# Experiment 2

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Aim: To design Flutter UI by including common widgets.

Theory: In Flutter, widgets are the building blocks of the user interface, and several common widgets play crucial roles in creating engaging and interactive applications. Here's a brief overview of some fundamental Flutter widgets:

1. Container: The most basic building block, a container is a box model that can contain other widgets, allowing you to customize its dimensions, padding, and decoration.

2. Row and Column: These widgets help organize children widgets horizontally (Row) or vertically (Column), facilitating the creation of flexible and responsive layouts.

3. AppBar: AppBar is a material design widget providing a top app bar that typically includes the app's title, leading and trailing icons, and actions.

4. ListView: Used to create scrollable lists of widgets, ListView is versatile for displaying a large number of items efficiently.

5. TextField: Enables users to input text, providing a text editing interface with options for validation, styling, and interaction.

6. ElevatedButton is a Flutter widget used to create a button with a raised appearance. It typically represents the primary action in a user interface. The button has a background color, elevation, and responds to user interactions with visual feedback

7. Image: The Image widget displays images from various sources, supporting both local and network images.

8. Scaffold: A top-level container for an app's visual elements, Scaffold provides a structure that includes an AppBar, body, and other optional features like drawers and bottom navigation.

9. Card: Representing a material design card, this widget displays information in a compact and visually appealing format, often used for grouping related content.

10. GestureDetector: Allows detection of various gestures like taps, drags, and long presses, enabling interactive responses to user input.

11. Stack: A widget that allows children widgets to be overlaid, facilitating complex UI designs by layering widgets on top of each other.

12. FutureBuilder: Ideal for handling asynchronous operations, FutureBuilder simplifies the management of UI updates based on the completion of a Future, making it valuable for fetching and displaying data.

These are just a few of the many widgets available in Flutter, each serving a unique purpose in crafting dynamic and user-friendly interfaces.

Code:

```
import 'package:cached_network_image/cached_network_image.dart';
import 'package:faker/faker.dart';
import
'package:flutter/cupertino.dart';
import 'package:flutter/material.dart';
import 'package:font_awesome_flutter/font_awesome_flutter.dart';
import 'package:google_fonts/google_fonts.dart';

class DetailPage extends StatelessWidget {
  const DetailPage({super.key, required
  this.imageUrl}); final String imageUrl;

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      body: Column(
        children: [
        Expanded(
            child: Container(
              decoration:
                BoxDecoration( image:
                DecorationImage(
                  image: CachedNetworkImageProvider(imageUrl),
                  fit: BoxFit.cover,
                ),
              ),
              child: SafeArea(
                child: Padding(
                  padding: const EdgeInsets.symmetric(horizontal: 18),
                  child: Column(
                    mainAxisAlignment: MainAxisAlignment.spaceBetween,
                    crossAxisAlignment: CrossAxisAlignment.end,
                    children: [
                      Row(
                        mainAxisAlignment: MainAxisAlignment.spaceBetween,
                        children: [
                          InkWell(
                            onTap: () => Navigator.pop(context),
                            child: CircleAvatar(
```

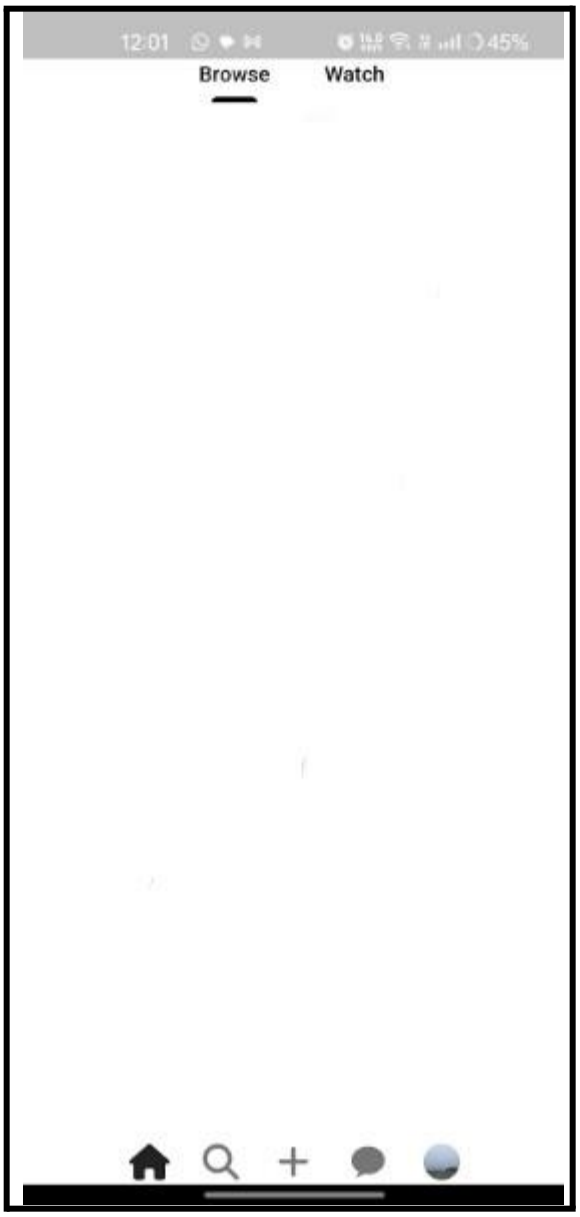
```
    backgroundColor:
    Colors.black.withOpacity(0.2), child: const Icon(
      CupertinoIcons.chevron_back,
      color: Colors.white,
      size: 28,
    ),
  ),
),
InkWell(
  onTap: () {
    showModalBottomSheet
      ( context: context,
      builder: (context) {
      return SizedBox(
          height: 330,
          child: Padding(
            padding: const EdgeInsets.symmetric(
                horizontal: 12, vertical: 16),
            child: Column(
              crossAxisAlignment:
                  CrossAxisAlignment.start,
              children: [
                Row(
                  crossAxisAlignment:
                      CrossAxisAlignment.center,
                  children: [
                    const Icon(
                        FontAwesomeIcons.xmark),
                    const SizedBox(
                      width: 12,
                    ),
                    Text(
                      'Options',
                      style: GoogleFonts.notoSans(),
                    ),
                  ],
                ),
                const SizedBox(
                  height: 30,
                ),
                Text(
                  'Follow ${Faker().internet.userName()}',
                  style: GoogleFonts.notoSans(
                    fontSize: 18,
                    fontWeight: FontWeight.w500,
```

```
),
const SizedBox(
  height: 15,
),
Text(
  'Copy link',
  style: GoogleFonts.notoSans(
    fontSize: 18,
    fontWeight: FontWeight.w500,
  ),
),
const SizedBox(
  height: 15,
),
Text(
  'Download image',
  style: GoogleFonts.notoSans(
    fontSize: 18,
    fontWeight: FontWeight.w500,
  ),
),
const SizedBox(
  height: 15,
),
Text(
  'Hide Pin',
  style: GoogleFonts.notoSans(
    fontSize: 18,
    fontWeight: FontWeight.w500,
  ),
),
const SizedBox(
  height: 15,
),
Text(
  'Report Pin',
  style: GoogleFonts.notoSans(
    fontSize: 18,
    fontWeight: FontWeight.w500,
  ),
),
Text(
  "This goes against Pinterest's community guidelines",
  style: GoogleFonts.notoSans(
    fontSize: 14,
```

```
                        ),
                      ],
                    ),
                  ),
                );
              },
              shape: RoundedRectangleBorder(
                borderRadius: BorderRadius.circular(20.0),
              ),
            );
          },
          child: const Icon(
            CupertinoIcons.ellipsis,
            color: Colors.white,
            size: 28,
          ),
        ),
      ],
    ),
    CircleAvatar(
      backgroundColor: Colors.white.withOpacity(0.8),
      child: const Icon(
        CupertinoIcons.viewfinder,
        color: Colors.black,
      ),
    )
  ],
 ),
 ),
 ),
),
Container(
 padding: const EdgeInsets.only(
  top: 10,
  bottom: 30,
  left: 18,
  right: 18,
 ),
 color: Colors.white,
 child: Row(
  mainAxisAlignment: MainAxisAlignment.spaceBetween,
  children: [
   const Icon(CupertinoIcons.heart_circle_fill),
   Row(
    children: [
```

```
                Container(
                  padding: const EdgeInsets.symmetric(
                      horizontal: 17, vertical: 15),
                  decoration: BoxDecoration(
                    color: const Color(0xFFF1F1F1),
                    borderRadius: BorderRadius.circular(30),
                  ),
                  child: Text(
                    'View',
                    style: GoogleFonts.notoSans(
                      fontWeight: FontWeight.w500,
                    ),
                  ),
                ),
                const SizedBox(
                  width: 6,
                ),
                Container(
                  padding: const EdgeInsets.symmetric(
                      horizontal: 17, vertical: 15),
                  decoration: BoxDecoration(
                    color: Theme.of(context).colorScheme.secondary,
                    borderRadius: BorderRadius.circular(30),
                  ),
                  child: Text(
                    'Save',
                    style: GoogleFonts.notoSans(
                      fontWeight: FontWeight.w500,
                      color: Colors.white,
                    ),
                  ),
                ),
              ],
            ),
            const Icon(Icons.share),
          ],
        ),
      ),
    ],
  ),
 );
 }
}
```

App UI:




Widgets used: Icons, font, bottom navigation bar, image

Conclusion: Thus, understood the use of basic common widgets used in Mobile App Development and used some of them to create the login page for the chosen mini project application.