

MPL EXP 3

Aim: To include icons, images, fonts in Flutter app

Theory:

Flutter allows adding **icons, images, and custom fonts** to improve visual representation. These assets can be stored in the **assets** folder and defined in the pubspec.yaml file.

1. Icons in Flutter

Flutter provides built-in icons through the Icons class, which contains Material Icons. We can also use external icons like Font Awesome or custom SVG icons.

2. Images in Flutter

Images can be included in Flutter from:

Asset images (stored locally)

Network images (fetched from a URL)

Memory images (loaded dynamically)

3. Fonts in Flutter

By default, Flutter uses the Roboto font, but custom fonts can be added by including .ttf or .otf font files in the assets. The font must be declared in pubspec.yaml.

Syntax for Including Icons, Images, and Fonts

1. Using Icons in Flutter

```
Icon(  
  Icons.home,  
  size: 50,  
  color: Colors.blue,  
)
```

To use external icons (e.g., **Font Awesome**):

```
import 'package:font_awesome_flutter/font_awesome_flutter.dart';
```

```
Icon(  
  FontAwesomeIcons.twitter,  
  size: 50,  
  color: Colors.blue,  
)
```

```
import 'package:font_awesome_flutter/font_awesome_flutter.dart';
Icon(
  FontAwesomeIcons.twitter,
  size: 50,
  color: Colors.blue,
)
```

Ensure you add the dependency in pubspec.yaml:

dependencies:

font_awesome_flutter: ^10.7.0

2. Using Images in Flutter

A. Asset Image (Local)

Add the image in the assets/images/ folder.

Declare it in pubspec.yaml:

flutter:

assets:

- assets/images/sample.png

Use it in the code:

Image.asset('assets/images/sample.png', width: 100, height: 100)

B. Network Image

Image.network(

'https://example.com/sample.jpg',

width: 100,

height: 100,

)

3. Using Custom Fonts in Flutter

Place the font file in assets/fonts/.

Declare it in pubspec.yaml:

flutter:

fonts:

- family: CustomFont

fonts:

- asset: assets/fonts/CustomFont-Regular.ttf

- asset: assets/fonts/CustomFont-Bold.ttf

weight: 700

Use it in Text widget:

Text(

'Hello Flutter!'

style: TextStyle(

fontFamily: 'CustomFont',

fontSize: 24,

```
fontWeight: FontWeight.bold,  
)  
)
```

Widgets Used

Widgets	Description
Icon	Displays built-in Material icons.
Image.asset	Loads an image from local assets.
Image.network	Loads an image from a URL.
ImageIcon	Displays an image as an icon.
Text	Displays text with custom fonts.

Important Properties

Property	Description
size	Defines the size of an icon or image.
color	Changes the color of an icon.
fit	Controls how an image fits inside a widget (BoxFit).
fontFamily	Specifies the custom font for text.
fontSize	Adjusts the size of the text.

Code:

homepage.dart

```
import 'package:flutter/material.dart';  
import 'package:google_fonts/google_fonts.dart';  
import 'package:blinkit/screens/categories.dart';
```

```
void main() {  
  runApp(BlinkitClone());  
}
```

```
class BlinkitClone extends StatelessWidget {  
  @override  
  Widget build(BuildContext context) {  
    return MaterialApp(  
      debugShowCheckedModeBanner: false,  
      initialRoute: '/home',  
    );  
  }  
}
```

```

    routes: {
      '/home': (context) => HomePage(),
      '/categories': (context) => CategoriesScreen(),
    },
  );
}
}

```

```

class HomePage extends StatefulWidget {
  @override
  _HomePageState createState() => _HomePageState();
}

```

```

class _HomePageState extends State<HomePage> {
  int _selectedIndex = 0;

  void _onItemTapped(int index) {
    if (index == 2) {
      Navigator.pushNamed(context, '/categories');
    } else {
      setState(() {
        _selectedIndex = index;
      });
    }
  }
}

```

```

@override
Widget build(BuildContext context) {
  return Scaffold(
    backgroundColor: Colors.white,
    bottomNavigationBar: BottomNavigationBar(
      currentIndex: _selectedIndex,
      selectedItemColor: Colors.green,
      unselectedItemColor: Colors.black,
      showUnselectedLabels: true,
      onTap: _onItemTapped,
      items: [
        BottomNavigationBarItem(icon: Icon(Icons.home), label: "Home"),
        BottomNavigationBarItem(
          icon: Icon(Icons.shopping_bag), label: "Order Again"),
        BottomNavigationBarItem(
          icon: Icon(Icons.category), label: "Categories"),
        BottomNavigationBarItem(icon: Icon(Icons.print), label: "Print"),
      ],
    ),
  );
}

```

```

),
body: SingleChildScrollView(
  child: Column(
    crossAxisAlignment: CrossAxisAlignment.start,
    children: [
      Container(
        color: Colors.yellow[700],
        padding: const EdgeInsets.only(
          top: 50, left: 16, right: 16, bottom: 10),
        child: Column(
          crossAxisAlignment: CrossAxisAlignment.start,
          children: [
            Row(
              children: [
                Icon(Icons.timer, color: Colors.black),
                const SizedBox(width: 5),
                Text(
                  "Blinkit in",
                  style: GoogleFonts.poppins(
                    fontSize: 14, fontWeight: FontWeight.w500),
                ),
                const SizedBox(width: 5),
                Text(
                  "10 minutes",
                  style: GoogleFonts.poppins(
                    fontSize: 18, fontWeight: FontWeight.bold),
                ),
                Spacer(),
                Icon(Icons.shopping_cart, color: Colors.black),
                const SizedBox(width: 10),
                CircleAvatar(
                  backgroundColor: Colors.white,
                  child: Icon(Icons.person, color: Colors.black),
                ),
              ],
            ),
            const SizedBox(height: 5),
            Text(
              "HOME - Ria Chaudhari, 202, Coral Nirmal ▼",
              style: GoogleFonts.poppins(
                fontSize: 14, fontWeight: FontWeight.w500),
            ),
            const SizedBox(height: 10),
            Container(

```

```

padding: EdgeInsets.symmetric(horizontal: 10),
decoration: BoxDecoration(
  color: Colors.white,
  borderRadius: BorderRadius.circular(10),
),
child: Row(
  children: [
    Icon(Icons.search, color: Colors.black54),
    Expanded(
      child: TextField(
        decoration: InputDecoration(
          hintText: "Search 'cookies'",
          border: InputBorder.none,
          contentPadding:
            EdgeInsets.symmetric(vertical: 10),
        ),
      ),
    ),
    Icon(Icons.mic, color: Colors.black54),
  ],
),
),
],
),
),
Container(
  padding: EdgeInsets.symmetric(vertical: 10),
  child: Row(
    mainAxisAlignment: MainAxisAlignment.spaceEvenly,
    children: [
      _CategoryItem(icon: Icons.shopping_bag, label: "All"),
      _CategoryItem(icon: Icons.favorite, label: "Weddings"),
      _CategoryItem(icon: Icons.tv, label: "Electronics"),
      _CategoryItem(icon: Icons.brush, label: "Beauty"),
      _CategoryItem(icon: Icons.child_care, label: "Kids"),
      _CategoryItem(icon: Icons.card_giftcard, label: "Gifting"),
    ],
  ),
),
Container(
  padding: EdgeInsets.all(16),
  decoration: BoxDecoration(
    color: Colors.yellow[100],
    borderRadius: BorderRadius.circular(10),

```

```
),  
child: Column(  
  children: [  
    Text("Welcome",  
      style: GoogleFonts.poppins(  
        fontSize: 22, fontWeight: FontWeight.bold)),  
    Text("Order now to avail exciting offers!",  
      style: GoogleFonts.poppins(fontSize: 14)),  
    Row(  
      mainAxisAlignment: MainAxisAlignment.spaceEvenly,  
      children: [  
        Text("Flat ₹50 OFF",  
          style: GoogleFonts.poppins(  
            fontSize: 16,  
            fontWeight: FontWeight.bold,  
            color: Colors.green)),  
        Text("+", style: GoogleFonts.poppins(fontSize: 20)),  
        Text("Free Delivery",  
          style: GoogleFonts.poppins(  
            fontSize: 16,  
            fontWeight: FontWeight.bold,  
            color: Colors.green)),  
      ],  
    ),  
  ],  
)  
,  
Padding(  
  padding: const EdgeInsets.symmetric(horizontal: 16),  
  child: Text(  
    "Bestsellers",  
    style: GoogleFonts.poppins(  
      fontSize: 18, fontWeight: FontWeight.bold),  
    ),  
),  
GridView.count(  
  padding: const EdgeInsets.all(16),  
  crossAxisCount: 3,  
  shrinkWrap: true,  
  physics: NeverScrollableScrollPhysics(),  
  children: [  
    _BestsellerItem(image: "assets/onion.jpg", count: "+135 more"),  
    _BestsellerItem(  
      image: "assets/oranges.jpg", count: "+320 more"),
```

```

        _BestsellerItem(image: "assets/lays.jpg", count: "+23 more"),
        _BestsellerItem(
            image: "assets/fortune.jpg", count: "+137 more"),
        _BestsellerItem(image: "assets/sprite.jpg", count: "+114 more"),
        _BestsellerItem(
            image: "assets/parle_g.jpg", count: "+135 more"),
    ],
),
],
),
),
);
}
}

```

```

class _CategoryItem extends StatelessWidget {
  final IconData icon;
  final String label;
  _CategoryItem({required this.icon, required this.label});

```

```

  @override
  Widget build(BuildContext context) {
    return Column(
      children: [
        Icon(icon, size: 28, color: Colors.black),
        Text(label, style: GoogleFonts.poppins(fontSize: 12)),
      ],
    );
  }
}

```

```

class _BestsellerItem extends StatelessWidget {
  final String image;
  final String count;
  _BestsellerItem({required this.image, required this.count});

```

```

  @override
  Widget build(BuildContext context) {
    return Column(
      children: [
        Image.asset(image, height: 50, fit: BoxFit.cover),
        Text(count, style: GoogleFonts.poppins(fontSize: 12)),
      ],
    );
  }
}

```



```
}  
}
```

categories.dart

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

```
class CategoriesScreen extends StatelessWidget {  
  @override  
  Widget build(BuildContext context) {  
    return Scaffold(  
      backgroundColor: Colors.white,  
      appBar: AppBar(  
        backgroundColor: Colors.amber.shade100,  
        elevation: 0,  
        title: Column(  
          crossAxisAlignment: CrossAxisAlignment.start,  
          children: [  
            Text(  
              "Blinkit in",  
              style: TextStyle(fontSize: 14, color: Colors.black54),  
            ),  
            Text(  
              "11 minutes",  
              style: TextStyle(fontSize: 20, fontWeight: FontWeight.bold, color:  
Colors.black),  
            ),  
            Text(  
              "HOME - Ria Chaudhari, 202, Coral Nirmal ▼",  
              style: TextStyle(fontSize: 14, color: Colors.black54),  
            ),  
          ],  
        ),  
        actions: [  
          IconButton(  
            icon: Icon(Icons.card_giftcard, color: Colors.black),  
            onPressed: () {},  
          ),  
          IconButton(  
            icon: Icon(Icons.person, color: Colors.black),  
            onPressed: () {},  
          ),  
        ],  
      ),  
      body: Column(  

```

```

children: [
  Padding(
    padding: const EdgeInsets.all(10.0),
    child: TextField(
      decoration: InputDecoration(
        hintText: 'Search "gifts"',
        prefixIcon: Icon(Icons.search, color: Colors.black54),
        suffixIcon: Icon(Icons.mic, color: Colors.black54),
        filled: true,
        fillColor: Colors.white,
        border: OutlineInputBorder(
          borderRadius: BorderRadius.circular(10),
          borderSide: BorderSide.none,
        ),
      ),
    ),
  ),
  Expanded(
    child: SingleChildScrollView(
      child: Padding(
        padding: const EdgeInsets.all(10.0),
        child: Column(
          crossAxisAlignment: CrossAxisAlignment.start,
          children: [
            buildCategorySection(context, "Grocery & Kitchen", [
              {"name": "Vegetables & Fruits", "image":
"assets/vegetables_fruits.png"},
              {"name": "Atta, Rice & Dal", "image": "assets/atta_rice_dal.png"},
              {"name": "Oil, Ghee & Masala", "image": 'assets/oil_ghee_masala.jpg'},
              {"name": "Dairy, Bread & Eggs", "image":
"assets/dairy_bread_eggs.png"},
              {"name": "Bakery & Biscuits", "image": "assets/bakery_biscuits.png"},
              {"name": "Dry Fruits & Cereals", "image":
"assets/dry_fruits_cereals.png"},
              {"name": "Chicken, Meat & Fish", "image":
"assets/chicken_meat_fish.png"},
              {"name": "Kitchenware & Appliances", "image":
"assets/kitchenware_appliances.png"},
            ]),
            buildCategorySection(context, "Snacks & Drinks", [
              {"name": "Chips & Namkeen", "image": "assets/chips_namkeen.png"},
              {"name": "Sweets & Chocolates", "image":
"assets/sweets_chocolates.png"},
              {"name": "Drinks & Juices", "image": "assets/drinks_juices.png"},
            ]),
          ],
        ),
      ),
    ),
  ),
]

```

```

        {"name": "Tea, Coffee & Milk Drinks", "image":
"assets/tea_coffee_milk.png"},
        {"name": "Instant Food", "image": "assets/instant_food.png"},
        {"name": "Sauces & Spreads", "image": "assets/sauces_spreads.png"},
        {"name": "Paan Corner", "image": "assets/paan_corner.png"},
        {"name": "Ice Creams & Desserts", "image":
"assets/icrecream_desserts.png"},
    ]),
    ],
    ),
    ),
    ),
    ),
    Container(
        padding: EdgeInsets.all(10),
        color: Colors.blue.shade100,
        child: Row(
            mainAxisAlignment: MainAxisAlignment.center,
            children: [
                Icon(Icons.delivery_dining, color: Colors.blue.shade800),
                SizedBox(width: 5),
                Text("Get FREE delivery", style: TextStyle(fontWeight: FontWeight.bold,
color: Colors.blue.shade800)),
                SizedBox(width: 5),
                Text("on all orders above ₹149", style: TextStyle(color: Colors.black54)),
            ],
        ),
    ),
    ],
    ),
    );
}

```

```

Widget buildCategorySection(BuildContext context, String title, List<Map<String,
String>> categories) {
    return Column(
        crossAxisAlignment: CrossAxisAlignment.start,
        children: [
            SizedBox(height: 10),
            Text(
                title,
                style: TextStyle(fontSize: 18, fontWeight: FontWeight.bold),
            ),
            GridView.builder(

```

```

shrinkWrap: true,
physics: NeverScrollableScrollPhysics(),
gridDelegate: SliverGridDelegateWithFixedCrossAxisCount(
  crossAxisCount: 4,
  crossAxisSpacing: 10,
  mainAxisSpacing: 10,
  childAspectRatio: 0.8,
),
itemCount: categories.length,
itemBuilder: (context, index) {
  return GestureDetector(
    onTap: () {
      if (categories[index]["name"] == "Bakery & Biscuits") {
        Navigator.pushNamed(context, '/bakery_biscuits');
      }
    },
    child: Column(
      children: [
        Container(
          height: 60,
          width: 60,
          decoration: BoxDecoration(
            color: Colors.grey.shade200,
            borderRadius: BorderRadius.circular(10),
            image: DecorationImage(
              image: AssetImage(categories[index]["image"]!),
              fit: BoxFit.cover,
            ),
          ),
        ),
        SizedBox(height: 5),
        Text(
          categories[index]["name"]!,
          textAlign: TextAlign.center,
          style: TextStyle(fontSize: 12),
        ),
      ],
    ),
  );
},
),
],
);
}

```

```
}
```

```
bakery_biscuits.dart
```

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

```
class BakeryBiscuitsPage extends StatelessWidget {
```

```
  @override
```

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

```
    return Scaffold(
```

```
      appBar: AppBar(
```

```
        backgroundColor: Colors.amber.shade100,
```

```
        elevation: 0,
```

```
        title: Text(
```

```
          "Bakery & Biscuits",
```

```
          style: TextStyle(
```

```
            fontSize: 20, fontWeight: FontWeight.bold, color: Colors.black),
```

```
        ),
```

```
      leading: IconButton(
```

```
        icon: Icon(Icons.arrow_back, color: Colors.black),
```

```
        onPressed: () {
```

```
          Navigator.pop(context);
```

```
        },
```

```
      ),
```

```
    ),
```

```
    body: Row(
```

```
      children: [
```

```
        // Sidebar Categories with Images
```

```
        Container(
```

```
          width: 100,
```

```
          color: Colors.white,
```

```
          child: ListView(
```

```
            children: [
```

```
              CategoryTile(
```

```
                label: 'Cookies',
```

```
                image: 'assets/cookies.png',
```

```
                isSelected: true),
```

```
              CategoryTile(
```

```
                label: 'Cream Biscuits',
```

```
                image: 'assets/cream_biscuits.png'),
```

```
              CategoryTile(
```

```
                label: 'Healthy & Digestive',
```

```
                image: 'assets/healthy_digestive.png'),
```

```
              CategoryTile(
```

```
                label: 'Sweet & Salty', image: 'assets/sweet_salty.png'),
```

```

        CategoryTile(
            label: 'Glucose & Marie',
            image: 'assets/glucose_marie.png'),
        CategoryTile(
            label: 'Rusks & Wafers', image: 'assets/rusks_wafers.png'),
        CategoryTile(
            label: 'Cakes & Rolls', image: 'assets/cakes_rolls.png'),
        CategoryTile(
            label: 'Baking Ingredients',
            image: 'assets/baking_ingredients.png'),
    ],
),
),
Expanded(
  child: Column(
    children: [
      Expanded(
        child: GridView.builder(
          padding: EdgeInsets.all(8),
          gridDelegate: SliverGridDelegateWithFixedCrossAxisCount(
            crossAxisCount: 2,
            crossAxisSpacing: 10,
            mainAxisSpacing: 10,
            childAspectRatio: 0.7,
          ),
          itemCount: products.length,
          itemBuilder: (context, index) {
            return ProductTile(product: products[index]);
          },
        ),
      ),
    ],
  ),
),
],
),
);
}
}

```

```

class CategoryTile extends StatelessWidget {
  final String label;
  final String image;
  final bool isSelected;

```

```
CategoryTile(  
    {required this.label, required this.image, this.isSelected = false});
```

```
@override
```

```
Widget build(BuildContext context) {  
    return Padding(  
        padding: const EdgeInsets.symmetric(vertical: 8.0),  
        child: Column(  
            children: [  
                Container(  
                    height: 50,  
                    width: 50,  
                    decoration: BoxDecoration(  
                        borderRadius: BorderRadius.circular(10),  
                        image: DecorationImage(  
                            image: AssetImage(image),  
                            fit: BoxFit.cover,  
                        ),  
                    ),  
                ),  
                SizedBox(height: 5),  
                Text(  
                    label,  
                    textAlign: TextAlign.center,  
                    style: TextStyle(  
                        color: isSelected ? Colors.green : Colors.black,  
                        fontWeight: isSelected ? FontWeight.bold : FontWeight.normal,  
                    ),  
                ),  
            ],  
        ),  
    );  
}
```

```
class ProductTile extends StatelessWidget {  
    final Product product;
```

```
    ProductTile({required this.product});
```

```
@override
```

```
Widget build(BuildContext context) {  
    return Card(  
        child: Column(  
            children: [  
                Container(  
                    height: 50,  
                    width: 50,  
                    decoration: BoxDecoration(  
                        borderRadius: BorderRadius.circular(10),  
                        image: DecorationImage(  
                            image: AssetImage(image),  
                            fit: BoxFit.cover,  
                        ),  
                    ),  
                ),  
                SizedBox(height: 5),  
                Text(  
                    label,  
                    textAlign: TextAlign.center,  
                    style: TextStyle(  
                        color: isSelected ? Colors.green : Colors.black,  
                        fontWeight: isSelected ? FontWeight.bold : FontWeight.normal,  
                    ),  
                ),  
            ],  
        ),  
    );  
}
```

```

shape: RoundedRectangleBorder(borderRadius: BorderRadius.circular(10)),
child: Column(
  crossAxisAlignment: CrossAxisAlignment.start,
  children: [
    Expanded(
      child: Image.network(
        product.imageUrl,
        fit: BoxFit.cover,
        width: double.infinity,
      ),
    ),
    Padding(
      padding: const EdgeInsets.all(8.0),
      child: Text(
        product.name,
        style: TextStyle(fontWeight: FontWeight.bold),
      ),
    ),
    Padding(
      padding: const EdgeInsets.symmetric(horizontal: 8.0),
      child: Row(
        mainAxisAlignment: MainAxisAlignment.spaceBetween,
        children: [
          Text(
            '₹${product.price}',
            style: TextStyle(
              color: Colors.green, fontWeight: FontWeight.bold),
          ),
          ElevatedButton(
            onPressed: () {},
            child: Text('ADD'),
          ),
        ],
      ),
    ),
  ],
),
);
}
}

```

```

class Product {
  final String name;
  final String imageUrl;

```


final double price;

```
Product({required this.name, required this.imageUrl, required this.price});
}
```

```
List<Product> products = [
  Product(
    name: 'Sunfeast Baked Creations Walnut & Choco Chip Cookies',
    imageUrl: 'assets/sunfeast_cookies.png',
    price: 134.0),
  Product(
    name: 'Hide & Seek Chocolate Chip Cookies (100 g)',
    imageUrl: 'assets/hide_seek_100.png',
    price: 29.0),
  Product(
    name: 'Hide & Seek Chocolate Chip Cookies (200 g)',
    imageUrl: 'assets/hide_seek_200.png',
    price: 45.0),
  Product(
    name: 'Britannia Good Day Cashew Biscuit',
    imageUrl: 'assets/britannia_goodday.png',
    price: 49.0),
];
```

pubsec.yaml:

flutter:

assets:

- assets\blinkit_onboarding_screen.png
- assets\blinkit_logo.png
- assets\fortune.jpg
- assets\lays.jpg
- assets\onion.jpg
- assets\oranges.jpg
- assets\parle_g.jpg
- assets\sprite.jpg
- assets\atta_rice_dal.png
- assets\bakery_biscuits.png
- assets\dairy_bread_eggs.png
- assets\oil_ghee_masala.jpg
- assets\vegetables_fruits.png
- assets\dry_fruits_cereals.png
- assets\kitchenware_appliances.png
- assets\chips_namkeen.png
- assets\chicken_meat_fish.png
- assets\icrecream_desserts.png

- assets\instant_food.png
- assets\paan_corner.png
- assets\sauces_spreads.png
- assets\sweets_chocolates.png
- assets\tea_coffee_milk.png
- assets\drinks_juices.png
- assets\hide_seek_100.png
- assets\sunfeast_cookies.png
- assets\hide_seek_200.png
- assets\brittanias_goodday.png
- assets\lotus_biscoff.png
- assets\nankhatai.png
- assets\cookies.png
- assets\cream_biscuits.png
- assets\sweet_salty.png
- assets\glucose_marie.png
- assets\rusks_wafers.png
- assets\cakes_rolls.png
- assets\baking_ingredients.png
- assets\healthy_digestive.png

dependencies:

flutter:

 sdk: flutter

The following adds the Cupertino Icons font to your application.

Use with the CupertinoIcons class for iOS style icons.

cupertino_icons: ^1.0.8

google_fonts: ^6.2.1

lucide_icons: ^0.257.0

Output:



