

LAB ASSIGNMENTS

ADVANCE PYTHON PROGRAMMING

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Q) web application using flutter

Code:

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

/// DATA_MODEL

/// Manages the counter's state and notifies listeners of changes.
class CounterData extends ChangeNotifier {
  int _count = 0;

  /// The current count value.
  int get count => _count;

  /// Increments the counter and notifies all listeners.
  void increment() {
    _count++;
    notifyListeners();
  }
}

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

  @override
  Widget build(BuildContext context) {
    return ChangeNotifierProvider<CounterData>(
```

```
// Create an instance of CounterData.  
create: (BuildContext context) => CounterData(),  
// Use the builder parameter as per instructions.  
builder: (BuildContext context, Widget? child) {  
  return MaterialApp(  
    title: 'Cute Counter App',  
    theme: ThemeData(  
      useMaterial3: true,  
      colorScheme: ColorScheme.fromSeed(  
        seedColor: Colors.pink.shade200,  
        brightness: Brightness.light,  
      ),  
      appBarTheme: AppBarTheme(  
        backgroundColor: Colors.pink.shade100,  
        foregroundColor: Colors.deepPurple,  
        elevation: 4,  
      ),  
    ),  
    // Fix: Use CardThemeData instead of CardTheme  
    cardTheme: CardThemeData(  
      shape: RoundedRectangleBorder(  
        borderRadius: BorderRadius.circular(20),  
      ),  
      elevation: 8,  
      color: Colors.white,  
    ),  
    elevatedButtonTheme: ElevatedButtonThemeData(  
      style: ElevatedButton.styleFrom(  
        backgroundColor: Colors.deepPurple.shade300,  
        foregroundColor: Colors.white,  
        shape: RoundedRectangleBorder(  
          borderRadius: BorderRadius.circular(15),  

```

```

    ),
    padding:
      const EdgeInsets.symmetric(horizontal: 30, vertical: 15),
    textStyle:
      const TextStyle(fontSize: 18, fontWeight: FontWeight.bold),
  ),
),
textTheme: TextTheme(
  displayLarge: TextStyle(
    fontSize: 72,
    fontWeight: FontWeight.bold,
    color: Colors.pink.shade800),
  headlineSmall: TextStyle(
    fontSize: 24,
    fontWeight: FontWeight.w600,
    color: Colors.deepPurple.shade700),
  bodyLarge: const TextStyle(fontSize: 18, color: Colors.black87),
  bodyMedium: const TextStyle(fontSize: 16, color: Colors.black54),
),
),
home: const CuteCounterHomePage(),
debugShowCheckedModeBanner: false,
);
},
);
}
}

```

```

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

```

@override

```
Widget build(BuildContext context) {  
  final TextTheme textTheme = Theme.of(context).textTheme;  
  // Listen to changes in CounterData provided by the ancestor.  
  final CounterData counterData = Provider.of<CounterData>(context);  
  
  return Scaffold(  
    appBar: AppBar(  
      title: const Text('Cute Counter Fun!'),  
      centerTitle: true,  
    ),  
    body: Center(  
      child: Padding(  
        padding: const EdgeInsets.all(20.0),  
        child: Card(  
          child: Padding(  
            padding: const EdgeInsets.all(32.0),  
            child: Column(  
              mainAxisAlignment: MainAxisAlignment.min,  
              children: <Widget>[  
                Icon(  
                  Icons.favorite,  
                  size: 80,  
                  color: Colors.pink.shade400,  
                ),  
                const SizedBox(height: 24),  
                Text(  
                  'You clicked me!',  
                  style: textTheme.headlineSmall,  
                ),  
                const SizedBox(height: 12),  
              ],  
            ),  
          ),  
        ),  
      ),  
    ),  
  );  
}
```

```
// Display the count from the data model.
Text(
  '${counterData.count} times!',
  style: textTheme.displayLarge?.copyWith(fontSize: 64),
),
const SizedBox(height: 30),
ElevatedButton.icon(
  // Call the increment method from the data model.
  onPressed: counterData.increment,
  icon: const Icon(Icons.add_circle_outline),
  label: const Text('Tap for Joy!'),
),
],
),
),
),
),
),
),
);
}
```

screenshot:

```
1 import 'package:flutter/material.dart';
2 import 'package:provider/provider.dart';
3
4 /// DATA_MODEL
5 /// Manages the counter's state and notifies listeners of changes.
6 class CounterData extends ChangeNotifier {
7   int _count = 0;
8
9   /// The current count value.
10  int get count => _count;
11
12  /// Increments the counter and notifies all listeners.
13  void increment() {
14    _count++;
15    notifyListeners();
16  }
17 }
18
19 class MyApp extends StatelessWidget {
20   const MyApp({super.key});
21
22   @override
23   Widget build(BuildContext context) {
24     return ChangeNotifierProvider<CounterData>([
25       // Create an instance of CounterData.
26       create: (BuildContext context) => CounterData(),
27       // Use the builder parameter as per instructions.
28       builder: (BuildContext context, Widget? child) {
29         return MaterialApp(
30           // Fix: Use CardThemeData instead of CardTheme
```

```
28     builder: (BuildContext context, Widget? child) {
29       return MaterialApp(
30         title: 'Cute Counter App',
31         theme: ThemeData(
32           useMaterial3: true,
33           colorScheme: ColorScheme.fromSeed(
34             seedColor: Colors.pink.shade200,
35             brightness: Brightness.light,
36           ),
37           appBarTheme: AppBarTheme(
38             backgroundColor: Colors.pink.shade100,
39             foregroundColor: Colors.deepPurple,
40             elevation: 4,
41           ),
42           // Fix: Use CardThemeData instead of CardTheme
43           cardTheme: CardThemeData(
44             shape: RoundedRectangleBorder(
45               borderRadius: BorderRadius.circular(20),
46             ),
47             elevation: 8,
48             color: Colors.white,
49           ),
50           elevatedButtonTheme: ElevatedButtonThemeData(
51             style: ElevatedButton.styleFrom(
52               backgroundColor: Colors.deepPurple.shade300,
53               foregroundColor: Colors.white,
54               shape: RoundedRectangleBorder(
55                 borderRadius: BorderRadius.circular(15),
56               ),
```

```

55         borderRadius: BorderRadius.circular(15),
56     ),
57     padding:
58         const EdgeInsets.symmetric(horizontal: 30, vertical: 15),
59     textStyle:
60         const TextStyle(fontSize: 18, fontWeight: FontWeight.bold),
61 ),
62 ),
63 textTheme: TextTheme(
64     displayLarge: TextStyle(
65         fontSize: 72,
66         fontWeight: FontWeight.bold,
67         color: Colors.pink.shade800),
68     headlineSmall: TextStyle(
69         fontSize: 24,
70         fontWeight: FontWeight.w600,
71         color: Colors.deepPurple.shade700),
72     bodyLarge: const TextStyle(fontSize: 18, color: Colors.black87),
73     bodyMedium: const TextStyle(fontSize: 16, color: Colors.black54),
74 ),
75 ),
76 home: const CuteCounterHomePage(),
77 debugShowCheckedModeBanner: false,
78 );
79 },
80 );
81 }
82 }

```

```

109         size: 80,
110         color: Colors.pink.shade400),
111     ),
112     const SizedBox(height: 24),
113     Text(
114         'You clicked me!',
115         style: textTheme.headlineSmall,
116     ),
117     const SizedBox(height: 12),
118     // Display the count from the data model.
119     Text(
120         '${counterData.count} times!',
121         style: textTheme.displayLarge?.copyWith(fontSize: 64),
122     ),
123     const SizedBox(height: 30),
124     ElevatedButton.icon(
125         // Call the increment method from the data model.
126         onPressed: counterData.increment,
127         icon: const Icon(Icons.add_circle_outline),
128         label: const Text('Tap for Joy!'),
129     ),
130 ),
131 ),
132 ),
133 ),
134 ),
135 ),
136 );
137 }
138 }

```

Cute Counter Fun!



You clicked me!

22 times!

⊕ Tap for Joy!