

# BVRIT HYDERABAD College of Engineering for Women

Title: 10. a) Write unit tests for UI components.

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**Code:**

## **main.dart**

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

class CustomButton extends StatelessWidget {
  final String label;
  final VoidCallback onPressed;

  const CustomButton({
    Key? key,
    required this.label,
    required this.onPressed,
  }) : super(key: key);

  @override
  Widget build(BuildContext context) {
    return ElevatedButton(
      onPressed: onPressed,
      child: Text(label),
    );
  }
}

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

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

  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(
          title: const Text('Homepage'), // <-- Added AppBar with title here
        ),
        body: Center(
```

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```
        child: CustomButton(  
          label: 'Press me',  
          onPressed: () {  
            debugPrint('Pressed!');  
          },  
        ),  
      ),  
    ),  
  );  
}
```

## Test.dart

```
import 'package:flutter/material.dart';  
import 'package:flutter_test/flutter_test.dart';  
import 'package:exp_10_a/main.dart';  
  
void main() {  
  testWidgets('CustomButton displays correctly and responds to taps',  
    (WidgetTester tester) async {  
    bool isPressed = false;  
  
    await tester.pumpWidget(  
      MaterialApp(  
        home: Scaffold(  
          body: CustomButton(  
            label: 'Test Button',  
            onPressed: () {  
              isPressed = true;  
              debugPrint('Button was pressed!');  
            },  
          ),  
        ),  
      ),  
    );  
    //flutter test test/test.dart  
  
    expect(find.text('Test Button'), findsOneWidget);  
  
    await tester.tap(find.text('Test Button'));  
    await tester.pump();
```

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```
expect(find.text('Test Button'), findsOneWidget);
expect(isPressed, isTrue);
});
}
```

## Output:

```
PS C:\Users\admin\exp_10_a> flutter test test/test.dart
00:14 +0: CustomButton displays correctly and responds to taps
Button was pressed!
00:14 +1: All tests passed!
PS C:\Users\admin\exp_10_a> flutter run
Connected devices:
Windows (desktop) • windows • windows-x64 • Microsoft Windows [Version 10.0.26100.6584]
Chrome (web) • chrome • web-javascript • Google Chrome 141.0.7390.54
Edge (web) • edge • web-javascript • Microsoft Edge 141.0.3537.71
[1]: Windows (windows)
[2]: Chrome (chrome)
[3]: Edge (edge)
Please choose one (or "q" to quit): 2
Launching lib\main.dart on Chrome in debug mode...
Waiting for connection from debug service on Chrome... 22.3s
This app is linked to the debug service: ws://127.0.0.1:58052/m5A8pblPuyo=/ws
Debug service listening on ws://127.0.0.1:58052/m5A8pblPuyo=/ws

To hot restart changes while running, press "r" or "R".
For a more detailed help message, press "h". To quit, press "q".

A Dart VM Service on Chrome is available at: http://127.0.0.1:58052/m5A8pblPuyo=
The Flutter DevTools debugger and profiler on Chrome is available at:
http://127.0.0.1:9101?uri=http://127.0.0.1:58052/m5A8pblPuyo=
Pressed!
```

Homepage

Press me

Activate Windows  
Go to Settings to activate Windows.

# BVRIT HYDERABAD College of Engineering for Women

Title: 10 b) Use Flutter debugging tools to identify and fix issues.

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Code:

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

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

  @override
  State<MyHomePage> createState() => _MyHomePageState();
}

class _MyHomePageState extends State<MyHomePage> {
  int _counter = 0;

  void _changeCounter() {
    setState(() {
      _counter++; // Place breakpoint here
      print("Counter value: $_counter"); // Also see output in console
    });
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(title: const Text('Debug Example')),
      body: Center(child: Text('Count: $_counter', style: const TextStyle(fontSize:
24))),
      floatingActionButton: FloatingActionButton(
        onPressed: _changeCounter,
        child: const Icon(Icons.remove),
      ),
    );
  }
}
```

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

## Output:

