  // This widget is the root of your application.
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      theme: ThemeData(
        brightness: Brightness.light, // Light theme settings
        primaryColor: Colors.blue,
      ),
      darkTheme: ThemeData(
        brightness: Brightness.dark, // Dark theme settings
        scaffoldBackgroundColor:
            const Color(0xFF121212), // Background for Scaffold in dark mode
        appBarTheme: const AppBarTheme(
          backgroundColor: Color(0xFF1F1F1F), // Dark app bar color
          iconTheme:
              IconThemeData(color: Colors.white), // Icon color in app bar
          titleTextStyle: TextStyle(color: Colors.white, fontSize: 20),
        ),
        textButtonTheme: TextButtonThemeData(
          style: TextButton.styleFrom(
            foregroundColor: Colors.white,
            backgroundColor: Colors.blue, // TextButton background color
          ),
        ),
        inputDecorationTheme: InputDecorationTheme(
          filled: true,
          fillColor:
              Colors.grey[800], // Input field background color in dark mode
          border: OutlineInputBorder(
            borderRadius: BorderRadius.circular(8.0),
            borderSide: BorderSide.none, // No border for input fields
          ),
          hintStyle: const TextStyle(color: Colors.grey), // Hint text style
        ),
        textTheme: const TextTheme(
          bodyMedium: TextStyle(color: Colors.white), // Body text color
          titleLarge: TextStyle(color: Colors.white), // Large title text color
```

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```
      ),
    ),
    themeMode: ThemeMode.dark, // Sets the dark theme as the default
    home: const BMICalculator(), // Home widget is the BMICalculator
    debugShowCheckedModeBanner: false, // Disable the debug banner
  );
 }
}

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

  @override
  State<BMICalculator> createState() => _BMICalculatorState();
}

class _BMICalculatorState extends State<BMICalculator> {
  int currentindex = 0; // Track selected gender
  String result = ""; // Variable to store BMI result
  double height = 0.0; // User height
  double weight = 0.0; // User weight
  TextEditingController heightController =
      TextEditingController(); // Controller for height input
  TextEditingController weightController =
      TextEditingController(); // Controller for weight input

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: const Text("BMI Calculator"),
        backgroundColor: Theme.of(context).appBarTheme.backgroundColor,
        actions: [
          IconButton(
            onPressed: () {}, // Placeholder for settings action
            icon: const Icon(Icons.settings),
          ),
        ],
      ),
      body: SingleChildScrollView(
        child: Padding(
          padding: const EdgeInsets.all(12.0), // Padding for content
          child: Column(
            mainAxisAlignment: MainAxisAlignment.start,
            crossAxisAlignment: CrossAxisAlignment.start,
            children: [
              Row(
                children: [
                  radioButton("Man", Colors.blue, 0), // Male option
                  radioButton("Women", Colors.pink, 1), // Female option
                ],
              ),
```

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```
          const SizedBox(height: 20.0),
          const Text(
            "Your Height in Centimeter :- ",
            style: TextStyle(fontSize: 18.0), // Label for height input
          ),
          const SizedBox(height: 8.0),
          TextField(
            controller: heightController,
            keyboardType: TextInputType.number,
            textAlign: TextAlign.center,
            decoration: InputDecoration(
              hintText:
                  "Your Height in Centimeter", // Placeholder for height input
              filled: true,
              fillColor: Theme.of(context).inputDecorationTheme.fillColor,
              border: OutlineInputBorder(
                borderRadius: BorderRadius.circular(8.0),
                borderSide: BorderSide.none, // No border for height input
              ),
            ),
          ),
          const SizedBox(height: 20.0),
          const Text(
            "Your Weight in Kilogram :- ",
            style: TextStyle(fontSize: 18.0), // Label for weight input
          ),
          const SizedBox(height: 8.0),
          TextField(
            controller: weightController,
            keyboardType: TextInputType.number,
            textAlign: TextAlign.center,
            decoration: InputDecoration(
              hintText:
                  "Your Weight in Kilogram", // Placeholder for weight input
              filled: true,
              fillColor: Theme.of(context).inputDecorationTheme.fillColor,
              border: OutlineInputBorder(
                borderRadius: BorderRadius.circular(8.0),
                borderSide: BorderSide.none, // No border for weight input
              ),
            ),
          ),
          const SizedBox(height: 20.0),
          SizedBox(
            width: double.infinity,
            height: 50.0,
            child: TextButton(
              onPressed: () {
                setState(() {
                  // Parsing the input values
                  height = double.parse(heightController.value.text);
                  weight = double.parse(weightController.value.text);
```

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```
                }); 
                calculateBMI(height, weight); // Trigger BMI calculation
              },
              child: const Text(
                "Calculate",
                style: TextStyle(color: Colors.white),
              ),
            ),
          ),
          const SizedBox(height: 20.0),
          const Center(
            child: Text(
              "Your BMI is :- ",
              textAlign: TextAlign.center, // Label for BMI result
              style: TextStyle(
                fontSize: 24.0,
                fontWeight: FontWeight.bold,
              ),
            ),
          ),
          const SizedBox(height: 50.0),
          Center(
            child: Text(
              result, // Display calculated BMI
              textAlign: TextAlign.center,
              style: const TextStyle(
                fontSize: 40.0,
                fontWeight: FontWeight.bold,
              ),
            ),
          ),
        ],
      ),
    ),
  ),
 );
}

// Function to calculate BMI based on height and weight
void calculateBMI(double height, double weight) {
  double finalresult = weight / (height * height / 10000); // Formula for BMI
  String bmi =
      finalresult.toStringAsFixed(2); // Format result to 2 decimal places
  setState(() {
    result = bmi; // Update result in the UI
  });
}

// Function to change the selected gender index
void changeIndex(int index) {
  setState(() {
    currentindex = index;
```

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```dart
  });
}

// Reusable radio button widget for gender selection
Widget radioButton(String value, Color color, int index) {
  return Expanded(
    child: Container(
      margin: const EdgeInsets.symmetric(horizontal: 12.0),
      height: 80.0,
      child: TextButton(
        style: TextButton.styleFrom(
          backgroundColor: currentindex == index ? color : Colors.grey[800],
          shape: RoundedRectangleBorder(
            borderRadius: BorderRadius.circular(8.0),
          ),
        ),
        onPressed: () {
          changeIndex(index); // Update selected gender
        },
        child: value == "Man"
            ? Icon(
                Icons.male,
                color: currentindex == index ? Colors.white : color,
                size: 40.0,
              )
            : Icon(
                Icons.female,
                color: currentindex == index ? Colors.white : color,
                size: 40.0,
              ),
      ),
    ),
  );
}
}
```

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Output:-