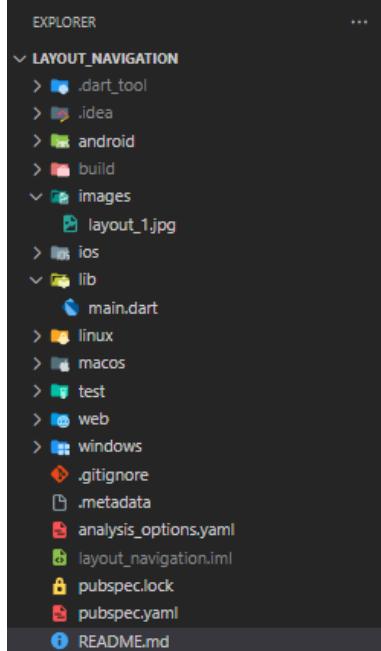
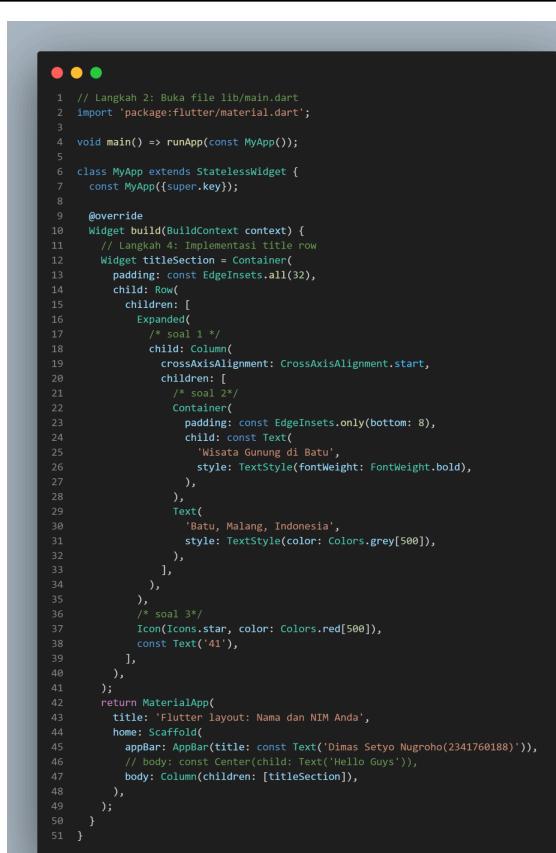


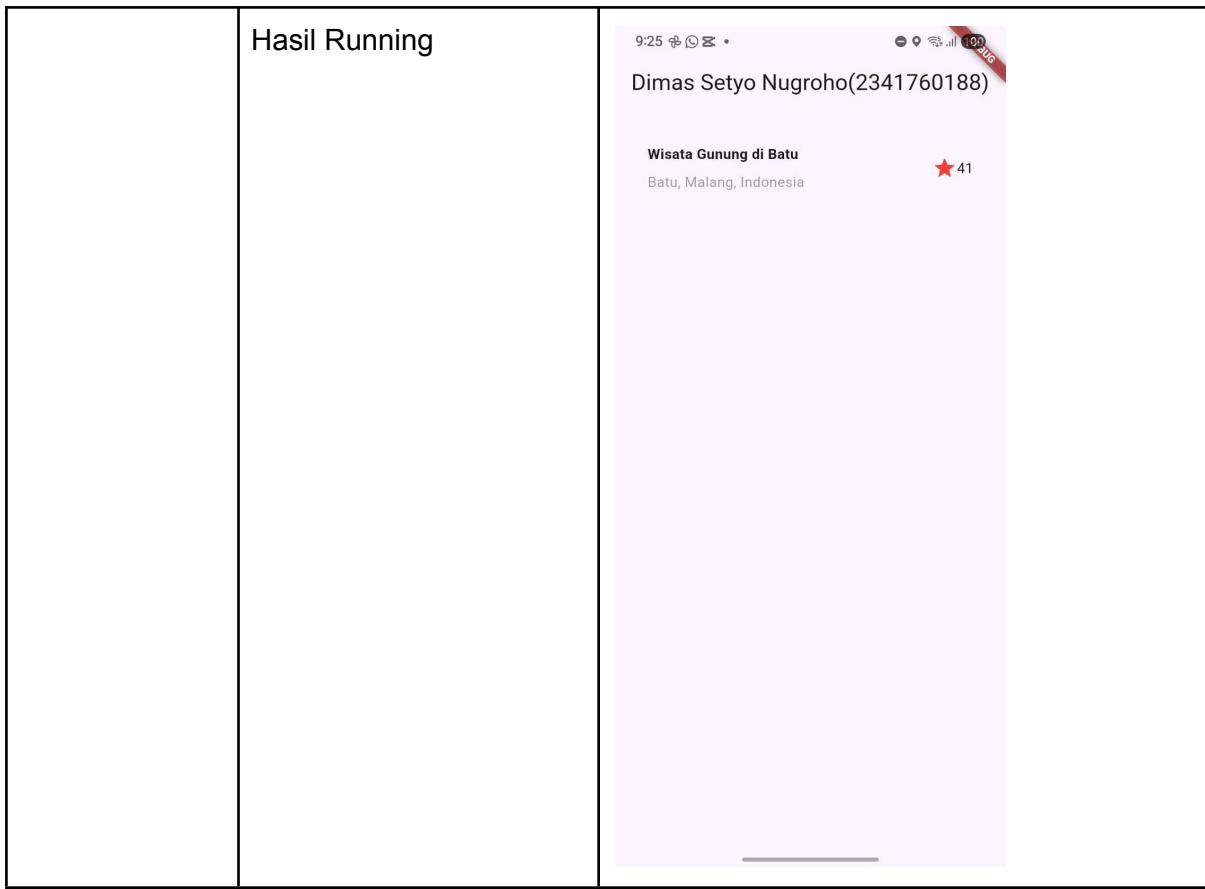
**Jobsheet Mata Kuliah Pemrograman Mobile
Flutter 2 Layout Navigation**



Disusun Oleh:
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**Jurusan Teknologi Informasi D4 Sistem Informasi Bisnis
Politeknik Negeri Malang
2024**

Praktikum	langkah	Dokumentasi
Praktikum 1 Membangun Layout Flutter	Langkah 1: Buat Project Baru	 <pre> EXPLORER ... LAYOUT_NAVIGATION > .dart_tool > .idea > android > build < images < layout_1.jpg > ios < lib < main.dart > linux > macos > test > web > windows > .gitignore > .metadata > analysis_options.yaml > layout_navigation.iml > pubspec.lock > pubspec.yaml > README.md </pre>
	Langkah 2: Buka file lib/main.dart Langkah 4: Implementasi title row 1. Soal 1 2. Soal 2 3. Soal 3	 <pre> 1 // Langkah 2: Buka file lib/main.dart 2 import 'package:flutter/material.dart'; 3 4 void main() => runApp(const MyApp()); 5 6 class MyApp extends StatelessWidget { 7 const MyApp({super.key}); 8 9 @override 10 Widget build(BuildContext context) { 11 // Langkah 4: Implementasi title row 12 Widget titleSection = Container(13 padding: const EdgeInsets.all(32), 14 child: Row(15 children: [16 Expanded(17 /* soal 1 */ 18 child: Column(19 crossAxisAlignment: CrossAxisAlignment.start, 20 children: [21 /* soal 2 */ 22 Container(23 padding: const EdgeInsets.only(bottom: 8), 24 child: const Text(25 'Wisata Gunung di Batu', 26 style: TextStyle(fontWeight: FontWeight.bold), 27), 28), 29 Text(30 'Batu, Malang, Indonesia', 31 style: TextStyle(color: Colors.grey[500]), 32), 33], 34), 35 /* soal 3 */ 36 Icon(Icons.star, color: Colors.red[500]), 37 const Text('41'), 38], 39), 40); 41 } 42 return MaterialApp(43 title: 'Flutter layout: Nama dan NIM Anda', 44 home: Scaffold(45 appBar: AppBar(title: const Text('Dimas Setyo Nugroho(2341760188)')), 46 // body: const Center(child: Text('Hello Guys')), 47 body: Column(children: [titleSection]), 48), 49); 50 } 51 } </pre>



Praktikum 2:
Implementasi
button row

Langkah 1: Buat method
Column
_buildButtonColumn

```
1 class MyApp extends StatelessWidget {
2   const MyApp({super.key});
3
4   @override
5   Widget build(BuildContext context) {
6     Widget titleSection = Container(
7       padding: const EdgeInsets.all(32),
8       child: Row(
9         children: [
10           Expanded(
11             /* soal 1*/
12             child: Column(
13               crossAxisAlignment: CrossAxisAlignment.start,
14               children: [
15                 /* soal 2*/
16                 Container(
17                   padding: const EdgeInsets.only(bottom: 8),
18                   child: const Text(
19                     'Wisata Gunung di Batu',
20                     style: TextStyle(fontWeight: FontWeight.bold),
21                   ),
22                 ),
23                 Text(
24                   'Batu, Malang, Indonesia',
25                   style: TextStyle(color: Colors.grey[500]),
26                 ),
27               ],
28             ),
29           /* soal 3*/
30           Icon(Icons.star, color: Colors.red[500]),
31           const Text('41'),
32         ],
33       ),
34     );
35   }
36   return MaterialApp(
37     title: 'Flutter layout: Nama dan NIM Anda',
38     home: Scaffold(
39       appBar: AppBar(title: const Text('Dimas Setyo Nugroho(2341760188'))),
40       // body: const Center(child: Text('Hello World')),
41       body: Column(children: [titleSection]),
42     ),
43   );
44 }
45
46 // praktikum 2
47 Column _buildButtonColumn(Color color, IconData icon, String label) {
48   return Column(
49     mainAxisAlignment: MainAxisAlignment.min,
50     mainAxisAlignment: MainAxisAlignment.center,
51     children: [
52       Icon(icon, color: color),
53       Container(
54         margin: const EdgeInsets.only(top: 8),
55         child: Text(
56           label,
57           style: TextStyle(
58             fontSize: 12,
59             fontWeight: FontWeight.w400,
60             color: color,
61           ),
62         ),
63       ),
64     ],
65   );
66 }
67 }
```

Dokumentasi penambahan modifikasi kode
untuk Column _buildButtonColumn

Langkah 2: Buat widget buttonSection

```
1 Widget build(BuildContext context) {
2   Widget titleSection = Container(
3     padding: const EdgeInsets.all(32),
4     child: Row(
5       children: [
6         Expanded(
7           /* soal 1*/
8           child: Column(
9             crossAxisAlignment: CrossAxisAlignment.start,
10            children: [
11              /* soal 2*/
12              Container(
13                padding: const EdgeInsets.only(bottom: 8),
14                child: const Text(
15                  'Wisata Gunung di Batu',
16                  style: TextStyle(fontWeight: FontWeight.bold),
17                ),
18              ),
19              Text(
20                'Batu, Malang, Indonesia',
21                style: TextStyle(color: Colors.grey[500]),
22              ),
23            ],
24          ),
25        ),
26        /* soal 3*/
27        Icon(Icons.star, color: Colors.red[500]),
28        const Text('41'),
29      ],
30    );
31  );
32
33 // button section
34 Color color = Theme.of(context).primaryColor;
35 Widget buttonSection = Row(
36   mainAxisAlignment: MainAxisAlignment.spaceEvenly,
37   children: [
38     _buildButtonColumn(color, Icons.call, 'CALL'),
39     _buildButtonColumn(color, Icons.near_me, 'ROUTE'),
40     _buildButtonColumn(color, Icons.share, 'SHARE'),
41   ],
42 );
43
44 return MaterialApp(
45   title: 'Flutter layout: Nama dan NIM Anda',
46   home: Scaffold(
47     appBar: AppBar(title: const Text('Dimas Setyo Nugroho(2341760188'))),
48     // body: const Center(child: Text('Hello World')),
49     body: Column(children: [titleSection, buttonSection]),
50   ),
51 );
52 }
53
54 // praktikum 2
55 Column _buildButtonColumn(Color color, IconData icon, String label) {
56   return Column(
57     mainAxisAlignment: MainAxisAlignment.spaceEvenly,
58     mainAxisSize: MainAxisSize.min,
59     mainAxisSize: MainAxisSize.min,
60     mainAxisSize: MainAxisSize.min,
61     mainAxisSize: MainAxisSize.min,
62     mainAxisSize: MainAxisSize.min,
63     mainAxisSize: MainAxisSize.min,
64     mainAxisSize: MainAxisSize.min,
65     mainAxisSize: MainAxisSize.min,
66     mainAxisSize: MainAxisSize.min,
67     mainAxisSize: MainAxisSize.min,
68     mainAxisSize: MainAxisSize.min,
69     mainAxisSize: MainAxisSize.min,
70     mainAxisSize: MainAxisSize.min,
71     mainAxisSize: MainAxisSize.min,
72     mainAxisSize: MainAxisSize.min,
73   );
74 }
```

Modifikasi hasil kode untuk menambahkan ikon langsung ke kolom

Langkah 3 : Tambah section button ke body

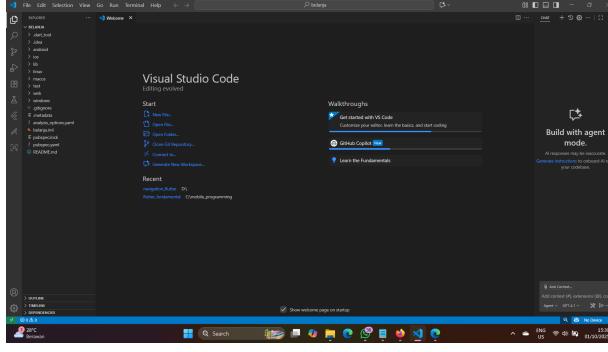
```
1 return MaterialApp(
2   title: 'Flutter layout: Nama dan NIM Anda',
3   home: Scaffold(
4     appBar: AppBar(title: const Text('Dimas Setyo Nugroho(2341760188'))),
5     // body: const Center(child: Text('Hello World')),
6     body: Column(children: [titleSection, buttonSection]),
7   ),
8 );
```

	Hasil Running	<p>Dimas Setyo Nugroho(2341760188)</p> <p>Wisata Gunung di Batu Batu, Malang, Indonesia ★ 41</p> <p>CALL ROUTE SHARE</p>
Praktikum 3: Implementasi text section	Langkah 1: Buat widget textSection	<pre> 1 // button section 2 Color color = Theme.of(context).primaryColor; 3 Widget buttonSection = Row(4 mainAxisAlignment: MainAxisAlignment.spaceEvenly, 5 children: [6 _buildButtonColumn(color, Icons.call, 'CALL'), 7 _buildButtonColumn(color, Icons.near_me, 'ROUTE'), 8 _buildButtonColumn(color, Icons.share, 'SHARE'), 9], 10); 11 12 // widget text section 13 Widget textSection = Container(14 padding: const EdgeInsets.all(32), 15 child: const Text(16 'Carilah teks di internet yang sesuai ' 17 'dengan foto atau tempat wisata yang ingin ' 18 'Anda tampilkan. ' 19 'Tambahkan nama dan NIM Anda sebagai ' 20 'identitas hasil pekerjaan Anda. ' 21 'Selamat mengerjakan 😊. ', 22 softWrap: true, 23), 24); </pre>
	Langkah 2: Tambahkan variabel text section ke body	<p>Menambahkan widget text section untuk program flutter.</p> <pre> 1 return MaterialApp(2 title: 'Flutter layout: Nama dan NIM Anda', 3 home: Scaffold(4 appBar: AppBar(title: const Text('Dimas Setyo Nugroho(2341760188'))), 5 body: Center(child: Text('Hello World')), 6 body: Column(children: [titleSection, buttonSection, textSection]), 7), 8); </pre> <p>Modifikasi untuk menambahkan textSection kedalam body untuk dijalankan</p>

	Hasil Running	
Praktikum 4: Implementasi image section	<p>Langkah 1: Siapkan asset gambar</p>  <p>Contoh gambar yang akan saya gunakan</p>  <p>Struktur folder assets</p> <pre> ● ● ● 1 flutter: 2 3 # The following line ensures that the Material Icons font is 4 # included with your application, so that you can use the icons in 5 # the material Icons class. 6 uses-material-design: true 7 assets: 8 - images/prambanan.jpg </pre> <p>Modifikasi pada pubspec.yaml</p>	

	<p>Langkah 2: Tambahkan gambar ke body</p>	<pre> 1 return MaterialApp(2 title: 'Flutter layout: Nama dan NIM Anda', 3 home: Scaffold(4 appBar: AppBar(title: const Text('Dimas Setyo Nugroho(2341760188'))), 5 // body: const Center(child: Text('Hello World')), 6 body: Column(7 children: [8 Image.asset(9 'assets/prambanan.jpg', 10 width: 600, 11 height: 240, 12 fit: BoxFit.cover, 13), 14 titleSection, 15 buttonSection, 16 textSection, 17], 18), 19), 20); </pre> <p>Langkah modifikasi untuk memasukkan gambar</p>
	<p>Langkah 3: Terakhir, ubah menjadi ListView</p>	<pre> 1 return MaterialApp(2 title: 'Flutter layout: Nama dan NIM Anda', 3 home: Scaffold(4 appBar: AppBar(title: const Text('Dimas Setyo Nugroho(2341760188'))), 5 // body: const Center(child: Text('Hello World')), 6 body: ListView(7 children: [8 Image.asset(9 'assets/prambanan.jpg', 10 width: 600, 11 height: 240, 12 fit: BoxFit.cover, 13), 14 titleSection, 15 buttonSection, 16 textSection, 17], 18), 19), 20); </pre>
	<p>Hasil Running</p>	<p>Candi Prambanan adalah kompleks candi Hindu terbesar di Indonesia yang terletak di dekat Yogyakarta. Dibangun pada abad ke-9 Masehi, candi ini terkenal dengan arsitektur tinggi menjulang dan relief cerita Ramayana yang indah. Kompleks ini didedikasikan untuk Trimurti: Brahma, Wisnu, dan Siwa, serta menjadi salah satu warisan budaya dunia UNESCO yang menarik wisatawan dari seluruh dunia.</p>

Praktikum 5: Membangun Navigasi di Flutter		

No	Langkah	Dokumentasi
1	Langkah 1: Siapkan project baru	
2	Langkah 2: Mendefinisikan Route	<p>Membuat class HomePage</p> <pre> 1 import 'package:flutter/material.dart'; 2 3 class HomePage extends StatelessWidget { 4 @override 5 Widget build(BuildContext context) { 6 throw UnimplementedError(); 7 } 8 }</pre> <p>membuat class ItemPage</p> <pre> 1 import 'package:flutter/material.dart'; 2 3 class ItemPage extends StatelessWidget { 4 @override 5 Widget build(BuildContext context) { 6 throw UnimplementedError(); 7 } 8 } 9 </pre>

3	Langkah 3: Lengkapi Kode di main.dart	<pre> 1 void main() { 2 // runApp(const MyApp()); 3 runApp(4 MaterialApp(5 initialRoute: '/', 6 routes: { 7 '/': (context) => HomePage(), 8 '/item': (context) => ItemPage() 9 }, 10), 11); 12 } </pre> <p>memodifikasi file main.dart untuk mendefinisikan dan membuat route untuk HomePage dan ItemPage.</p>
4	Langkah 4: Membuat data model	<pre> 1 class Item { 2 String name; 3 int price; 4 5 Item({required this.name, required this.price}); 6 } </pre>
5	Langkah 5: Lengkapi kode di class HomePage	<pre> 1 import 'package:flutter/material.dart'; 2 import 'package:belanja/models/item.dart'; 3 4 class HomePage extends StatelessWidget { 5 final List<Item> items = [6 Item(name: 'Sugar', price: 5000), 7 Item(name: 'Salt', price: 2000), 8]; 9 10 @override 11 Widget build(BuildContext context) { 12 return Scaffold(13 appBar: AppBar(14 title: Text('Home Page'), 15), 16 body: ListView.builder(17 itemCount: items.length, 18 itemBuilder: (context, index) { 19 return ListTile(20 title: Text(items[index].name), 21 subtitle: Text('Price: \\${items[index].price}'), 22 onTap: () { 23 Navigator.pushNamed(context, '/item', arguments: items[index]); 24 }, 25); 26 }, 27); 28); 29 } 30 } </pre> <p>melengkapi kode di class HomePage</p>

6

Langkah 6: Membuat ListView dan itemBuilder

```

1  Widget build(BuildContext context) {
2      return Scaffold(
3          appBar: AppBar(title: Text('Home Page')),
4          body: Container(
5              margin: EdgeInsets.all(8),
6              child: ListView.builder(
7                  padding: EdgeInsets.all(8),
8                  itemCount: items.length,
9                  itemBuilder: (context, index) {
10                      return Card(
11                          child: Container(
12                              margin: EdgeInsets.all(8),
13                              child: Row(
14                                  children: [
15                                      Expanded(child: Text(items[index].name)),
16                                      Expanded(
17                                          child: Text(
18                                              'Rp ${items[index].price}',
19                                              textAlign: TextAlign.end,
20                                          ),
21                                      ),
22                                  ],
23                              ),
24                          ),
25                      );
26                  },
27              ),
28          );
29      }
30  }
31 }
```

Kode program untuk membuat listview dan item builder

7

Kode item_page.dart

```

1  import 'package:flutter/material.dart';
2  import 'package:belanja/models/item.dart';
3
4  class ItemPage extends StatelessWidget {
5      @override
6      Widget build(BuildContext context) {
7          final Item item = ModalRoute.of(context)!.settings.arguments as Item;
8
9          return Scaffold(
10              appBar: AppBar(title: Text(item.name)),
11              body: Center(
12                  child: Text(
13                      '${item.name} with ${item.price}',
14                      style: TextStyle(fontSize: 20),
15                  ),
16              );
17      }
18  }
19 }
```

8

Langkah 7: Menambahkan aksi pada ListView

```

1  return InkWell(
2      onTap: () {
3          Navigator.pushNamed(context, '/item', arguments: items[index]);
4      },

```

9

Hasil running

The screenshot displays three separate Android Studio projects, each showing a different state of a component named "Sugar".

- Top Project:** Shows the "Sugar" component in its initial state, consisting of a single button labeled "Sugar".
- Middle Project:** Shows the "Sugar" component with a list of items. The first item is "Sugar", which is highlighted in blue. The other items are "Banana", "Orange", and "Apple".
- Bottom Project:** Shows the "Sugar" component with a list of items. The first item is "Banana", followed by "Orange", "Apple", and "Sugar".

In all three cases, the "Sugar" component is integrated into a larger layout structure, including a Scaffold, a Column, and a Row. The code for the Sugar component is as follows:

```
class Sugar extends StatelessWidget { @override void build(BuildContext context) { final item = context.read<Item>(); return Container( decoration: BoxDecoration( color: Colors.white, border: Border.all( color: Colors.black, width: 1), ), padding: EdgeInsets.all(8), child: Text(item.name), ); } }
```

```

1 import 'package:flutter/material.dart';
2 import 'package:belajarjs/models/item.dart';
3
4 class HomePage extends StatelessWidget {
5   final List<Item> items = [
6     // modifikasi untuk menambahkan imageUrl dan rating
7     Item(
8       name: 'Sugar',
9       price: 5000,
10      imageUrl: 'images/sugar.jpeg',
11      rating: 4.5,
12      stock: 20,
13    ),
14    Item(
15      name: 'Salt',
16      price: 2000,
17      imageUrl: 'images/salt.jpeg',
18      rating: 4.0,
19      stock: 20,
20    ),
21  ];
22
23 @override
24 Widget build(BuildContext context) {
25   return Scaffold(
26     appBar: AppBar(
27       title: Text('Home Page'),
28       backgroundColor: Colors.lightBlueAccent,
29     ),
30     body: Container(
31       margin: EdgeInsets.all(8),
32       padding: EdgeInsets.all(8),
33       child: GridView.builder(
34         itemCount: items.length,
35         gridDelegate: SliverGridDelegateWithFixedCrossAxisCount(
36           crossAxisCount: 2,
37           childAspectRatio: 3 / 4,
38           mainAxisSpacing: 8,
39           crossAxisSpacing: 8,
40         ),
41         // modifikasi untuk menampilkan item dalam grid dan menambahkan image dan rating
42         itemBuilder: (context, index) {
43           return InkWell(
44             onTap: () {
45               Navigator.pushNamed(context, '/item', arguments: items[index]);
46             },
47             child: Card(
48               // mengatur card
49               elevation: 4,
50               shape: RoundedRectangleBorder(
51                 borderRadius: BorderRadius.circular(8),
52               ),
53               child: Padding(
54                 // hanya numbers jarak di dalam card
55                 padding: const EdgeInsets.all(8),
56                 child: Column(
57                   //meh row menjadi column
58                   mainAxisAlignment: MainAxisAlignment.center,
59                   children: [
60                     Expanded(
61                       child: Hero(
62                         tag: items[index].name, // tag harus unik untuk tiap item
63                         child: ClipRect(
64                           borderRadius: BorderRadius.circular(8),
65                           child: Image.asset(
66                             items[index].imageUrl,
67                             fit: BoxFit.cover,
68                             width: double.infinity,
69                           ),
70                         ),
71                     ),
72                   ],
73                 ),
74               ),
75               const SizedBox(height: 10),
76               // Text untuk Nama Produk
77               Text(
78                 items[index].name,
79                 style: const TextStyle(
80                   fontSize: 16,
81                   fontWeight: FontWeight.bold,
82                 ),
83               ),
84               const SizedBox(height: 6),
85               // text untuk Harga Produk
86               Text(
87                 'Rp ${items[index].price}',
88                 style: const TextStyle(
89                   fontSize: 14,
90                   color: Colors.black54,
91                 ),
92               ),
93             ),
94             const SizedBox(height: 6),
95             // Row untuk menambahkan Rating
96             Row(
97               mainAxisAlignment: MainAxisAlignment.center,
98               children: [
99                 const Icon(Icons.star, color: Colors.amber, size: 18),
100                 const SizedBox(width: 4),
101                 Text(
102                   items[index].rating.toString(),
103                   style: const TextStyle(fontSize: 14),
104                 ),
105               ],
106             ),
107           ],
108         ),
109       ),
110     ),
111   ),
112   );
113 },
114 },
115 ),
116 ),
117 );
118 }
119 }
120

```

home_page.dart

```
1 import 'package:flutter/material.dart';
2 import 'package:belajar/modul/item.dart';
3
4 class ItemPage extends StatelessWidget {
5   @override
6   Widget build(BuildContext context) {
7     final Item item = ModalRoute.of(context).settings.arguments as Item;
8
9     return Scaffold(
10       appBar: AppBar(
11         title: Text(item.name),
12         backgroundColor: Colors.lightBlueAccent,
13       ),
14       body: SingleChildScrollView(
15         child: Padding(
16           padding: EdgeInsets.all(16.0),
17           child: Column(
18             crossAxisAlignment: CrossAxisAlignment.start,
19             children: [
20               Hero(
21                 tag: item.name, // sama dengan tag di HomePage
22                 child: Image.asset(
23                   item.imageUrl,
24                   borderRadius: BorderRadius.circular(8),
25                   fit: BoxFit.cover,
26                   width: double.infinity,
27                   height: 250,
28                 ),
29               ),
30             ],
31           ),
32           const SizedBox(height: 16),
33         ),
34         Text(
35           item.name,
36           style: const TextStyle(
37             fontSize: 24,
38             fontWeight: FontWeight.bold,
39           ),
40         ),
41         const SizedBox(height: 8),
42         Text(
43           'Price: ${item.price}',
44           style: const TextStyle(fontSize: 18, color: Colors.green),
45         ),
46         const SizedBox(height: 8),
47         Text(
48           'Stock: ${item.stock}',
49           style: const TextStyle(
50             fontSize: 20,
51             fontWeight: FontWeight.w500,
52           ),
53         ),
54         const SizedBox(height: 8),
55         Row(
56           children: [
57             IconButton(
58               icon: Icons.star,
59               color: Colors.amber,
60               size: 40,
61             ),
62             Text(
63               item.rating.toString(),
64               style: const TextStyle(fontSize: 18),
65             ),
66           ],
67         ),
68         const SizedBox(height: 16),
69         const Text(
70           'This is a detailed description of the item. It provides more information about the product, its features, and benefits.',
71           style: TextStyle(fontSize: 16),
72         ),
73       ),
74     );
75   }
76 }
77 }
```

item_page.dart

```
1 class Item {
2   // modifikasi untuk menambahkan imageUrl dan rating
3   final String name;
4   final int price;
5   final String imageUrl;
6   final double rating;
7   final int stock;
8
9   Item({
10     required this.name,
11     required this.price,
12     required this.imageUrl,
13     required this.rating,
14     required this.stock,
15   });
16 }
17 }
```

item.dart

```

1 import 'package:flutter/material.dart';
2 import 'package:belanja/pages/home_page.dart';
3 import 'package:belanja/pages/item_page.dart';
4
5 void main() {
6   runApp(const MyApp());
7 }
8
9 class MyApp extends StatelessWidget {
10   const MyApp({super.key});
11
12   @override
13   Widget build(BuildContext context) {
14     return MaterialApp(
15       debugShowCheckedModeBanner: false,
16       initialRoute: '/',
17       routes: {'/': (context) => HomePage(), '/item': (context) => ItemPage()},
18       builder: (context, child) {
19         return Scaffold(
20           body: Column(
21             children: [
22               Expanded(child: child ?? const SizedBox()),
23               Container(
24                 color: Colors.lightBlueAccent,
25                 padding: const EdgeInsets.all(12),
26                 width: double.infinity,
27                 child: const Center(
28                   child: Text(
29                     '@ Dimas Setyo Nugroho | 2341760188',
30                     style: TextStyle(color: Colors.white),
31                   ),
32                 ),
33               ),
34             ],
35           ),
36         );
37       },
38     );
39   }
40 }

```

modifikasi main.dart untuk footer

11 Hasil running

