

**LAPORAN PRAKTIKUM  
PEMROGRAMAN PERANGKAT BERGERAK**

**MODUL V**

**ANTARMUKA PENGGUNA LANJUTAN**



**Disusun Oleh :**

**Devrin Anggun Saputri / 2211104001**

**SE0601**

**Asisten Praktikum :**

**Muhammad Faza Zulian Gesit Al Barru**

**Aisyah Hasna Aulia**

**Dosen Pengampu :**

**Yudha Islami Sulistya, S.Kom., M.Cs.**

**PROGRAM STUDI S1 SOFTWARE ENGINEERING**

**FAKULTAS INFORMATIKA**

**TELKOM UNIVERSITY PURWOKERTO**

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## GUIDED

### 1. File main.dart

```
1 import 'package:flutter/material.dart';
2 import 'flexible_expanded.dart'; // Tambahkan import ini
3
4 void main() {
5   runApp(const MyApp());
6 }
7
8 class MyApp extends StatelessWidget {
9   const MyApp({super.key});
10
11   @override
12   Widget build(BuildContext context) {
13     return MaterialApp(
14       title: 'Flutter Demo',
15       theme: ThemeData(
16         colorScheme: ColorScheme.fromSeed(seedColor: Colors.deepPurple),
17         useMaterial3: true,
18       ),
19       home: FlexibleExpandedScreen(), // Pastikan ini sesuai dengan nama kelas di flexible_expanded.dart
20     );
21   }
22 }
```

### 2. Flexible\_expanded.dart

```
1 import 'package:flutter/material.dart';
2
3 class FlexibleExpandedScreen extends StatelessWidget {
4   const FlexibleExpandedScreen({super.key});
5
6   @override
7   Widget build(BuildContext context) {
8     return Scaffold(
9       appBar: AppBar(
10        title: const Text('Flexible and Expanded'),
11      ),
12      body: Column(
13        children: [
14          // Section 1: Flexible & Expanded
15          Padding(
16            padding: const EdgeInsets.all(10.0),
17            child: Column(
18              children: [
19                // Flexible
20                Row(
21                  children: <Widget>[
22                    Container(
23                      width: 50,
24                      height: 100,
25                      color: Colors.red,
26                    ),
27                    Flexible(
28                      child: Container(
29                        height: 100,
30                        color: Colors.green,
31                        child: const Text(
32                          "Flexible takes up the remaining space but can shrink if needed.",
33                          textAlign: TextAlign.center,
34                          softWrap: true,
35                          overflow: TextOverflow.ellipsis,
36                        ),
37                      ),
38                    ),
39                    const Icon(Icons.sentiment_very_satisfied),
40                  ],
41                ),
42                const SizedBox(height: 20),
43                // Expanded
44                Row(
45                  children: <Widget>[
46                    Container(
47                      width: 50,
48                      height: 100,
49                      color: Colors.red,
50                    ),
51                    Expanded(
52                      child: Container(
53                        height: 100,
54                        color: Colors.green,
55                        child: const Text(
56                          "Expanded forces the widget to take up all the remaining space.",
57                          textAlign: TextAlign.center,
58                          softWrap: true,
59                          overflow: TextOverflow.ellipsis,
60                        ),
61                      ),
62                    ),
63                  ],
64                ),
65              ],
66            ),
67          ),
68        ],
69      ),
70    );
71  }
```

```

1  ),
2      ),
3      const Icon(Icons.sentiment_very_satisfied),
4  ],
5  ),
6  ],
7  ),
8  ),
9  const SizedBox(height: 20),
10
11  // Section 2: CustomScrollView wrapped in Expanded to make it scrollable
12  Expanded(
13    child: CustomScrollView(
14      slivers: <Widget>[
15        // Sliver App Bar
16        const SliverAppBar(
17          pinned: true,
18          expandedHeight: 250.0,
19          flexibleSpace: FlexibleSpaceBar(
20            title: Text('Selamat Datang Di Dunia Coding'),
21          ),
22        ),
23
24        // Sliver Grid
25        SliverGrid(
26          gridDelegate: const SliverGridDelegateWithMaxCrossAxisExtent(
27            maxCrossAxisExtent: 200.0,
28            mainAxisSpacing: 10.0,
29            crossAxisSpacing: 10.0,
30            childAspectRatio: 4.0,
31          ),
32          delegate: SliverChildBuilderDelegate(
33            (BuildContext context, int index) {
34              return Container(
35                alignment: Alignment.center,
36                color: Colors.teal[100 * (index % 9)],
37                child: Text('Grid Item $index'),
38              );
39            },
40            childCount: 10, // Limit Grid to 10 items
41          ),
42        ),
43
44        // Sliver Fixed List
45        SliverFixedExtentList(
46          itemExtent: 50.0,
47          delegate: SliverChildBuilderDelegate(
48            (BuildContext context, int index) {
49              return Container(
50                alignment: Alignment.center,
51                color: Colors.lightBlue[100 * (index % 9)],
52                child: Text('List Item $index'),
53              );
54            },
55            childCount: 10, // Limit List to 10 items
56          ),
57        ),
58      ],
59    ),
60  ),
61 ],
62 ),
63 );
64 }
65 }
66

```

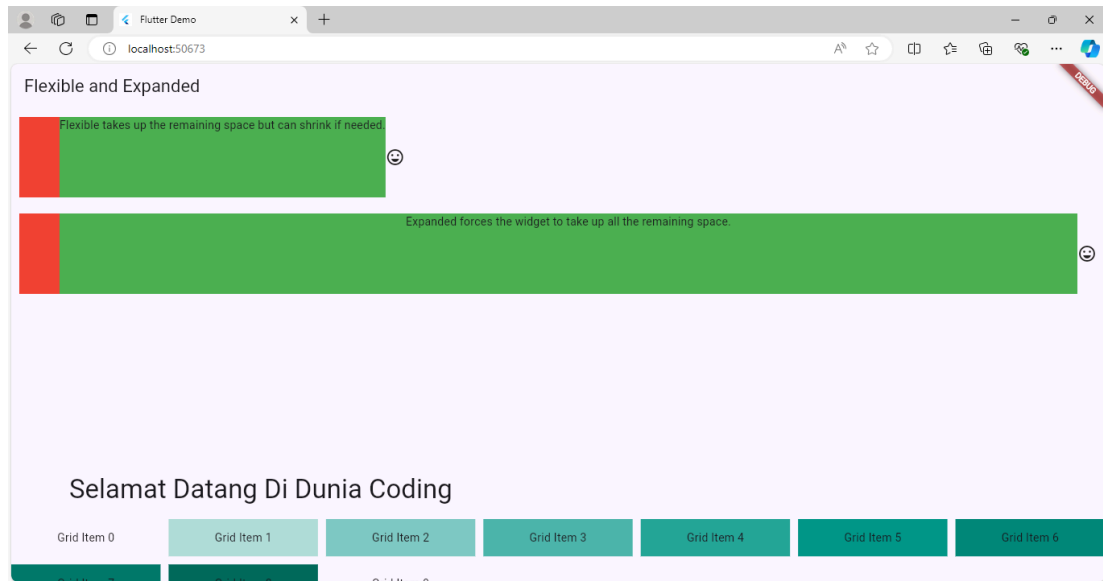
### 3. Widget\_test.dart

```

1  // This is a basic Flutter widget test.
2  //
3  // To perform an interaction with a widget in your test, use the WidgetTester
4  // utility in the flutter_test package. For example, you can send tap and scroll
5  // gestures. You can also use WidgetTester to find child widgets in the widget
6  // tree, read text, and verify that the values of widget properties are correct.
7
8  import 'package:flutter/material.dart';
9  import 'package:flutter_test/flutter_test.dart';
10
11  import 'package:pertemuan_5/main.dart';
12
13  void main() {
14    testWidgets('Counter increments smoke test', (WidgetTester tester) async {
15      // Build our app and trigger a frame.
16      await tester.pumpWidget(const MyApp());
17
18      // Verify that our counter starts at 0.
19      expect(find.text('0'), findsOneWidget);
20      expect(find.text('1'), findsNothing);
21
22      // Tap the '+' icon and trigger a frame.
23      await tester.tap(find.byIcon(Icons.add));
24      await tester.pump();
25
26      // Verify that our counter has incremented.
27      expect(find.text('0'), findsNothing);
28      expect(find.text('1'), findsOneWidget);
29    });
30  }
31

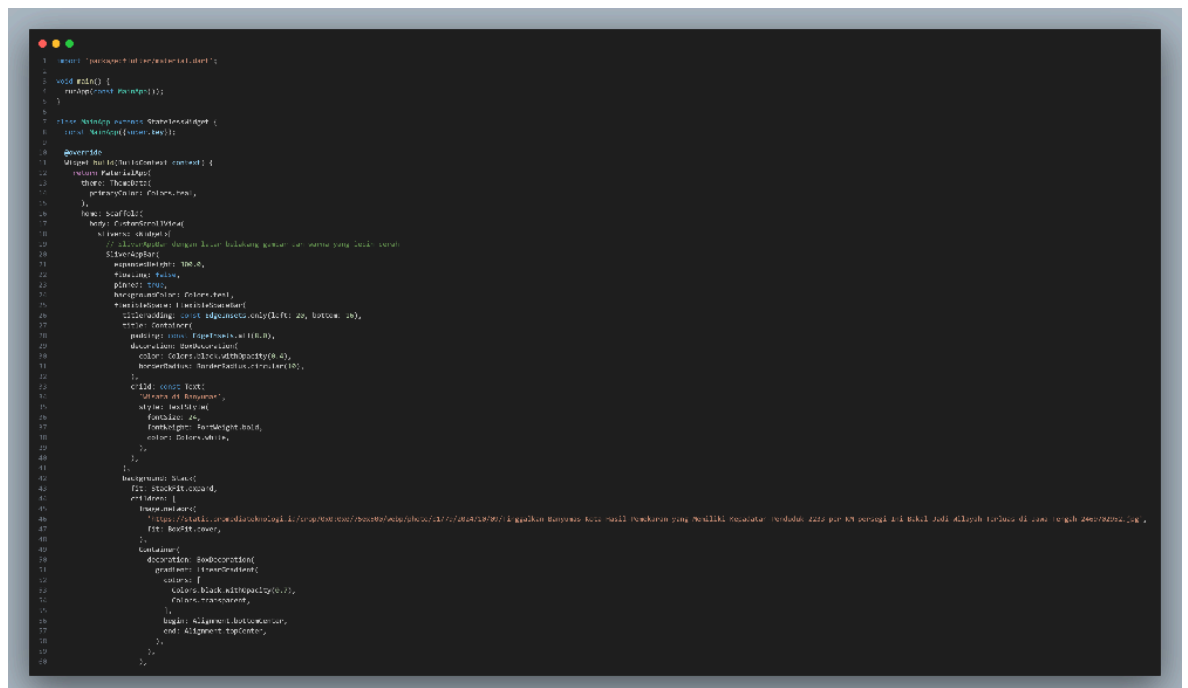
```

## Output:



## UNGUIDED

### 1. Main.dart



```

1      },
2      },
3      },
4      },
5      // SliverList untuk daftar tempat wisata
6      SliverList(
7        delegate: SliverChildBuilderDelegate(
8          (BuildContext context, int index) {
9            // Cek apakah index masih dalam batas array
10             if (index < wisataImages.length &&
11                index < wisataTitles.length &&
12                index < wisataDescriptions.length) {
13               return GestureDetector(
14                 onTap: () {
15                   // tindakan saat kartu diklik
16                   showDialog(
17                     context: context,
18                     builder: (BuildContext context) {
19                       return AlertDialog(
20                         title: Text(wisataTitles[index]),
21                         content: Text(wisataDescriptions[index]),
22                         actions: [
23                           TextButton(
24                             child: const Text("Tutup"),
25                             onPressed: () {
26                               Navigator.of(context).pop();
27                             },
28                           ),
29                         ],
30                       );
31                     },
32                   );
33                 },
34               child: Container(
35                 margin: const EdgeInsets.all(12.0),
36                 decoration: BoxDecoration(
37                   borderRadius: BorderRadius.circular(15),
38                   color: Colors.white,
39                   boxShadow: [
40                     BoxShadow(
41                       color: Colors.teal.withOpacity(0.3),
42                       spreadRadius: 4,
43                       blurRadius: 4,
44                       offset: const Offset(0, 3),
45                     ),
46                   ],
47                 ),
48                 child: Column(
49                   crossAxisAlignment: CrossAxisAlignment.start,
50                   children: [
51                     // Gambar wisata
52                     ClipRRect(
53                       borderRadius: const BorderRadius.only(
54                         topLeft: Radius.circular(15),
55                         topRight: Radius.circular(15),
56                       ),
57                       child: Image.network(
58                         wisataImages[index],
59                         height: 200,
60                         fit: BoxFit.cover,
61                       ),
62                     ),
63                     // Nama dan Deskripsi Wisata
64                     Padding(
65                       padding: const EdgeInsets.all(12.0),
66                       child: Column(
67                         crossAxisAlignment: CrossAxisAlignment.start,
68                         children: [
69                           Text(
70                             wisataTitles[index],

```

```

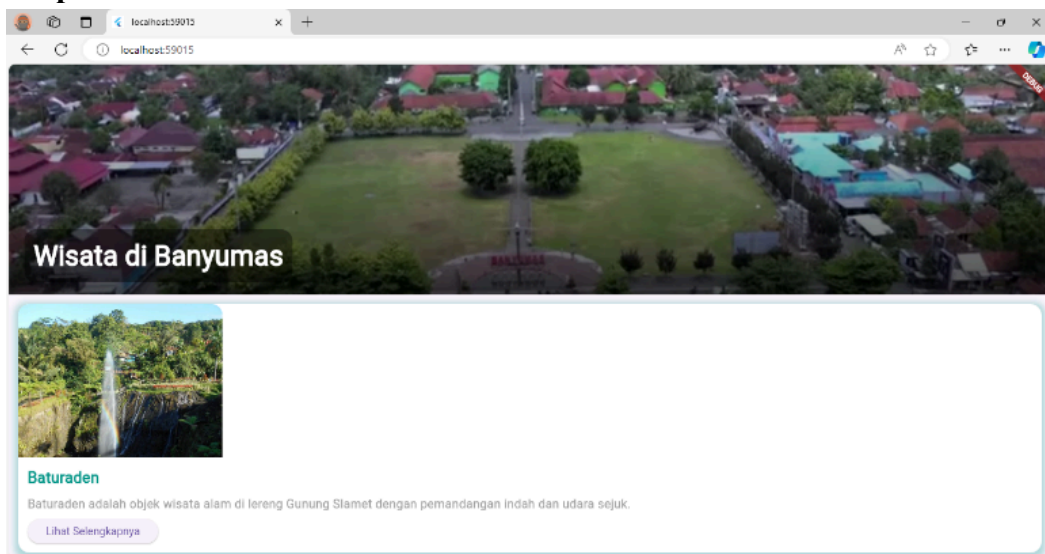
1      style: const TextStyle(
2        fontSize: 20,
3        fontWeight: FontWeight.bold,
4        color: Colors.teal,
5      ),
6    ),
7    const SizedBox(height: 8),
8    Text(
9      wisataDescriptions[index],
10     style: const TextStyle(
11       fontSize: 16,
12       color: Colors.grey,
13     ),
14   ),
15   const SizedBox(height: 8),
16   ElevatedButton(
17     onPressed: () {
18       // aksi untuk tombol tambah banyak data
19       showDialog(
20         context: context,
21         builder: (BuildContext context) {
22           return AlertDialog(
23             title: const Text(wisataTitles[index]),
24             content: Text(
25               "Tambahkan jumlah wisata...",
26             ),
27             actions: [
28               TextButton(
29                 child: const Text("Tutup"),
30                 onPressed: () {
31                   Navigator.of(context).pop();
32                 },
33               ),
34             ],
35           );
36         },
37       );
38       child: const Text("Total: $jumlahWisata"),
39     ),
40   ),
41   ),
42   ),
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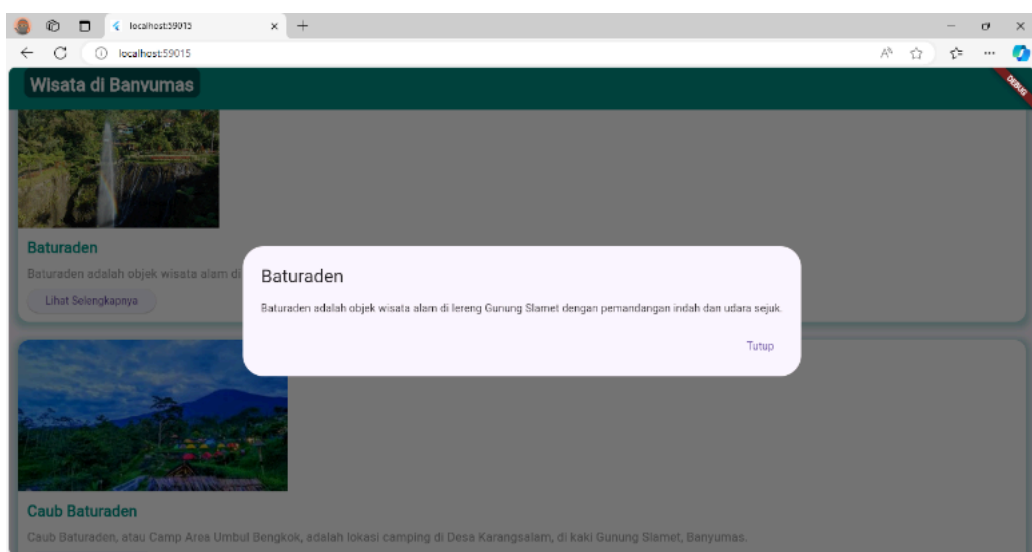
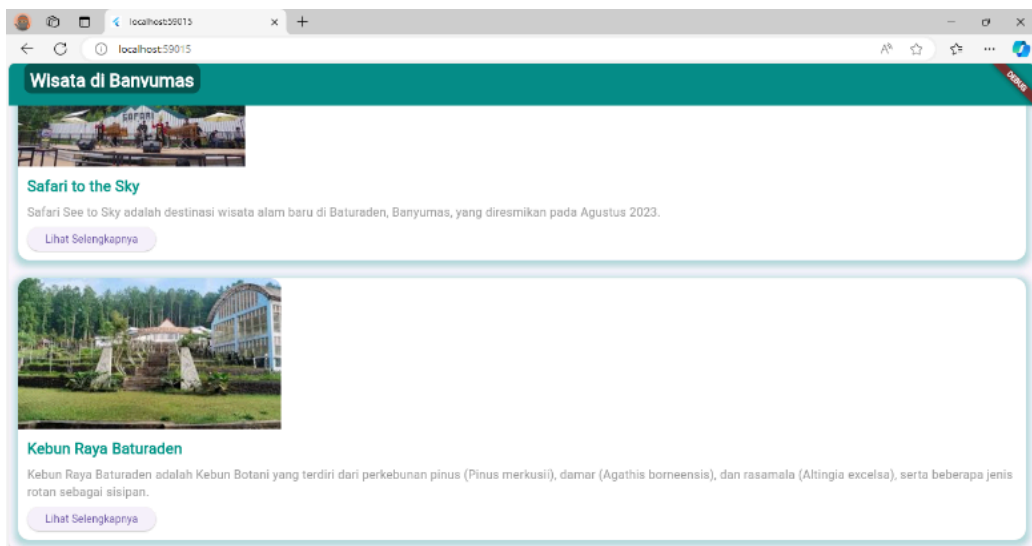
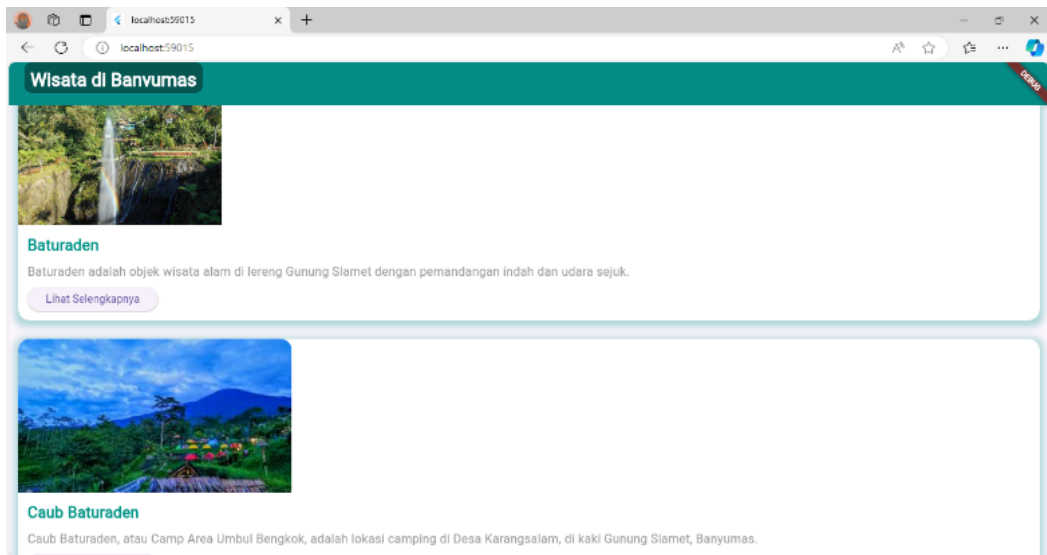
```

## 2. Widget\_test.dart

```
1 // This is a basic Flutter widget test.
2 //
3 // To perform an interaction with a widget in your test, use the WidgetTester
4 // utility in the flutter_test package. For example, you can send tap and scroll
5 // gestures. You can also use WidgetTester to find child widgets in the widget
6 // tree, read text, and verify that the values of widget properties are correct.
7
8 import 'package:flutter/material.dart';
9 import 'package:flutter_test/flutter_test.dart';
10
11 import 'package:unguided_wisata/main.dart'; // Sesuaikan dengan struktur project
12
13 void main() {
14   testWidgets('Counter increments smoke test', (WidgetTester tester) async {
15     // Build our app and trigger a frame.
16     await tester.pumpWidget(const MainApp()); // Ubah dari MyApp ke MainApp
17
18     // Verifikasi bahwa counter dimulai dari 0.
19     expect(find.text('0'), findsOneWidget);
20     expect(find.text('1'), findsNothing);
21
22     // Tap pada icon '+' dan trigger frame.
23     await tester.tap(find.byIcon(Icons.add));
24     await tester.pump();
25
26     // Verifikasi bahwa counter bertambah menjadi 1.
27     expect(find.text('0'), findsNothing);
28     expect(find.text('1'), findsOneWidget);
29   });
30 }
31
```

## Output:





**Penjelasan:**

Program ini berhasil mengimplementasikan CustomScrollView, SliverAppBar, dan SliverList dengan efektif untuk menampilkan informasi tempat wisata di Banyumas. Desain yang responsif dan interaktif membuat aplikasi ini menarik untuk digunakan dan memberikan kemudahan dalam mencari wisata di Banyumas. Code ini dapat dikembangkan untuk menambah lebih banyak fitur dan informasi sesuai kebutuhan pengguna.