PEMROGRAMAN PERANGKAT BERGERAK

MODUL VII

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PROGRAM STUDI S1 SOFTWARE ENGINEERING

FAKULTAS INFORMATIKA

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TUGAS PENDAHULUAN

A. SOAL

(Soal) Buatlah satu project untuk menampilkan beberapa produk dan halaman e-commerce dengan menerapkan class model serta navigasi halaman

B. SOURCE CODE

1. Main.dart

```dart
import 'package:flutter/material.dart';
import '/models/product.dart';
import 'screens/home_screen.dart';
import 'screens/product_detail_screen.dart';

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

class MyApp extends StatelessWidget {
  const MyApp({super.key});

  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Aplikasi Shoppe',
      debugShowCheckedModeBanner: false,
      theme: ThemeData(primarySwatch: Colors.blue, fontFamily:
  'Poppins'),
      home: const HomeScreen(),
      routes: {
        '/detail': (context) {
          final args = ModalRoute.of(context)!.settings.arguments as
  Product;
          return ProductDetailScreen(product: args);
        }
      },
    );
  }
}
```

2. products.dart

import '../models/product.dart';

List<Product> products = [
  Product(

```dart
    id: 1,
    name: "Laptop Asus G14",
    price: 13500000,
    image: "https://rog.asus.com/id/articles/rog-gaming-laptops/12625d93-5232-4001-a6ba-d3d676d87e0c/",
    description:
        "Laptop Asus G14 dengan prosesor AMD Ryzen 9 dan grafis NVIDIA RTX 3060. Cocok untuk gaming dan multitasking.",
    rating: 4,
    category: "Laptop",
  ),
  Product(
    id: 2,
    name: "Monitor 24 inch",
    price: 19999000,
    image: "https://images.unsplash.com/photo-1541807084-5c52b6b3adef?w=400",
    description:
        "Monitor 24 inch dengan resolusi 1920x1080 dan refresh rate 144Hz. Cocok untuk gaming dan multitasking.",
    rating: 4.9,
    category: "Monitor",
  ),

];
```

3. product.dart
```dart
class Product {
  final int id;
  final String name;
  final double price;
  final String image;
  final String description;
  final double rating;
```

```dart
  final String category;

  const Product({
    required this.id,
    required this.name,
    required this.price,
    required this.image,
    required this.description,
    required this.rating,
    required this.category,
  });

  factory Product.fromJson(Map<String, dynamic> json) {
    return Product(
      id: json['id'],
      name: json['name'],
      price: json['price'].toDouble(),
      image: json['image'],
      description: json['description'],
      rating: json['rating'].toDouble(),
      category: json['category'],
    );
  }
}
```

4. home_screen.dart

```dart
import 'package:flutter/material.dart';
import '../models/product.dart';
import '../data/products.dart';
import 'product_detail_screen.dart';

class HomeScreen extends StatelessWidget {
  const HomeScreen({super.key});
```

```dart
@override
Widget build(BuildContext context) {
  return Scaffold(
    appBar: AppBar(
      title: const Text(
        'Ilham Shope',
        style: TextStyle(fontWeight: FontWeight.bold, color: Colors.white),
      ),
      backgroundColor: Colors.blue,
      elevation: 0,
    ),
    body: Column(
      children: [
        // Header
        Container(
          color: Colors.blue,
          child: const Column(crossAxisAlignment: CrossAxisAlignment.start),
        ),

        // List Produk
        Expanded(
          child: Padding(
            padding: const EdgeInsets.all(16),
            child: GridView.builder(
              gridDelegate: const SliverGridDelegateWithFixedCrossAxisCount(
                crossAxisCount: 2,
                crossAxisSpacing: 16,
                mainAxisSpacing: 16,
                childAspectRatio: 0.7,
              ),
              itemCount: products.length,
              itemBuilder: (context, index) {
                return ProductCard(product: products[index]);
              },
```

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

class ProductCard extends StatelessWidget {
  final Product product;

  const ProductCard({super.key, required this.product});

  @override
  Widget build(BuildContext context) {
    return Card(
      elevation: 4,
      shape: RoundedRectangleBorder(borderRadius: BorderRadius.circular(12)),
      child: InkWell(
        onTap: () {
          Navigator.push(
            context,
            MaterialPageRoute(
              builder: (context) => ProductDetailScreen(product: product),
            ),
          );
        },
        child: Column(
          crossAxisAlignment: CrossAxisAlignment.start,
          children: [
            // Gambar Produk
            ClipRRect(
              borderRadius: const BorderRadius.only(
```

```dart
        topLeft: Radius.circular(12),
        topRight: Radius.circular(12),
      ),
      child: Image.network(
        product.image,
        height: 120,
        width: double.infinity,
        fit: BoxFit.cover,
      ),
    ),

    // Info Produk
    Padding(
      padding: const EdgeInsets.all(12),
      child: Column(
        crossAxisAlignment: CrossAxisAlignment.start,
        children: [
          Text(
            product.name,
            style: const TextStyle(
              fontWeight: FontWeight.bold,
              fontSize: 14,
            ),
            maxLines: 2,
            overflow: TextOverflow.ellipsis,
          ),
          const SizedBox(height: 4),
          Text(
            product.category,
            style: TextStyle(color: const Color.fromARGB(255, 110, 31, 31),
fontSize: 12),
          ),
          const SizedBox(height: 8),
```

```dart
                    // Rating
                    Row(
                      children: [
                        Icon(Icons.star, color: const Color.fromARGB(255, 17, 215, 106), size: 16),
                        const SizedBox(width: 4),
                        Text(
                          product.rating.toString(),
                          style: const TextStyle(
                            fontSize: 12,
                            fontWeight: FontWeight.bold,
                          ),
                        ),
                      ],
                    ),
                    const SizedBox(height: 8),

                    // Harga
                    Text(
                      'Rp ${product.price.toStringAsFixed(0).replaceAllMapped(RegExp(r'(\d{1,3})(?=(\d{3})+(?!\d))'), (Match m) => '${m[1]}.')}',
                      style: const TextStyle(
                        fontWeight: FontWeight.bold,
                        fontSize: 14,
                        color: Colors.blue,
                      ),
                    ),
                  ],
                ),
              ),
            ],
          ),
        ),
```

```
  );
 }
}


5. product_detail_screen.dart
import 'package:flutter/material.dart';
import '../models/product.dart';

class ProductDetailScreen extends StatelessWidget {
  final Product product;

  const ProductDetailScreen({super.key, required this.product});

  @override
  Widget build(BuildContext context) {
   return Scaffold(
     body: CustomScrollView(
       slivers: [
         // App Bar dengan gambar
         SliverAppBar(
           expandedHeight: 300,
           pinned: true,
           flexibleSpace: FlexibleSpaceBar(
             background: Image.network(product.image, fit: BoxFit.cover),
           ),
           leading: IconButton(
             icon: const Icon(Icons.arrow_back, color: Colors.blue),
             onPressed: () => Navigator.pop(context),
           ),
         ),

         // Detail Produk
         SliverToBoxAdapter(
           child: Padding(
```

```dart
          padding: const EdgeInsets.all(16),
          child: Column(
            crossAxisAlignment: CrossAxisAlignment.start,
            children: [
              // Nama dan Kategori
              Text(
                product.name,
                style: const TextStyle(
                  fontSize: 24,
                  fontWeight: FontWeight.bold,
                ),
              ),
              const SizedBox(height: 8),
              Text(
                product.category,
                style: TextStyle(color: Colors.grey[600], fontSize: 16),
              ),
              const SizedBox(height: 16),

              // Rating dan Harga
              Row(
                mainAxisAlignment: MainAxisAlignment.spaceBetween,
                children: [
                  Row(
                    children: [
                      Icon(Icons.star, color: Colors.amber, size: 20),
                      const SizedBox(width: 4),
                      Text(
                        product.rating.toString(),
                        style: const TextStyle(
                          fontSize: 16,
                          fontWeight: FontWeight.bold,
                        ),
                      ),
                    ),
```

```dart
                const SizedBox(width: 4),
                Text(
                  '(100+ reviews)',
                  style: TextStyle(color: Colors.grey[600]),
                ),
              ],
            ),
            Text(
              'Rp ${product.price.toStringAsFixed(0).replaceAllMapped(RegExp(r'(\d{1,3})(?=(\d{3})+(?!\d))'), (Match m) => '${m[1]}.')}',
              style: const TextStyle(
                fontSize: 20,
                fontWeight: FontWeight.bold,
                color: Colors.blue,
              ),
            ),
          ],
        ),
        const SizedBox(height: 24),

        // Deskripsi
        const Text(
          'Deskripsi Produk',
          style: TextStyle(fontSize: 18, fontWeight: FontWeight.bold),
        ),
        const SizedBox(height: 8),
        Text(
          product.description,
          style: TextStyle(
            fontSize: 16,
            color: Colors.grey[700],
            height: 1.5,
          ),
```

```dart
          ),
          const SizedBox(height: 32),

          // Tombol Aksi
          SizedBox(
            width: double.infinity,
            height: 50,
            child: ElevatedButton(
              onPressed: () {
                _showSuccessDialog(context);
              },
              style: ElevatedButton.styleFrom(
                backgroundColor: Colors.blue,
                shape: RoundedRectangleBorder(
                  borderRadius: BorderRadius.circular(12),
                ),
              ),
              child: const Text(
                'Tambah ke Keranjang',
                style: TextStyle(
                  color: Colors.white,
                  fontSize: 16,
                  fontWeight: FontWeight.bold,
                ),
              ),
            ),
          ),
        ],
      ),
    ),
  ],
),
);
```

```dart
  }

  void _showSuccessDialog(BuildContext context) {
    showDialog(
      context: context,
      builder: (BuildContext context) {
        return AlertDialog(
          title: const Text('Berhasil!'),
          content: Text('${product.name} telah ditambahkan ke keranjang'),
          actions: [
            TextButton(
              onPressed: () {
                Navigator.of(context).pop();
              },
              child: const Text('OK'),
            ),
          ],
        );
      },
    );
  }
}
```