

MAD PWA LAB 3

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Aim: Exploring Flutter Widgets

Theory:

Images:

- Flutter supports the integration of various image formats, such as PNG, JPEG, GIF, and WebP.
- Images can be displayed using the Image widget, and different aspects like width, height, and alignment can be customized.

● Asset images are commonly used and are declared in the pubspec.yaml file under the flutter section. The Image.asset constructor is then used to load these assets

Fonts:

- Fonts in Flutter can be customized by specifying the TextStyle for text widgets.
- Custom fonts, including TrueType and OpenType fonts, can be used by declaring them in the pubspec.yaml file and specifying them in the TextStyle with the fontFamily property.

Icons:

- Flutter provides a wide range of icons through the Icons class, including Material Icons and Cupertino Icons.

- The Icon widget is used to display icons, and you can customize their appearance using properties like color, size, and opacity.

Button Types:

- Flutter provides various button types, including ElevatedButton, TextButton, OutlinedButton, and more.
- These buttons offer different visual styles, allowing developers to choose the one that best fits the application's design.

Button Properties:

- Buttons can be customized using properties such as onPressed (to define the action when the button is pressed), style (to modify the button's appearance), and child (to set the content inside the button)

Code:

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

```
class Product {  
  String name;  
  double price;  
  double rating;
```

```

int purchases;
String description;

Product({
    required this.name,
    required this.price,
    required this.rating,
    required this.purchases,
    required this.description,
});
}

class HomePage extends StatelessWidget {
  final List<Product> products = [
    Product(
      name: "T Shirt",
      price: 99.99,
      rating: 4.5,
      purchases: 200,
      description:
        "Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed do eiusmod tempor
incididunt ut labore et dolore magna aliqua.",
    ),
    Product(
      name: "Watch",
      price: 49.99,
      rating: 3.8,
      purchases: 150,
      description:
        "Sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim
veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.",
    ),
    Product(
      name: "Smart Phone",
      price: 189.99,
      rating: 4.2,
      purchases: 300,
      description:
        "Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea
commodo consequat.",
    ),
    // Add more products as needed
  ];

  final List<Product> offers = [
    Product(
      name: "Offer 1 on all jeans get 10% off",
      price: 49.99,
      rating: 4.0,
      purchases: 100,
      description: "Special offer for today!",
    ),
    Product(
      name: "Offer 2 get a discount on order above 300 on shirts",
      price: 79.99,

```

```

        rating: 4.2,
        purchases: 150,
        description: "Limited time offer!",
    ),
    // Add more offers as needed
];

@override
Widget build(BuildContext context) {
  return Scaffold(
    appBar: AppBar(
      backgroundColor: Colors.red,
      title: Text('Products'),
      leading: IconButton(
        icon: Icon(Icons.search),
        onPressed: () {
          Navigator.push(
            context,
            MaterialPageRoute(builder: (context) => SearchBar()),
          );
        },
      ),
    ),
    body: SingleChildScrollView(
      child: Column(
        crossAxisAlignment: CrossAxisAlignment.start,
        children: <Widget>[
          _buildOffersBox(),
          _buildProductsSection(),
        ],
      ),
    ),
  );
}

Widget _buildOffersBox() {
  return Container(
    color: Colors.blueAccent,
    padding: EdgeInsets.symmetric(horizontal: 16, vertical: 12),
    margin: EdgeInsets.all(16),
    child: Column(
      crossAxisAlignment: CrossAxisAlignment.start,
      children: <Widget>[
        Text(
          'Special Offers',
          style: TextStyle(
            color: Colors.white,
            fontSize: 20,
            fontWeight: FontWeight.bold,
          ),
        ),
        SizedBox(height: 8),
        Container(
          height: 120, // Adjust the height as needed
          child: ListView(

```

```

scrollDirection: Axis.horizontal,
children: offers.map((offer) {
  return Container(
    width: 150, // Adjust the width as needed
    margin: EdgeInsets.only(right: 16),
    decoration: BoxDecoration(
      color: Colors.white,
      borderRadius: BorderRadius.circular(8),
    ),
    padding: EdgeInsets.all(8),
    child: Column(
      crossAxisAlignment: CrossAxisAlignment.start,
      children: [
        Text(
          offer.name,
          style: TextStyle(
            color: Colors.black,
            fontWeight: FontWeight.bold,
          ),
        ),
        SizedBox(height: 4),
        Text(
          offer.description,
          style: TextStyle(color: Colors.grey),
        ),
      ],
    ),
  );
}).toList(),
),
],
),
);
}

```

```

Widget _buildProductsSection() {
  return Container(
    color: Colors.grey[200],
    padding: EdgeInsets.all(16),
    child: Column(
      crossAxisAlignment: CrossAxisAlignment.start,
      children: <Widget>[
        Text(
          'Featured Products',
          style: TextStyle(
            fontSize: 20,
            fontWeight: FontWeight.bold,
          ),
        ),
        SizedBox(height: 8),
        Column(
          children: products.map((product) {
            return Card(
              elevation: 4,

```

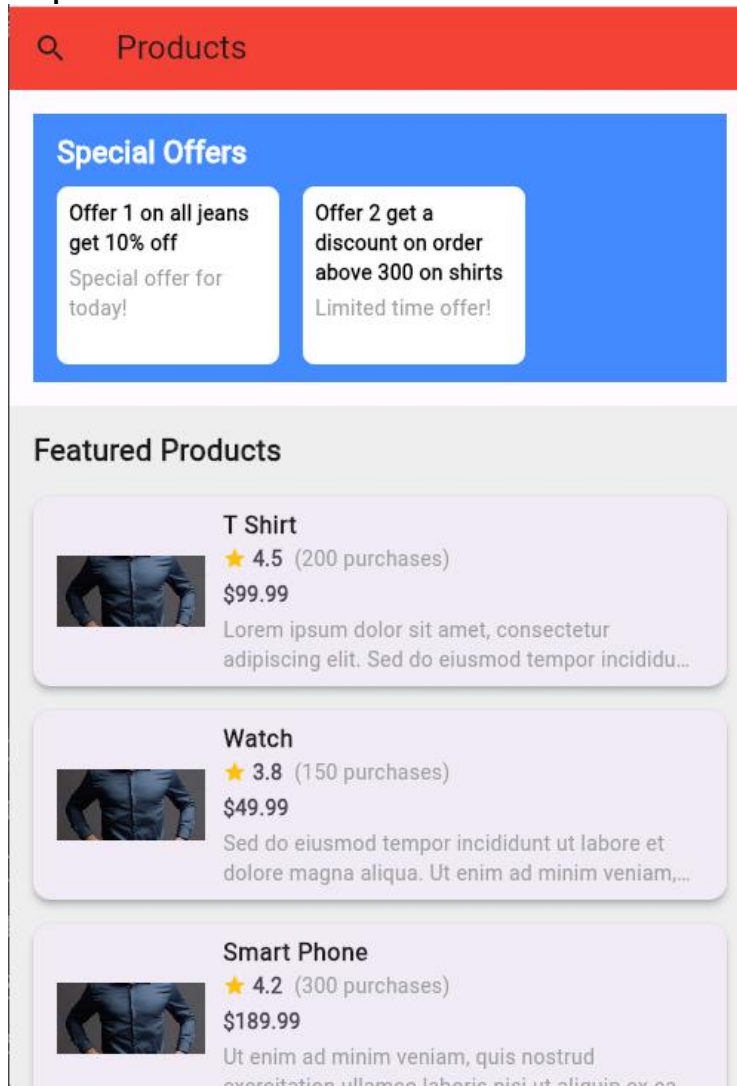
```

margin: EdgeInsets.symmetric(vertical: 8),
child: ListTile(
  leading: SizedBox(
    width: 100,
    child: Image.asset(
      'comp.jpeg', // Replace with actual product image URL
      fit: BoxFit.cover,
    ),
  ),
  title: Text(
    product.name,
    style: TextStyle(fontWeight: FontWeight.bold),
  ),
  subtitle: Column(
    crossAxisAlignment: CrossAxisAlignment.start,
    children: <Widget>[
      Row(
        children: <Widget>[
          Icon(Icons.star, color: Colors.amber, size: 16),
          SizedBox(width: 4),
          Text(
            '${product.rating}',
            style: TextStyle(fontWeight: FontWeight.bold),
          ),
          SizedBox(width: 8),
          Text(
            '(${product.purchases} purchases)',
            style: TextStyle(color: Colors.grey),
          ),
        ],
      ),
      SizedBox(height: 4),
      Text(
        '\${product.price}',
        style: TextStyle(fontWeight: FontWeight.bold),
      ),
      SizedBox(height: 4),
      Text(
        product.description,
        maxLines: 2,
        overflow: TextOverflow.ellipsis,
        style: TextStyle(color: Colors.grey),
      ),
    ],
  ),
  onTap: () {
    // Handle tap on product
  },
),
);
}).toList(),
),
],
),

```

```
);  
}  
}
```

Output:



Conclusion:

Thus we studied how to design UI using various icons ,images,buttons.