Experiment	3
Aim	Create an E-Commerce app using Bottom Navigation
Objective	• To Create E-Commerce App • To Develop Bottom Navigation • To Use 60-30-10 rule
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Date of Submission	16/02/2025

Technology used	**Flutter**
Task	Develop an e-commerce app with Bottom Navigation Bar with 4 tabs: Home, Browse list of Products (Atleast 5 products) and see product details (image, name, price, and description), Profile and Cart.

Code with proper label	**homescreen.dart**:
	import 'package:flutter/material.dart';
	import '../widgets/common_header.dart';
	import 'package:google_fonts/google_fonts.dart';
	
	class HomeScreen extends StatelessWidget {
	@override
	Widget build(BuildContext context) {
	return Scaffold(
	appBar: CommonHeader(),

```
    body: Center(
      child: Column(
        mainAxisAlignment: MainAxisAlignment.center,
        children: [
          // AK Store!! (Logo-like Text)
          Text(
            'AK Store!!',
            style: GoogleFonts.pacifico(
              fontSize: 50,
              fontWeight: FontWeight.bold,
              color: Colors.blue[800],
            ),
          ),
          SizedBox(height: 10),
          // Tagline
          Text(
            'Where one can buy anything!!',
            style: GoogleFonts.lobster(
              fontSize: 20,
              fontStyle: FontStyle.italic,
              color: Colors.blue[600],
            ),
          ),
        ],
      ),
    ),
  );
 }
}
```

cart.dart:

```
import 'package:flutter/material.dart';
import '../widgets/common_header.dart';
import 'products.dart';

class Cart extends StatefulWidget {
  static List<Map<String, dynamic>> cartItems = [];

  @override
  _CartState createState() => _CartState();
}

class _CartState extends State<Cart> {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: CommonHeader(),
      body: Cart.cartItems.isEmpty
          ? Center(child: Text('No Items Added'))
          : Column(
              children: [
                Expanded(
                  child: ListView.builder(
                    itemCount: Cart.cartItems.length,
                    itemBuilder: (context, index) {
                      return Card(
```

```
color: Colors.blue[300],
margin: EdgeInsets.all(10),
child: Padding(
 padding: EdgeInsets.all(10),
 child: Row(
  children: [
   Image.asset(
    Cart.cartItems[index]['image'],
    width: 80,
    height: 80,
    fit: BoxFit.cover,
   ),
   SizedBox(width: 20),
   Expanded(
    child: Column(
     crossAxisAlignment: CrossAxisAlignment.start,
     children: [
      Text(
       Cart.cartItems[index]['name'],
       style: TextStyle(fontSize: 18, fontWeight:
FontWeight.bold),
      ),
      Text(Cart.cartItems[index]['description']),
      Text(
       Cart.cartItems[index]['price'],
       style: TextStyle(fontSize: 16, color: Colors.red[800]),
      ),
      SizedBox(height: 10),
      ElevatedButton(
```

```
                                onPressed: () {
                                  setState(() {
                                    Products().createState().products.add(Cart.cartItems[ind
ex]);
                                    Cart.cartItems.removeAt(index);
                                  });
                                },
                                style: ElevatedButton.styleFrom(
                                  backgroundColor: Colors.red,
                                ),
                                child: Text('Remove from Cart'),
                              ),
                            ],
                          ),
                        ),
                      ],
                    ),
                  ),
                );
              },
            ),
          ),
          ElevatedButton(
            onPressed: () {
              setState(() {
                Cart.cartItems.clear();
                ScaffoldMessenger.of(context).showSnackBar(
                  SnackBar(content: Text('Order Placed!')),
                );
```

```
                });
              },
              child: Text('Place Order'),
            ),
          ],
        ),
    );
  }
}
```

products.dart:

```
import 'package:flutter/material.dart';
import '../widgets/common_header.dart';
import 'cart.dart';

class Products extends StatefulWidget {
  @override
  _ProductsState createState() => _ProductsState();
}

class _ProductsState extends State<Products> {
  List<Map<String, dynamic>> products = [
    {
      'name': 'Camera',
      'description': 'Capture Every Moment.',
      'price': '\$100',
      'image': 'assets/images/p2.jpg',
    },
```

```
  {
   'name': 'Nivia',
   'description': 'Only for Men',
   'price': '\$50',
   'image': 'assets/images/p1.jpg',
  },
  {
   'name': 'Watch',
   'description': 'It Tells Time!!',
   'price': '\$80',
   'image': 'assets/images/p3.jpg',
  },
  {
   'name': 'Dove',
   'description': 'Lets be Beautiful',
   'price': '\$20',
   'image': 'assets/images/p4.jpg',
  },
  {
   'name': 'Cocacola',
   'description': 'Better Choice than Kala-Khatta',
   'price': '\$5',
   'image': 'assets/images/p5.jpg',
  }

];

@override
Widget build(BuildContext context) {
```

```
return Scaffold(
  appBar: CommonHeader(),
  body: products.isEmpty
     ? Center(child: Text('No Items Available'))
     : ListView.builder(
        itemCount: products.length,
        itemBuilder: (context, index) {
          return Card(
            color: Colors.blue[300],
            margin: EdgeInsets.all(10),
            child: Padding(
              padding: EdgeInsets.all(10),
              child: Row(
                children: [
                  Image.asset(
                    products[index]['image'],
                    width: 80,
                    height: 80,
                    fit: BoxFit.cover,
                  ),
                  SizedBox(width: 20),
                  Expanded(
                    child: Column(
                      crossAxisAlignment: CrossAxisAlignment.start,
                      children: [
                        Text(
                          products[index]['name'],
                          style: TextStyle(fontSize: 18, fontWeight: FontWeight.bold),
                        ),
```

```
                    Text(products[index]['description']),
                    Text(
                     products[index]['price'],
                     style: TextStyle(fontSize: 16, color: Colors.green[800]),
                    ),
                    SizedBox(height: 10),
                    ElevatedButton(
                     onPressed: () {
                      setState(() {
                       Cart.cartItems.add(products[index]);
                       products.removeAt(index);
                      });
                     },
                     style: ElevatedButton.styleFrom(
                      backgroundColor: Colors.green,
                     ),
                     child: Text('Add to Cart'),
                    ),
                   ],
                  ),
                 ),
                ],
               ),
              ),
             );
            },
           ),
  );
}
```

}

profile.dart:

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

class Profile extends StatefulWidget {
  @override
  _ProfileState createState() => _ProfileState();
}

class _ProfileState extends State<Profile> {
  bool _isEditing = false;
  TextEditingController _nameController = TextEditingController(text: "Abhijit Khambekar");
  TextEditingController _addressController = TextEditingController(text: "100th Charming Avenue");

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: CommonHeader(),
      body: Center(
        child: Padding(
          padding: EdgeInsets.all(16.0),
          child: Column(
            mainAxisAlignment: MainAxisAlignment.center,
            crossAxisAlignment: CrossAxisAlignment.start,
            children: [
```

```
// Circular Profile Image
Center(
  child: CircleAvatar(
    radius: 60,
    backgroundImage: NetworkImage(
      'assets/images/test.jpg', // Replace with your image URL or Asset
    ),
  ),
),
SizedBox(height: 20),
// Name Label and Field
Text(
  'Name',
  style: TextStyle(fontSize: 12, fontWeight: FontWeight.bold),
),
SizedBox(height: 5),
TextField(
  controller: _nameController,
  enabled: _isEditing,
  decoration: InputDecoration(
    border: OutlineInputBorder(
      borderSide: BorderSide.none, // No border effect
    ),
    filled: true,

  ),
  style: TextStyle(fontSize: 16),
),
SizedBox(height: 20),
```

```
// Address Label and Field
Text(
  'Address',
  style: TextStyle(fontSize: 12, fontWeight: FontWeight.bold),
),
SizedBox(height: 5),
TextField(
  controller: _addressController,
  enabled: _isEditing,
  decoration: InputDecoration(
    border: OutlineInputBorder(
      borderSide: BorderSide.none, // No border effect
    ),
    filled: true,

  ),
  style: TextStyle(fontSize: 16),
),
SizedBox(height: 30),

// Edit and Save Buttons
Center(
  child: _isEditing
      ? ElevatedButton(
          onPressed: () {
            setState(() {
              _isEditing = false;
            });
```

```
                    // Save the updated profile data
                    ScaffoldMessenger.of(context).showSnackBar(
                      SnackBar(content: Text('Profile Saved!')),
                    );
                  },
                  child: Text('Save Profile'),
                  style: ElevatedButton.styleFrom(
                    backgroundColor: const Color.fromARGB(255, 147, 198, 255),
                  ),
                )
              : ElevatedButton(
                  onPressed: () {
                    setState(() {
                      _isEditing = true;
                    });
                  },
                  child: Text('Edit Profile'),
                  style: ElevatedButton.styleFrom(
                    backgroundColor: const Color.fromARGB(255, 147, 198, 255), // Dark Blue
                  ),
                ),
            ),
          ],
        ),
      ),
    ),
  );
}
```

```
}
```

common_header.dart:

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

class CommonHeader extends StatelessWidget implements PreferredSizeWidget {
 @override
 Widget build(BuildContext context) {
  return AppBar(

    title: Text(
     'My First Flutter E App',
     style: TextStyle(
       color: Colors.white,
       fontWeight: FontWeight.bold,
     ),
    ),
    backgroundColor: Colors.blue[800],  // Primary Blue
    centerTitle: true,
  );
 }

 @override
 Size get preferredSize => Size.fromHeight(kToolbarHeight);
}
```

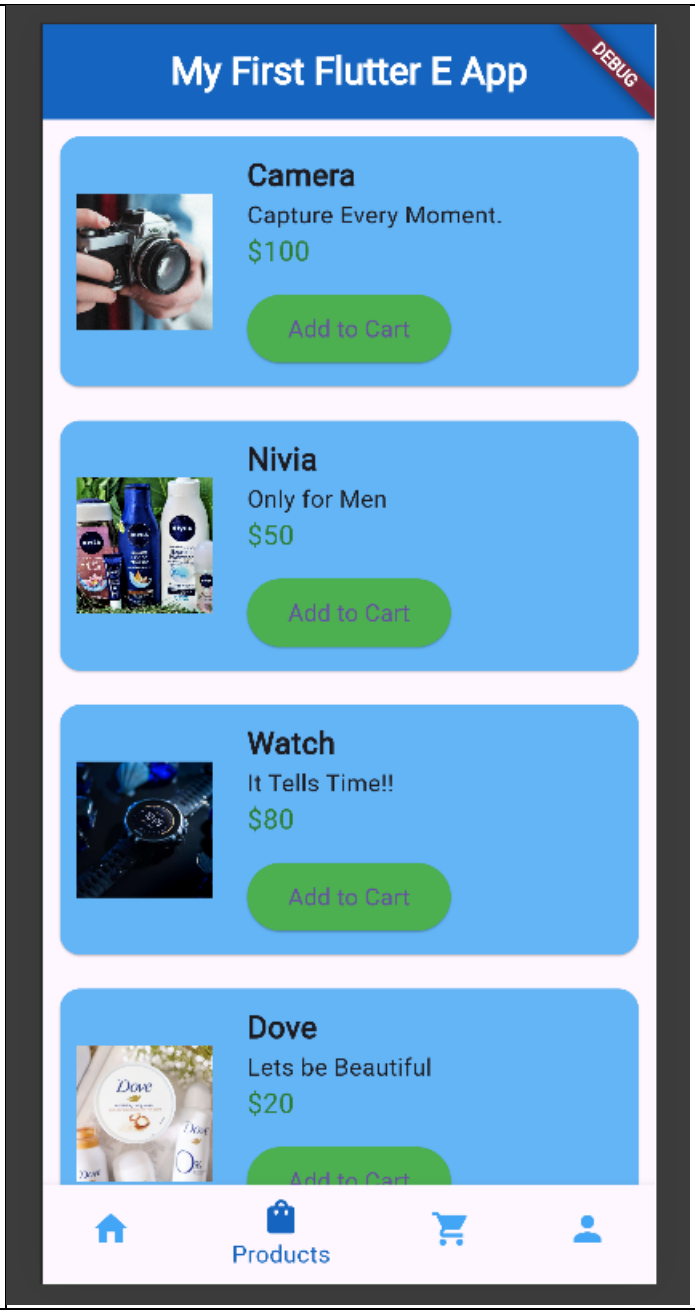
main.dart:

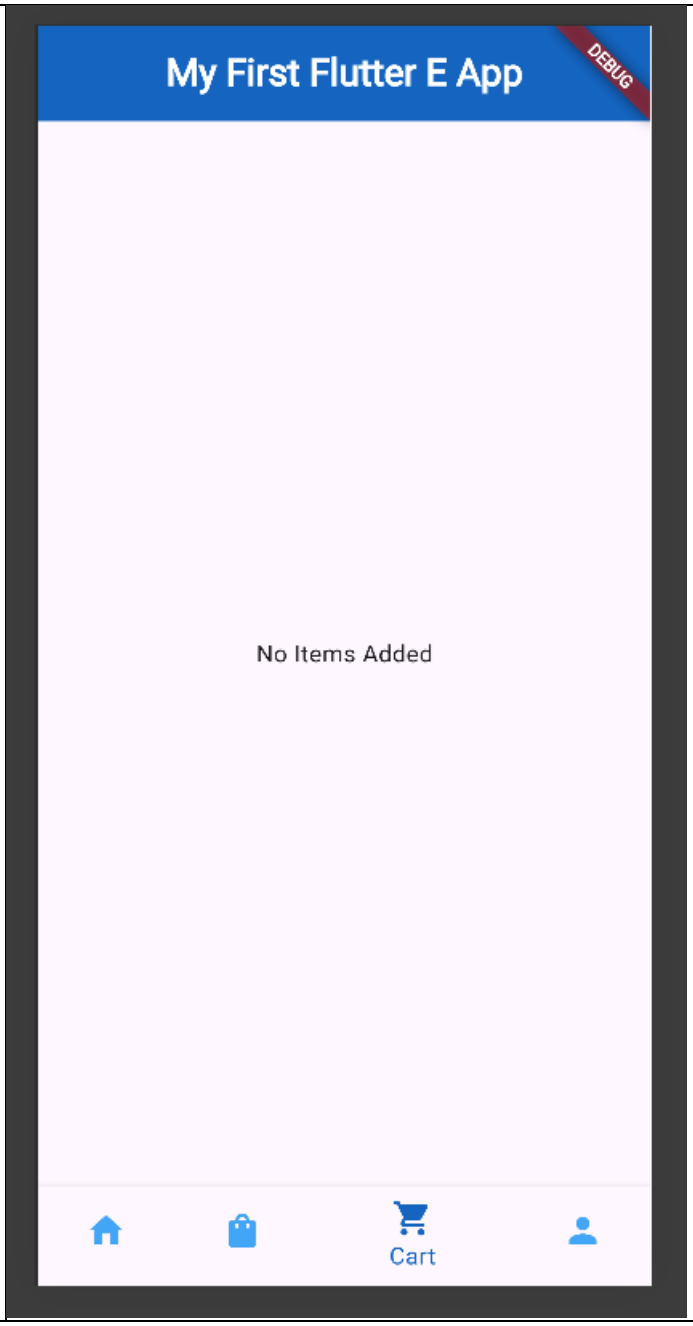
```
import 'package:flutter/material.dart';
import 'screens/homescreen.dart';
import 'screens/products.dart';
import 'screens/cart.dart';
import 'screens/profile.dart';

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

class MyApp extends StatelessWidget {
 @override
 Widget build(BuildContext context){
  return MaterialApp(
    title: 'Homebar Navigation',
    home: HomeBar(),
  );
 }
}

class HomeBar extends StatefulWidget {
 @override
 _HomeBarState createState() => _HomeBarState();
}

class _HomeBarState extends State<HomeBar> {
 int _currentIndex = 0;
```

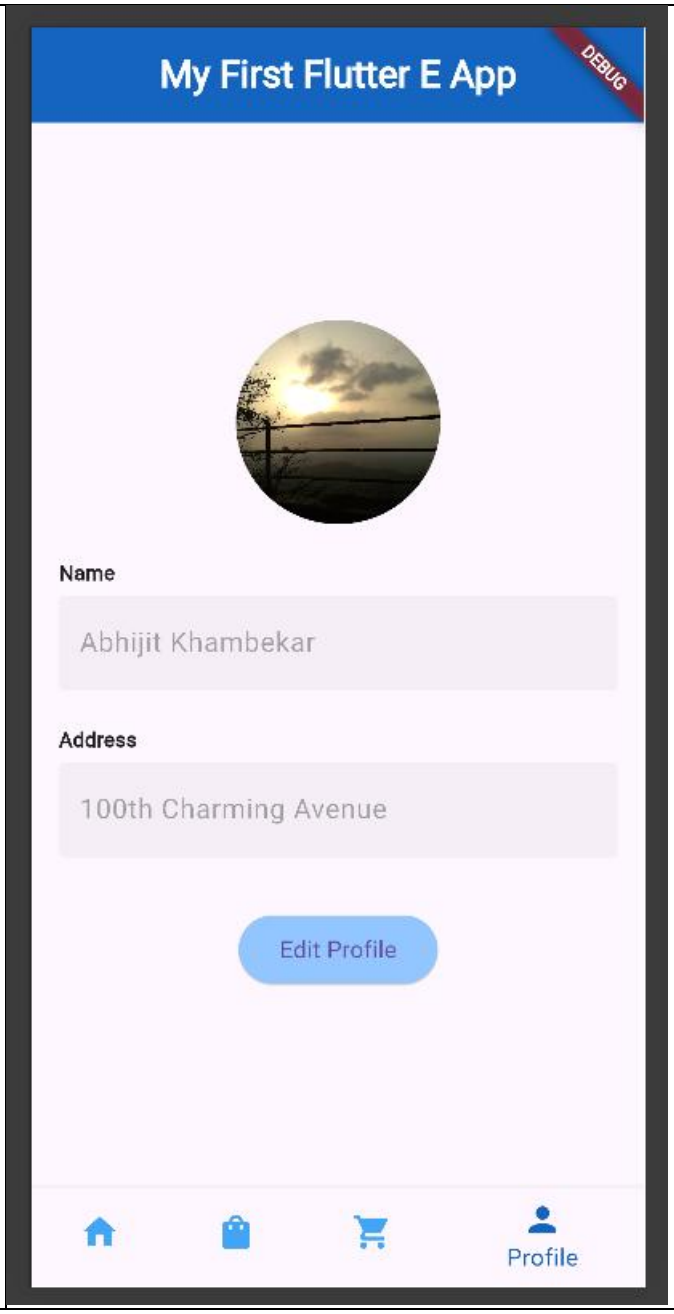
```
final List<Widget> _screens = [
  HomeScreen(),
  Products(),
  Cart(),
  Profile(),
];

@override
Widget build(BuildContext context) {
  return Scaffold(
    body: _screens[_currentIndex],
    bottomNavigationBar: BottomNavigationBar(
      currentIndex: _currentIndex,
      onTap: (index) {
        setState(() {
          _currentIndex = index;
        });
      },
       selectedItemColor: Colors.blue[800],  // Dark Blue for Active Icon
      unselectedItemColor: Colors.blue[400],
      items: [
        BottomNavigationBarItem(
          icon: Icon(Icons.home),
          label: 'Home',
        ),
        BottomNavigationBarItem(
          icon: Icon(Icons.shopping_bag),
          label: 'Products',
```

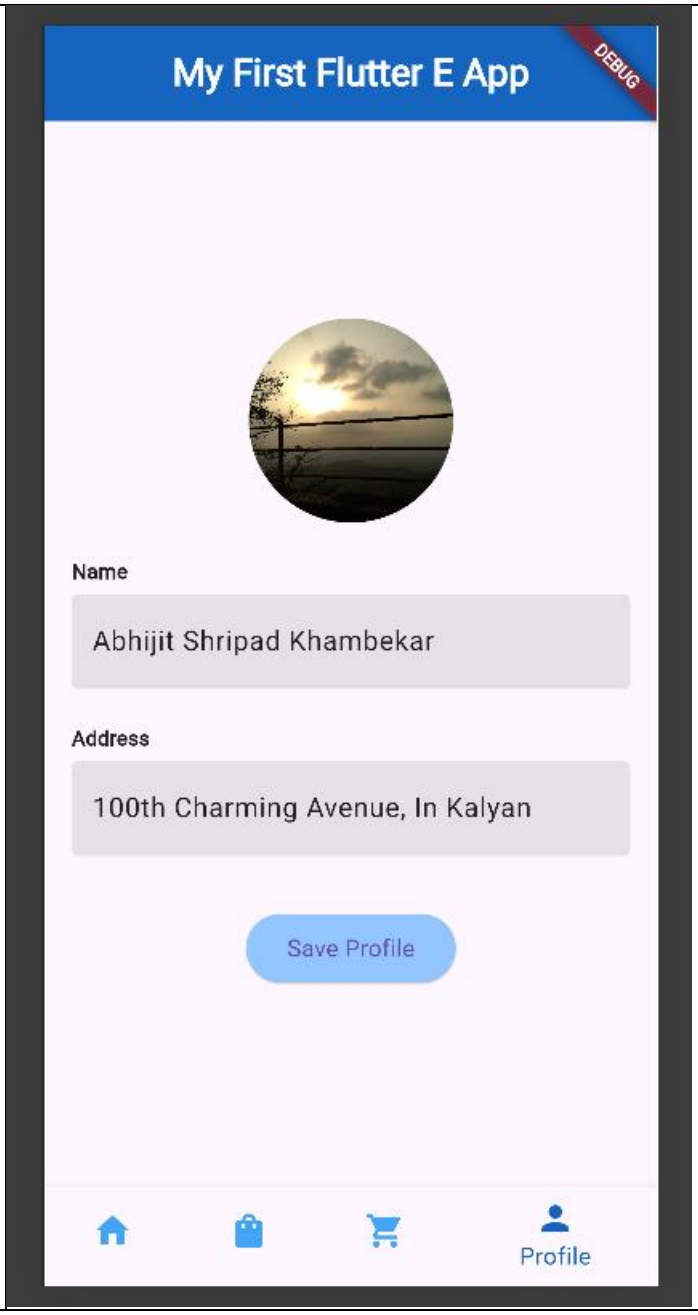
```
        ),
        BottomNavigationBarItem(
          icon: Icon(Icons.shopping_cart),
          label: 'Cart',
        ),
        BottomNavigationBarItem(
          icon: Icon(Icons.person),
          label: 'Profile',
        ),
      ],
    ),
  );
 }
}
```

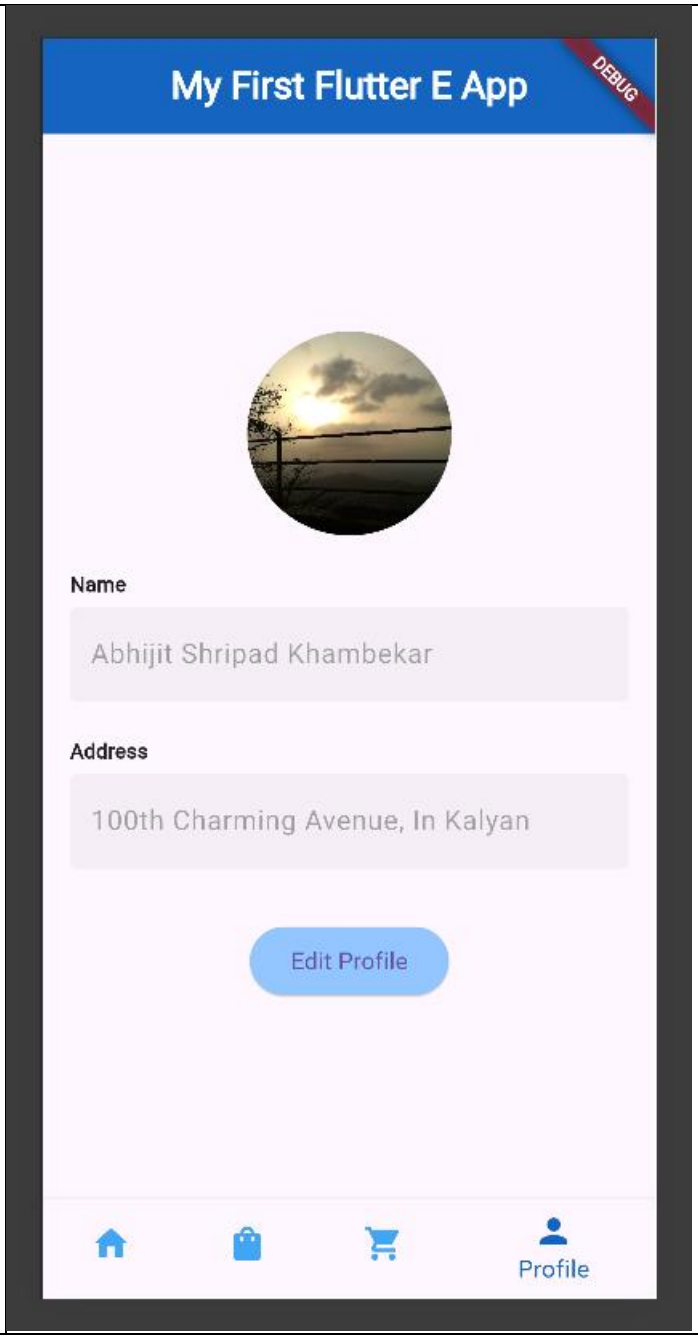
Screenshots		

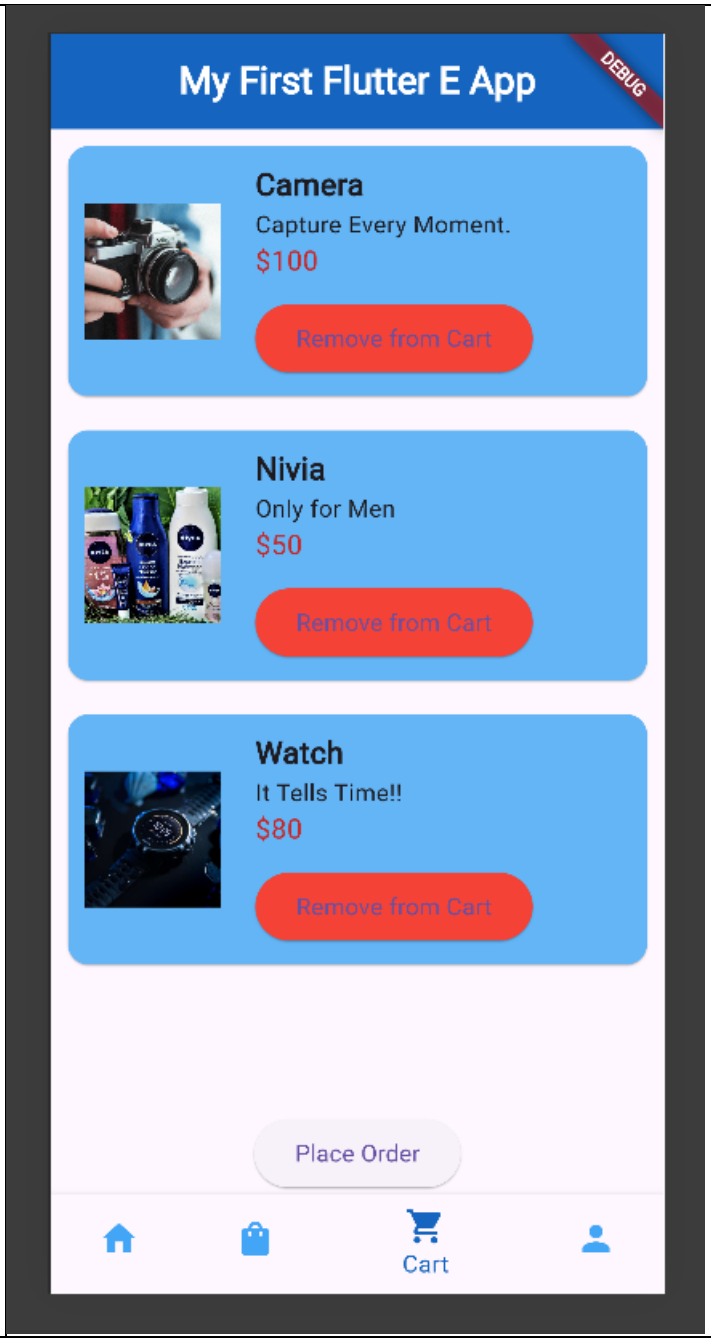

My First Flutter E App
DEBUG
Camera
Capture Every Moment.
$100
Add to Cart
Nivia
Only for Men
$50
Add to Cart
Watch
It Tells Time!!
$80
Add to Cart
Dove
Lets be Beautiful
$20
Products

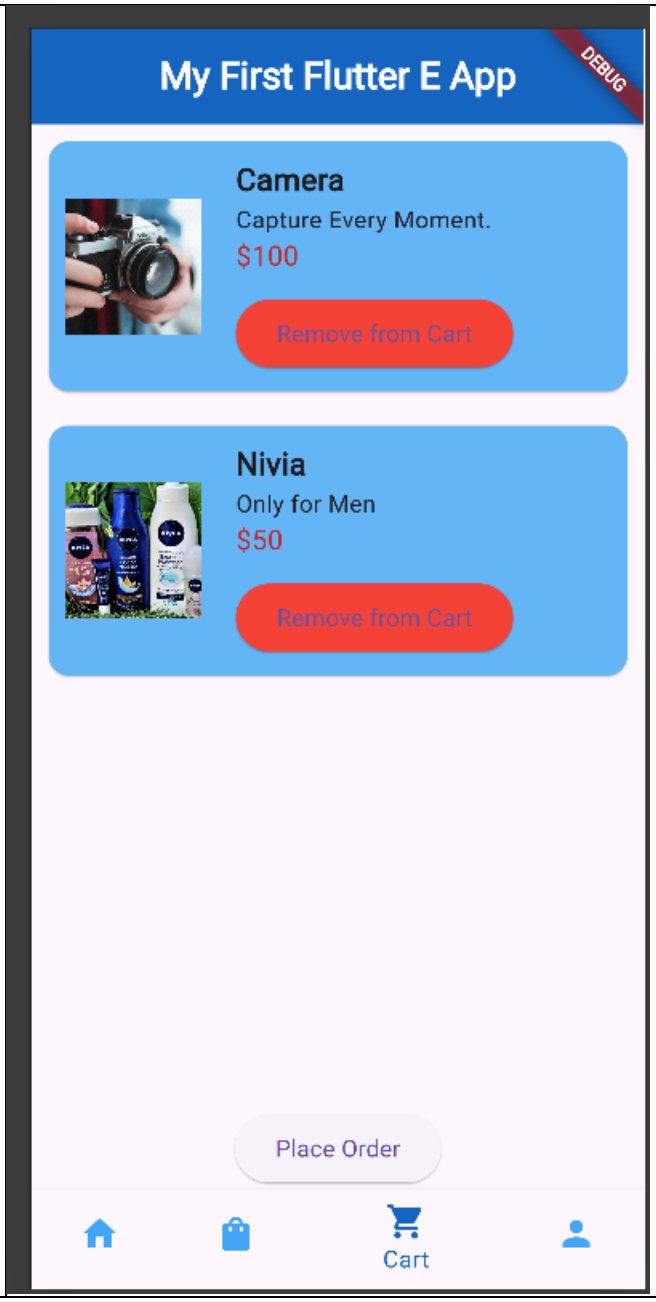

My First Flutter E App
DEBUG
No Items Added
Cart

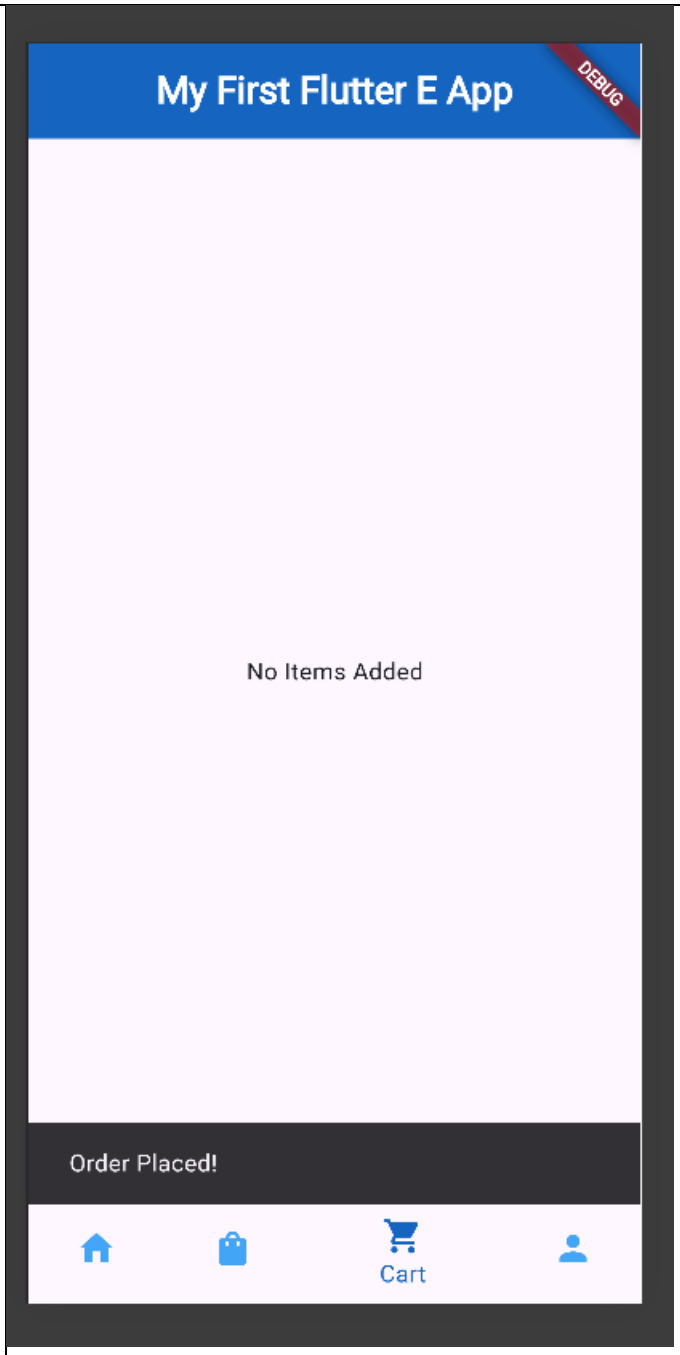

My First Flutter E App
DEBUG
Name
Abhijit Khambekar
Address
100th Charming Avenue
Edit Profile
Profile


My First Flutter E App
DEBUG
Name
Abhijit Shripad Khambekar
Address
100th Charming Avenue, In Kalyan
Save Profile
Profile


My First Flutter E App
DEBUG
Name
Abhijit Shripad Khambekar
Address
100th Charming Avenue, In Kalyan
Edit Profile
Profile


My First Flutter E App
DEBUG
Camera
Capture Every Moment.
$100
Remove from Cart
Nivia
Only for Men
$50
Remove from Cart
Watch
It Tells Time!!
$80
Remove from Cart
Place Order
Cart


My First Flutter E App
DEBUG
Camera
Capture Every Moment.
$100
Remove from Cart
Nivia
Only for Men
$50
Remove from Cart
Place Order
Cart



Question and Answers	Answer the following Questions: 1. How to create Bottom Navigation? Solu: To create a Bottom Navigation in Flutter, we use the BottomNavigationBar widget. It allows us to add multiple tabs at the bottom of the screen, making navigation between pages easy. Each tab has an icon and a label. We keep track of

	the selected tab using a variable and update the screen using the setState() method when a user taps on a tab. 2. How did you use 60-30-10 rule in your application? Solu: The 60-30-10 rule is a color scheme technique where 60% is the main color, 30% is the secondary color, and 10% is the accent color. In the application, Blue is used as the main color (60%) for the background and headers, a lighter shade of Blue (30%) is used for cards and containers, and accent colors like Green for the "Add Cart" button and Red for the "Remove Cart" button (10%) make important actions stand out. This creates a balanced and visually appealing look. 3. Which new elements did you use for creating UI components? Solu: **New UI elements** used include Card for displaying product information in a neatly organized manner, CircleAvatar for showing the profile image in a circular shape, and SnackBar for displaying short messages like "Profile Saved" or "Order Placed". Additionally, the AlertDialog was used for confirmation pop-ups, and the GoogleFonts package was added to use stylish fonts, making the text look more attractive and professional.
Conclusion	Learned, how to create navigation bar on bottom, linking of 2 pages and displaying data transfer among pages, how to use google fonts.