LAPORAN UTS PEMROGRAMAN MOBILE

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JURUSAN TEKNOLOGI INFORMASI
PRODI D-IV SISTEM INFORMASI BISNIS
POLITEKNIK NEGERI MALANG
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Instruksi:

1. Buat aplikasi Flutter sederhana yang memiliki lima halaman: Landing Page, Login Page, Halaman Utama (Home), About, dan Profile.
2. Aplikasi harus menggunakan sistem navigasi antar halaman.
3. Gunakan Flutter Layout untuk menata tampilan setiap halaman.
4. Implementasikan logika sederhana pada Login Page, yaitu: o Jika username dan password diisi dengan benar (contoh: username: admin, password: admin123), maka pengguna diarahkan ke Halaman Utama (Home). o Jika login gagal, tampilkan pesan error di bawah form login.
5. Gunakan minimal satu widget Stateful dan sisanya widget Stateless.
6. Sertakan tampilan responsif untuk mendukung berbagai ukuran layar.
7. Halaman Profile harus menampilkan informasi pengguna yang diambil dari input di halaman login (misalnya, menampilkan username).
8. Pada halaman About, tuliskan deskripsi singkat tentang aplikasi.
9. Landing Page adalah halaman pertama yang muncul ketika aplikasi dibuka, dan menampilkan tombol untuk masuk ke halaman login.

A. Model item


```dart
lib > models > item.dart > Item > Item

1    class Item {
2      String name;
3      int price;
4      int stock;
5      double rating;
6      String imageUrl;
7
8      Item({
9        required this.name,
10       required this.price,
11       required this.stock,
12       required this.rating,
13       required this.imageUrl,
14     });
15   }
```
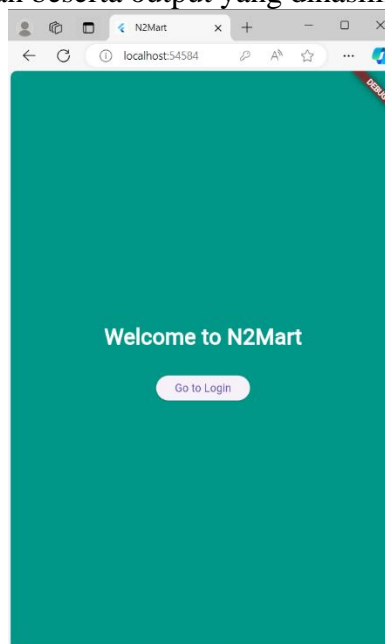
B. Landing Page

Berikut adalah inputan yang saya masukkan beserta output yang dihasilkan


```dart
lib > pages > landing_page.dart > LandingPage > build

1    import 'package:flutter/material.dart';
2
3    class LandingPage extends StatelessWidget {
4      const LandingPage({super.key});
5
6      @override
7      Widget build(BuildContext context) {
8        return Scaffold(
9          backgroundColor: Colors.teal,
10         body: Center(
11           child: Column(
12             mainAxisAlignment: MainAxisAlignment.center,
13             children: [
14               const Text(
15                 'Welcome to N2Mart',
16                 style: TextStyle(
17                   fontSize: 28,
18                   fontWeight: FontWeight.bold,
19                   color: Colors.white,
20                 ), // TextStyle
21               ), // Text
22               const SizedBox(height: 30),
23               ElevatedButton(
24                 onPressed: () {
25                   Navigator.pushNamed(context, '/login');
26                 },
27                 child: const Text('Go to Login'),
28               ), // ElevatedButton
29             ],
30           ), // Column
31         ), // Center
32       ); // Scaffold
33     }
34   }
```
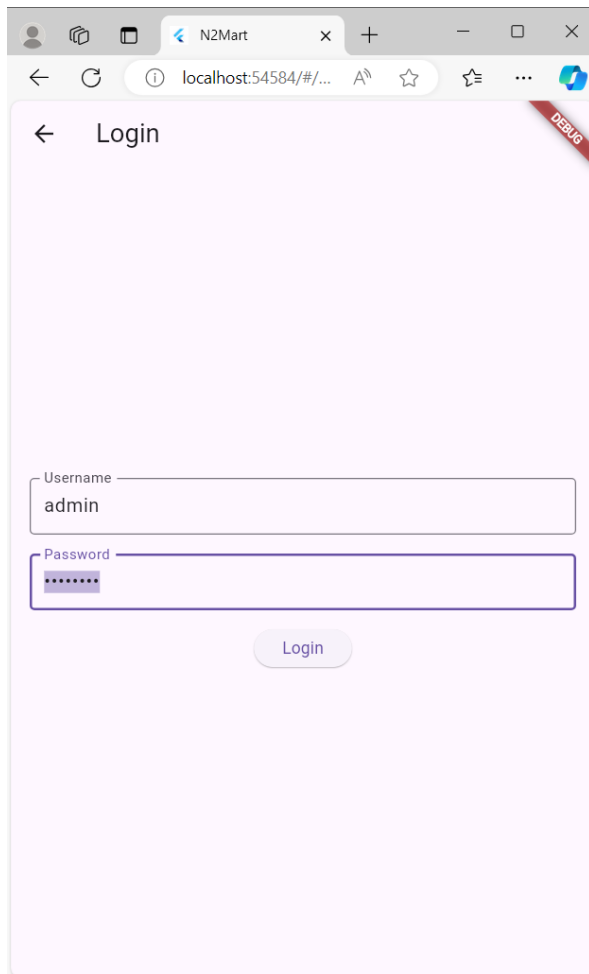
C. Login Page

Berikut adalah inputan yang saya masukkan beserta output yang dihasilkan

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

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

  @override
  _LoginPageState createState() => _LoginPageState();    Invalid use of a private type in a public API.dTry making the private type public, or making the API that uses the private type also be private.
}

class _LoginPageState extends State<LoginPage> {
  final TextEditingController _usernameController = TextEditingController();
  final TextEditingController _passwordController = TextEditingController();

  String? _errorMessage;

  // Login function
  void _login() {
    String username = _usernameController.text;
    String password = _passwordController.text;

    // Validate login
    if (username == 'admin' && password == 'admin123') {
      // Ganti 'makanan' dengan kategori yang sesuai
      Navigator.pushReplacementNamed(context, '/home', arguments: {
        'username': username, // Kirim username
        'category': 'makanan', // Atau kategori lainnya sesuai kebutuhan
      });
    } else {
      // Show error message if login fails
      setState(() {
        _errorMessage = 'Invalid username or password. Please try again.';
      });
    }
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: const Text('Login'),
      ), // AppBar
      body: Padding(
        padding: const EdgeInsets.all(16.0),
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: [
            TextField(
              controller: _usernameController,
              decoration: InputDecoration(    Use 'const' with the constructor to improve performance.dTry adding the 'const' keyword to the constructor invocation.
                labelText: 'Username',
                border: OutlineInputBorder(),    Use 'const' with the constructor to improve performance.dTry adding the 'const' keyword to the constructor invocation.
              ), // InputDecoration
            ), // TextField
            const SizedBox(height: 16.0),
            TextField(
              controller: _passwordController,
              obscureText: true,
              decoration: InputDecoration(    Use 'const' with the constructor to improve performance.dTry adding the 'const' keyword to the constructor invocation.
                labelText: 'Password',
                border: OutlineInputBorder(),    Use 'const' with the constructor to improve performance.dTry adding the 'const' keyword to the constructor invocation.
              ), // InputDecoration
            ), // TextField
            const SizedBox(height: 16.0),
            ElevatedButton(
              onPressed: _login,
              child: const Text('Login'),
            ), // ElevatedButton
            if (_errorMessage != null)
              Padding(
                padding: const EdgeInsets.only(top: 8.0),
                child: Text(
                  _errorMessage!,
                  style: const TextStyle(color: Colors.red),
                ), // Text
              ), // Padding
          ],
        ), // Column
      ), // Padding
    ); // Scaffold
  }
}
```

D. Halaman Profil

Berikut adalah inputan yang saya masukkan beserta output yang dihasilkan

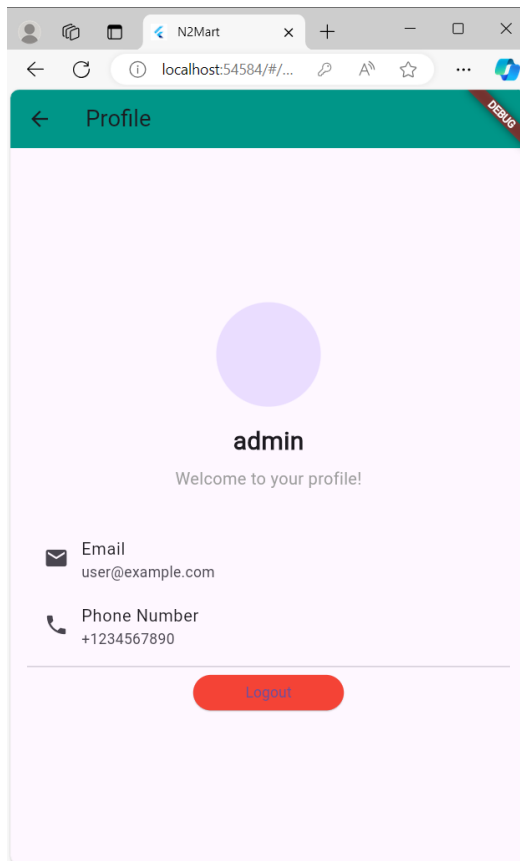E. Halaman Homepage

Berikut adalah inputan yang saya masukkan beserta output yang dihasilkan


```dart
import 'package:flutter/material.dart';
import 'package:flutter_uts_belanja/models/item.dart'; // Pastikan kamu memiliki model Item

class HomePage extends StatefulWidget {
  final String username; // Tambahkan username
  final String category;

  const HomePage({super.key, required this.username, required this.category});

  @override
  _HomePageState createState() => _HomePageState();    // Invalid use of a private type in a public API. Try makin

class _HomePageState extends State<HomePage> {
  late List<Item> items;

  @override
  void initState() {
    super.initState();
    items = _loadItems(widget.category); // Load items berdasarkan kategori
  }

  List<Item> _loadItems(String category) {
    if (category == 'makanan') {
      return [
        Item(name: 'Macaron', price: 5000, stock: 10, rating: 4.5, imageUrl: 'images/macaron.JPG'),
        Item(name: 'Ramyeon', price: 2000, stock: 20, rating: 4.0, imageUrl: 'images/ramyeon.JPG'),
      ];
    } else if (category == 'minuman') {
      return [
        Item(name: 'Soda', price: 3000, stock: 15, rating: 4.5, imageUrl: 'images/soda.JPG'),
        Item(name: 'Juice', price: 2500, stock: 25, rating: 4.0, imageUrl: 'images/juice.JPG'),
      ];
    } else {
      return []; // Kasus default
    }
  }

  int _selectedIndex = 0;

  void _onItemTapped(int index) {
    switch (index) {
      case 0:
        Navigator.pushReplacementNamed(context, '/home', arguments: {
          'username': widget.username,
          'category': widget.category,
        });
        break;
      case 1:
        Navigator.pushNamed(context, '/cart'); // Navigasi ke halaman Cart
        break;
      case 2:
        Navigator.pushNamed(context, '/profile', arguments: widget.username); // Navigasi ke halaman Profile
        break;
    }
  }
```
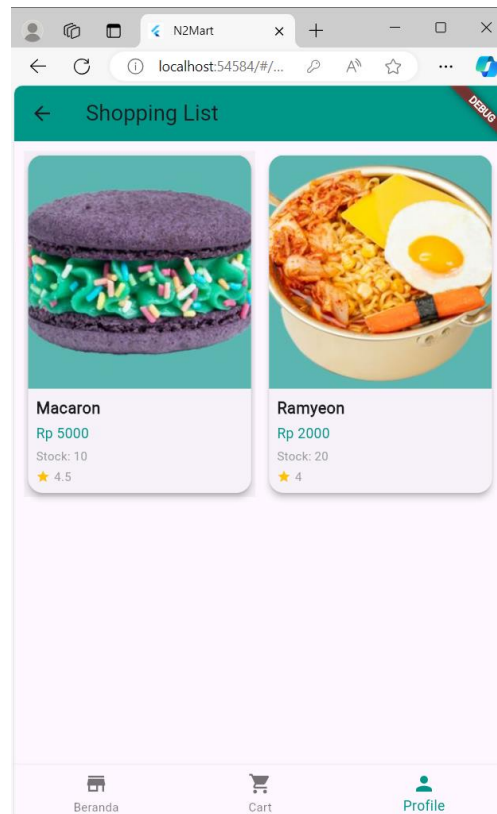
```dart
14    class _HomePageState extends State<HomePage> {

58      @override
59      @override
60      Widget build(BuildContext context) {
61        return Scaffold(
62          appBar: AppBar(
63            title: const Text('Shopping List'),
64            backgroundColor: Colors.teal,
65          ), // AppBar
66          body: GridView.builder(
67            padding: const EdgeInsets.all(10),
68            gridDelegate: const SliverGridDelegateWithFixedCrossAxisCount(
69              crossAxisCount: 2,
70              crossAxisSpacing: 10,
71              mainAxisSpacing: 10,
72              childAspectRatio: 1 / 3, // Adjust the aspect ratio for better visuals
73            ), // SliverGridDelegateWithFixedCrossAxisCount
74            itemCount: items.length,
75            itemBuilder: (context, index) {
76              final item = items[index];
77              return InkWell(
78                onTap: () {
79                  // Navigate to ItemPage with item data
80                  Navigator.pushNamed(
81                    context,
82                    '/item',
83                    arguments: item,
84                  );
85                },
86                child: Hero(
87                  tag: item.name,
88                  child: Card(
89                    elevation: 5,
90                    shape: RoundedRectangleBorder(
91                      borderRadius: BorderRadius.circular(15),
92                    ), // RoundedRectangleBorder
93                    child: Column(
94                      crossAxisAlignment: CrossAxisAlignment.start,
95                      children: [
96                        Expanded(
97                          child: ClipRRect(
98                            borderRadius: const BorderRadius.only(
99                              topLeft: Radius.circular(15),
100                             topRight: Radius.circular(15),
101                           ), // BorderRadius.only
102                           child: Image.asset(
103                             item.imageUrl,
104                             fit: BoxFit.cover,
105                             width: double.infinity,
106                           ), // Image.asset
107                         ), // ClipRRect
108                       ), // Expanded
109                       Padding(
110                         padding: const EdgeInsets.all(8.0),
111                         child: Column(
112                           crossAxisAlignment: CrossAxisAlignment.start,
113                           children: [
114                             Text(
115                               item.name,
116                               style: const TextStyle(
117                                 fontWeight: FontWeight.bold,
118                                 fontSize: 16,
119                               ), // TextStyle
120                             ), // Text
121                             const SizedBox(height: 4),
122                             Text(
123                               'Rp ${item.price}',
124                               style: const TextStyle(
125                                 fontSize: 14,
126                                 color: Colors.teal,
127                               ), // TextStyle
128                             ), // Text
129                             const SizedBox(height: 4),
130                             Text(
131                               'Stock: ${item.stock}',
132                               style: const TextStyle(fontSize: 12, color: Colors.grey),
133                             ), // Text
134                             const SizedBox(height: 4),
135                             Row(
136                               children: [
137                                 const Icon(
138                                   Icons.star,
139                                   color: Colors.amber,
140                                   size: 14,
141                                 ), // Icon
142                                 const SizedBox(width: 4),
143                                 Text(
144                                   '${item.rating}',
145                                   style: const TextStyle(
146                                     fontSize: 12,
147                                     color: Colors.grey,
148                                   ), // TextStyle
149                                 ), // Text
150                               ],
151                             ), // Row
152                           ],
153                         ), // Column
154                       ), // Padding
155                     ],
156                   ), // Column
157                 ), // Card
158               ), // Hero
159             ); // InkWell
160           },
161         ), // GridView.builder
```

```
lib > pages > home_page.dart > _HomePageState > build
   14  ∨ class _HomePageState extends State<HomePage> {
   60  ∨   Widget build(BuildContext context) {
  162           bottomNavigationBar: BottomNavigationBar(
  163             currentIndex: _selectedIndex,
  164             onTap: (index) {
  165               setState(() {
  166                 _selectedIndex = index;
  167               });
  168               _onItemTapped(index);
  169             },
  170             selectedItemColor: ■Colors.teal,
  171             items: const <BottomNavigationBarItem>[
  172               BottomNavigationBarItem(
  173                 icon: Icon(Icons.store),
  174                 label: 'Beranda',
  175               ), // BottomNavigationBarItem
  176               BottomNavigationBarItem(
  177                 icon: Icon(Icons.shopping_cart),
  178                 label: 'Cart',
  179               ), // BottomNavigationBarItem
  180               BottomNavigationBarItem(
  181                 icon: Icon(Icons.person),
  182                 label: 'Profile',
  183               ), // BottomNavigationBarItem
  184             ], // <BottomNavigationBarItem>[]
  185           ), // BottomNavigationBar
  186         ); // Scaffold
  187       }
  188   }
```
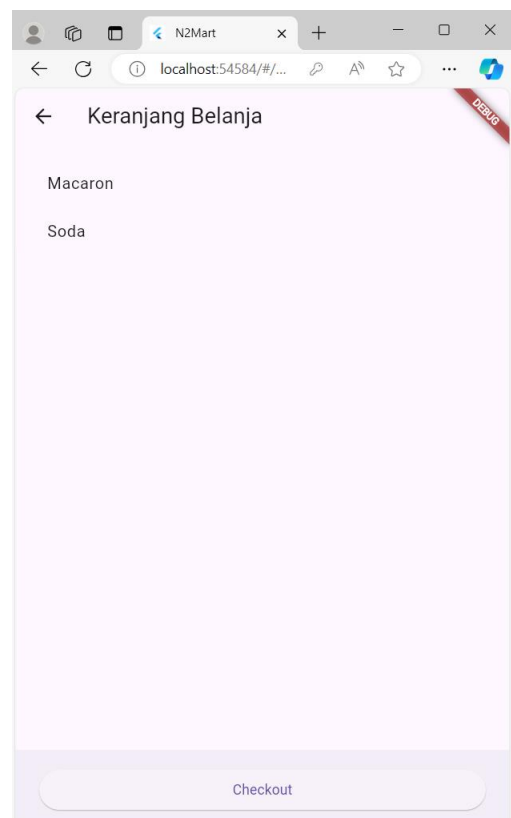
F. Halaman Keranjang
Berikut adalah inputan yang saya masukkan beserta output yang dihasilkan

```
lib > pages > cart_page.dart > ...
   1  import 'package:flutter/material.dart';
   2
   3  class CartPage extends StatelessWidget {
   4    const CartPage({super.key});
   5
   6    @override
   7    Widget build(BuildContext context) {
   8      // Dummy data for cart items (replace with your actual cart management logic)
   9      final List<String> cartItems = ['Macaron', 'Soda']; // Contoh item di keranjang
  10
  11      return Scaffold(
  12        appBar: AppBar(
  13          title: const Text('Keranjang Belanja'),
  14        ), // AppBar
  15        body: Padding(
  16          padding: const EdgeInsets.all(16.0),
  17          child: cartItems.isNotEmpty
  18              ? ListView.builder(
  19                  itemCount: cartItems.length,
  20                  itemBuilder: (context, index) {
  21                    return ListTile(
  22                      title: Text(cartItems[index]),
  23                    ); // ListTile
  24                  },
  25                ) // ListView.builder
  26              : const Center(
  27                  child: Text('Keranjang Anda kosong!'),
  28                ), // Center
  29        ), // Padding
  30        bottomNavigationBar: BottomAppBar(
  31          child: Padding(
  32            padding: const EdgeInsets.all(8.0),
  33            child: ElevatedButton(
  34              onPressed: () {
  35                // Tambahkan logika checkout di sini
  36                ScaffoldMessenger.of(context).showSnackBar(
  37                  const SnackBar(content: Text('Checkout belum diimplementasikan')),
  38                );
  39              },
  40              child: const Text('Checkout'),
  41            ), // ElevatedButton
  42          ), // Padding
  43        ), // BottomAppBar
  44      ); // Scaffold
  45    }
  46  }
```

G. Halaman Detail Produk

Berikut adalah inputan yang saya masukkan beserta output yang dihasilkan

```dart
import 'package:flutter/material.dart';
import 'package:flutter_uts_belanja/models/item.dart'; // Pastikan model Item sudah didefinisikan

class ItemPage extends StatelessWidget {
  final Item item;

  const ItemPage({super.key, required this.item});

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text(item.name),
      ), // AppBar
      body: Padding(
        padding: const EdgeInsets.all(16.0),
        child: Column(
          crossAxisAlignment: CrossAxisAlignment.start,
          children: [
            Image.asset(
              item.imageUrl,
              height: 200,
              fit: BoxFit.cover,
            ), // Image.asset
            const SizedBox(height: 16.0),
            Text(
              item.name,
              style: const TextStyle(fontSize: 24, fontWeight: FontWeight.bold),
            ), // Text
            const SizedBox(height: 8.0),
            Text(
              'Harga: Rp ${item.price}',
              style: const TextStyle(fontSize: 18, color: Colors.green),
            ), // Text
            const SizedBox(height: 8.0),
            Text(
              'Stok: ${item.stock}',
              style: const TextStyle(fontSize: 18),
            ), // Text
            const SizedBox(height: 8.0),
            Text(
              'Rating: ${item.rating}',
              style: const TextStyle(fontSize: 18),
            ), // Text
            const SizedBox(height: 16.0),
            ElevatedButton(
              onPressed: () {
                // Navigasi ke halaman About
                Navigator.pushNamed(context, '/about', arguments: item);
              },
              child: const Text('Detail'),
            ), // ElevatedButton
          ],
        ), // Column
      ), // Padding
    ); // Scaffold
  }
}
```

```dart
4    class AboutPage extends StatelessWidget {
5      const AboutPage({super.key});
6
7      @override
8      Widget build(BuildContext context) {
9        final Item item = ModalRoute.of(context)!.settings.arguments as Item; // Ambil argumen item
10
11       return Scaffold(
12         appBar: AppBar(
13           title: Text(item.name),
14         ), // AppBar
15         body: Padding(
16           padding: const EdgeInsets.all(16.0),
17           child: Column(
18             crossAxisAlignment: CrossAxisAlignment.start,
19             children: [
20               Image.asset(
21                 item.imageUrl,
22                 height: 200,
23                 fit: BoxFit.cover,
24               ), // Image.asset
25               const SizedBox(height: 16.0),
26               Text(
27                 item.name,
28                 style: const TextStyle(fontSize: 24, fontWeight: FontWeight.bold),
29               ), // Text
30               const SizedBox(height: 8.0),
31               Text(
32                 'Detail tentang ${item.name}',
33                 style: const TextStyle(fontSize: 18),
34               ), // Text
35             ],
36           ), // Column
37         ), // Padding
38       ); // Scaffold
39     }
40   }
```

N2Mart

localhost:54584/#/i...

DEBUG

← Macaron

Macaron

Harga: Rp 5000

Stok: 10

Rating: 4.5

Detail