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## Department of Information Technology

Academic Year: 2024-25

Semester: VI

Class / Branch / Div: TE- IT C

Subject: MAD & PWA Lab

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Roll No. 13

Date of Submission: 06/02/25

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### Experiment No.3

**Aim:** To design a layout of Flutter App using layout widgets.

**Prerequisites:** Android studio, flutter SDK

**Software:** Android studio, flutter SDK.

**Code:**

**main.dart :**

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

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

```
class MyApp extends StatelessWidget {  
  @override  
  Widget build(BuildContext context) {  
    return MaterialApp(  
      debugShowCheckedModeBanner: false,  
      home: Scaffold(  
        appBar: AppBar(title: Text("Product List")),  
        body: ListView(  

```



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children: [

ProductBox(

name: "Smartphone",

description: "A high-quality smartphone with great camera features.",

price: 699,

image: "assets/images/smartphone.png",

),

ProductBox(

name: "Headphones",

description: "Wireless noise-canceling headphones.",

price: 199,

image: "assets/images/headphone.png",

),

ProductBox(

name: "Smartwatch",

description: "A sleek smartwatch with fitness tracking features.",

price: 299,

image: "assets/images/smartwatch.png",

),

ProductBox(

name: "Tablet",

description: "A tablet is a wireless, portable personal computer with a touchscreen interface.",

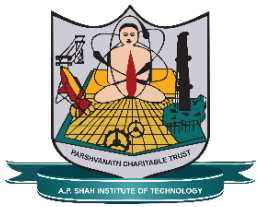
price: 30000,

image: "assets/images/tablet.jpeg",

),

],

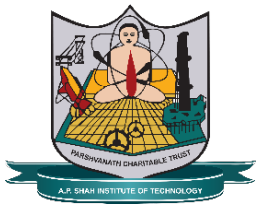
),



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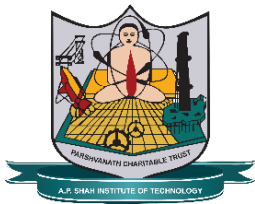
```
    ),  
    );  
}  
}  
  
class ProductBox extends StatelessWidget {  
    final String name;  
    final String description;  
    final int price;  
    final String image;  
  
    ProductBox({  
        required this.name,  
        required this.description,  
        required this.price,  
        required this.image,  
    });  
  
    @override  
    Widget build(BuildContext context) {  
        return Container(  
            padding: EdgeInsets.all(10),  
            margin: EdgeInsets.all(10),  
            decoration: BoxDecoration(  
                border: Border.all(color: Colors.grey),  
                borderRadius: BorderRadius.circular(10),  
                color: Colors.white,  
            ),  
        );  
    }  
}
```



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```
child: Row(  
  children: [  
    Image.asset(image, width: 100, height: 100, fit: BoxFit.cover),  
    SizedBox(width: 10), // Space between image and text  
    Expanded(  
      child: Column(  
        crossAxisAlignment: CrossAxisAlignment.start,  
        children: [  
          Text(name, style: TextStyle(fontSize: 18, fontWeight: FontWeight.bold)),  
          SizedBox(height: 5),  
          Text(description, style: TextStyle(fontSize: 14, color: Colors.grey[600])),  
          SizedBox(height: 5),  
          Text("\${price.toString()}", style: TextStyle(fontSize: 16, fontWeight:  
FontWeight.bold, color: Colors.green)),  
        ],  
      ),  
    ),  
  ],  
);  
}
```



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**widget\_test.dart :**

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

```
import 'package:flutter_test/flutter_test.dart';
```

```
import 'package:exp3/main.dart';
```

```
void main() {
```

```
  testWidgets('Product list displays correctly', (WidgetTester tester) async {
```

```
    // Build our app and trigger a frame.
```

```
    await tester.pumpWidget(const MyApp());
```

```
    // Verify the product names are displayed.
```

```
    expect(find.text('Smartphone'), findsOneWidget);
```

```
    expect(find.text('Headphones'), findsOneWidget);
```

```
    expect(find.text('Smartwatch'), findsOneWidget);
```

```
    expect(find.text('Tablet'), findsOneWidget);
```

```
    // Verify that the product prices are displayed correctly.
```

```
    expect(find.text('$699'), findsOneWidget);
```

```
    expect(find.text('$199'), findsOneWidget);
```

```
    expect(find.text('$299'), findsOneWidget);
```

```
    expect(find.text('$30000'), findsOneWidget);
```

```
    // Verify that the description texts are displayed correctly.
```

```
      expect(find.text('A high-quality smartphone with great camera features.'),  
findsOneWidget);
```

```
      expect(find.text('Wireless noise-canceling headphones.'), findsOneWidget);
```



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```
expect(find.text('A sleek smartwatch with fitness tracking features.'), findsOneWidget);
```

```
expect(find.text('A tablet is a wireless, portable personal computer with a touchscreen interface.'), findsOneWidget);
```

```
// Verify that the images are loaded (optional, you may need to adjust this to fit your image assets setup).
```

```
expect(find.byType(Image), findsNWidgets(4)); // Expecting four product images.
```

```
});
```

```
}
```

#### **pubspec.yaml :**

```
name: exp3
```

```
description: A new Flutter project.
```

```
publish_to: 'none' # Remove this line if you want to publish to pub.dev
```

```
version: 1.0.0+1
```

```
environment:
```

```
  sdk: ">=2.19.0 <3.0.0"
```

```
dependencies:
```

```
  flutter:
```

```
    sdk: flutter
```

```
  # Add any additional dependencies here
```

```
dev_dependencies:
```

```
  flutter_test:
```

```
    sdk: flutter
```

```
  # Add any testing dependencies here
```

```
flutter:
```

```
  uses-material-design: true
```



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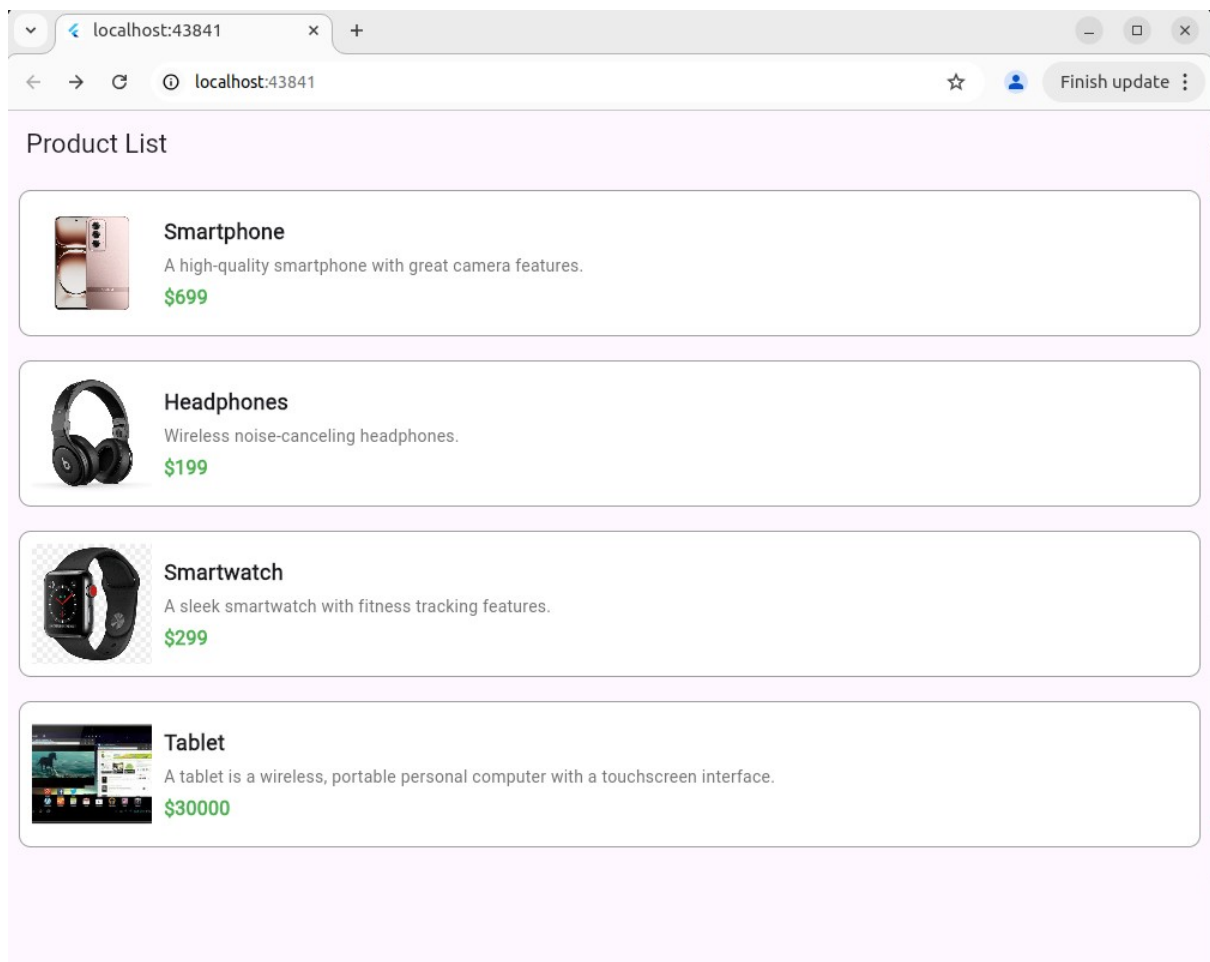
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assets:

- assets/images/smartphone.png
- assets/images/headphone.png
- assets/images/smartwatch.png
- assets/images/tablet.jpeg

**Output :**



**Conclusion :** In this experiment we have designed a layout by using flutter various layout widgets.