MAD & PWA Lab
Journal

Experiment No.	03
Experiment Title.	To include icons, images, fonts in Flutter app
Roll No.	60
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Class	D15A
Subject	MAD & PWA Lab
Lab Outcome	LO2: Design and Develop interactive Flutter App by using widgets, layouts, gestures and animation
Grade:	

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

Theory:

Using Icons in Flutter

Icons in Flutter can be added using the built-in Material Icons or custom icon packs.

(a) Material Icons

Flutter provides a collection of built-in Material Icons, which can be used with the Icon widget.

Eg: Icon(Icons.home, size: 30, color: Colors.blue)

(b) Custom Icons

If you need icons that are not available in the Material Icons set, you can use external icon packs like:

- Font Awesome (font_awesome_flutter package)
- Custom SVG Icons (flutter_svg package)

  Eg in pubspec.yaml file -

  dependencies:
   font_awesome_flutter: ^10.5.0

In code -

import 'package:font_awesome_flutter/font_awesome_flutter.dart';

IconButton(
  icon: FaIcon(FontAwesomeIcons.heart, color: Colors.red),
  onPressed: () {},
)

Adding Images in Flutter

Images can be loaded in Flutter from different sources like assets, network, or memory.

(a) Using Network Images

Network images are loaded from an online URL. Example:

Eg: Image.network("https://example.com/sample.jpg", width: 200, height: 150)

(b) Using Asset Images

To use images from the local project folder (assets/), follow these steps:

1. Place the image inside the assets/images/ folder.
2. Declare the image in pubspec.yaml:

```
flutter:
  assets:
    - assets/images/sample.png
```

In code: Image.asset("assets/images/sample.png", width: 200, height: 150)

Adding Custom Fonts in Flutter

Custom fonts improve the visual identity of an app.

Steps to Add a Custom Font:

1. Download the font and place it inside the assets/fonts/ folder.
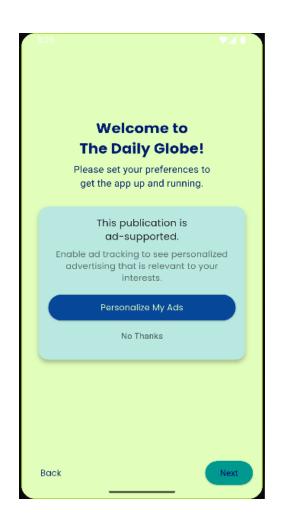2. Declare the font in pubspec.yaml:

```
flutter:
  fonts:
    - family: CustomFont
      fonts:
        - asset: assets/fonts/CustomFont-Regular.ttf
        - asset: assets/fonts/CustomFont-Bold.ttf
          weight: 700
```

In code -

```
Text(
  "Hello, Flutter!",
  style: TextStyle(fontFamily: "CustomFont", fontSize: 20, fontWeight: FontWeight.bold),
)
```

```dart
import 'package:flutter/material.dart';
import 'package:dailyhunt/login.dart';
import
'package:permission_handler/permission_h
andler.dart';

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

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

  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: "The Daily Globe",
      color: Color(0xFF001A6E),
      theme: ThemeData(
        primarySwatch: Colors.blue,
        scaffoldBackgroundColor: const
Color(0xFFE1FFBB),
        // textTheme: const TextTheme(
        //   bodyLarge: TextStyle(color:
Color(0xFFEFE9D5)),
        //   bodyMedium: TextStyle(color:
Color(0xFFEFE9D5)),
        //   titleLarge: TextStyle(color:
Color(0xFFEFE9D5)),
        // ),
        // textTheme: const TextTheme(
        //   titleLarge:TextStyle(
        //     color: Color(0xFFEFE9D5)
        //   )
        // )
      ),
      home: const OnboardingFlow(),
      debugShowCheckedModeBanner: false,
    );
  }
}

class OnboardingFlow extends
StatefulWidget {
  const OnboardingFlow({super.key});

  @override
  State<OnboardingFlow> createState() =>
_OnboardingFlowState();
}

class _OnboardingFlowState extends
State<OnboardingFlow> {

  final PageController _pageController =
PageController();
  int _currentPage = 0;

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      body: Column(
        children: [
          Expanded(
            child: PageView(
              controller: _pageController,
              onPageChanged: (index) {
                setState(() {
                  _currentPage = index;
                });
              },
              children: const [
                SplashScreen(),
                TrackingScreen(),
                NotificationScreen(),
              ],
            ),
          ),
          // Page Navigation Buttons
          Padding(
            padding: const
EdgeInsets.symmetric(horizontal: 16,
vertical: 20),
            child: Row(
              mainAxisAlignment:
MainAxisAlignment.spaceBetween,
              children: [
                if (_currentPage > 0)
                  TextButton(
                    onPressed: () {

_pageController.previousPage(
                        duration: const
Duration(milliseconds: 300),
                        curve: Curves.easeInOut,
                      );
                    },
                    child: const Text(
                      "Back",
                      style: TextStyle(color:
Color(0xFF001A6E),fontFamily:
"CustomPoppins"),
                    ),
                  ),
                ElevatedButton(
                  onPressed: () {
                    if (_currentPage < 2) {
```

```dart
                _pageController.nextPage(
                  duration: const
Duration(milliseconds: 300),
                  curve: Curves.easeInOut,
                );
              } else {
                // Navigate to login screen
                Navigator.pushReplacement(
                  context,
                  MaterialPageRoute(builder:
(context) => const Login()),
                );
              }
            },
            style: ElevatedButton.styleFrom(
              foregroundColor:
Color(0xFF001A6E),
              backgroundColor:
Color(0xFF009990),
            ),
            child: Text(_currentPage == 2 ?
"Get Started" : "Next"),
          ),
        ],
      ),
    ),
   ),
  ];
 ),
 );
 }
}

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

  @override
  Widget build(BuildContext context) {
   return const Center(
    child: Text(
     'THE DAILY GLOBE',
     style: TextStyle(
      color: Color(0xFF001A6E),
      fontSize: 32,
      fontWeight: FontWeight.bold,
      fontFamily: "CustomPoppins"
     ),
    ),
   );
  }
}

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

  @override
  Widget build(BuildContext context) {
   return SafeArea(
    child: Padding(
     padding: const EdgeInsets.all(24.0),
     child: Column(
      mainAxisAlignment:
MainAxisAlignment.center,
      children: [
       const Text(
        'Welcome to\nThe Daily Globe!',
        textAlign: TextAlign.center,
        style: TextStyle(
         color: Color(0xFF001A6E),
         fontSize: 24,
         fontWeight: FontWeight.bold,
         fontFamily: "CustomPoppins"
        ),
       ),
       const SizedBox(height: 8),
       const Text(
        'Please set your preferences
to\nget the app up and running.',
        textAlign: TextAlign.center,
        style: TextStyle(
         color: Color(0xFF001A6E),
         fontSize: 16,
        ),
       ),
       const SizedBox(height: 24),
       Card(
        color: const Color(0xFFB8E8E0),
        elevation: 5,
        shape: RoundedRectangleBorder(
         borderRadius:
BorderRadius.circular(16),
        ),
        child: Padding(
         padding: const
EdgeInsets.all(16.0),
         child: Column(
          crossAxisAlignment:
CrossAxisAlignment.stretch,
          mainAxisSize:
MainAxisSize.min,
          children: [
           const Text(
            'This publication is\nad-
supported.',
            textAlign: TextAlign.center,
            style: TextStyle(
             fontSize: 16,
             fontWeight:
FontWeight.w500,
```

```dart
                    fontFamily: "CustomPoppins"
                  ),
                ),
                const SizedBox(height: 8),
                const Text(
                  'Enable ad tracking to see
personalized advertising that is relevant to
your interests.',
                  textAlign: TextAlign.center,
                  style: TextStyle(
                    fontSize: 14,
                    color: Colors.black54,
                    fontFamily: "CustomPoppins"
                  ),
                ),
                const SizedBox(height: 16),
                ElevatedButton(
                  onPressed: () {},
                  style:
ElevatedButton.styleFrom(
                    backgroundColor: const
Color(0xFF074799),
                    padding: const
EdgeInsets.symmetric(vertical: 12),
                  ),
                  child: const Text(
                    'Personalize My Ads',
                    style: TextStyle(
                      color: Color(0xFFE1FFBB),
                      fontFamily:
"CustomPoppins",
                    ),
                  ),
                ),
                TextButton(
                  onPressed: () {
                    print('No Thanks');
                  },
                  child: const Text(
                    'No Thanks',
                    style: TextStyle(color:
Colors.black54),
                  ),
                ),
              ],
            ),
          ),
        ),
      ],
    ),
  );
  }
}
```

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

  Future<void>
requestNotificationPermission(BuildContext
context) async {
    var status = await
Permission.notification.request();

    if (status.isGranted) {
      // Show success message
      // ignore:
use_build_context_synchronously

ScaffoldMessenger.of(context).showSnackB
ar(
        const SnackBar(content:
Text('Notification permission granted!')),
      );
    } else if (status.isDenied) {
      // Show warning message
      // ignore:
use_build_context_synchronously

ScaffoldMessenger.of(context).showSnackB
ar(
        const SnackBar(content:
Text('Notification permission denied!')),
      );
    } else if (status.isPermanentlyDenied) {
      // Open app settings if permanently
denied
      // ignore:
use_build_context_synchronously

ScaffoldMessenger.of(context).showSnackB
ar(
        const SnackBar(
          content: Text(
            'Notification permission
permanently denied. Enable from settings.'),
        ),
      );
      await openAppSettings();
    }
  }

  @override
  Widget build(BuildContext context) {
    return SafeArea(
      child: Padding(
        padding: const EdgeInsets.all(24.0),
        child: Column(
          mainAxisAlignment:
```

```dart
          MainAxisAlignment.center,
            children: [
              const Text(
                'Welcome to\nThe Daily Globe!',
                textAlign: TextAlign.center,
                style: TextStyle(
                  color: Color(0xFF001A6E),
                  fontSize: 24,
                  fontWeight: FontWeight.bold,
                  fontFamily: "CustomPoppins"
                ),
              ),
              const SizedBox(height: 8),
              const Text(
                'Please set your preferences
to\nget the app up and running.',
                textAlign: TextAlign.center,
                style: TextStyle(
                  color: Color(0xFF001A6E),
                  fontSize: 16,
                  fontFamily: "CustomPoppins"
                ),
              ),
              const SizedBox(height: 24),
              Card(
                color: const Color(0xFFB8E8E0),
                elevation: 5,
                shape: RoundedRectangleBorder(
                  borderRadius:
BorderRadius.circular(16),
                ),
                child: Padding(
                  padding: const
EdgeInsets.all(16.0),
                  child: Column(
                    crossAxisAlignment:
CrossAxisAlignment.stretch,
                    mainAxisSize:
MainAxisSize.min,
                    children: [
                      const Text(
                        "Don't miss our\ntop stories!",
                        textAlign: TextAlign.center,
                        style: TextStyle(
                          fontSize: 16,
                          fontWeight:
FontWeight.w500,
                          fontFamily: "CustomPoppins"
                        ),
                      ),
                      const SizedBox(height: 8),
                      const Text(
                        'Subscribe to our notifications
to stay up to date on the latest breaking
news.',
                        textAlign: TextAlign.center,
                        style: TextStyle(
                          fontSize: 14,
                          color: Colors.black54,
                          fontFamily: "CustomPoppins"
                        ),
                      ),
                      const SizedBox(height: 16),
                      ElevatedButton(
                        onPressed: () =>
requestNotificationPermission(context),
                        style:
ElevatedButton.styleFrom(
                          backgroundColor: const
Color(0xFF074799),
                          padding: const
EdgeInsets.symmetric(vertical: 12),
                        ),
                        child: const Text(
                          'Subscribe to Notifications
Now',
                          style: TextStyle(
                            color: Color(0xFFE1FFBB),
                            fontFamily:
"CustomPoppins"
                          ),
                        ),
                      ),
                      TextButton(
                        onPressed: () {},
                        child: const Text(
                          'No Thanks',
                          style: TextStyle(color:
Colors.black54,fontFamily:
"CustomPoppins"),
                        ),
                      ),
                    ],
                  ),
                ),
              ),
            ],
          ),
        ),
      );
  }
}
```

THE DAILY GLOBE

Next

**Welcome to
The Daily Globe!**

Please set your preferences to
get the app up and running.

This publication is
ad-supported.

Enable ad tracking to see personalized
advertising that is relevant to your
interests.

Personalize My Ads

No Thanks

Back

Next

Welcome to
The Daily Globe!

Please set your preferences to
get the app up and running.

Don't miss our
top stories!

Subscribe to our notifications to stay up
to date on the latest breaking news.

Subscribe to Notifications Now

No Thanks

Back   Get Started

Login.dart file

```dart
import 'package:dailyhunt/languages.dart';
import 'package:flutter/material.dart';
import 'home.dart';

class Login extends StatefulWidget {
  const Login({super.key});

  @override
  State<Login> createState() =>
_LoginState();
}

class _LoginState extends State<Login> {
  final TextEditingController emailController
= TextEditingController();
  final TextEditingController
passwordController =
TextEditingController();

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      body: Stack(
        children: [
          // Background Image
          Align(
            alignment: Alignment.topCenter,
            child: Container(
              height: 580, // Adjust the height as
needed
              decoration: BoxDecoration(
                image: DecorationImage(
                  image:
AssetImage("assets/background.png"),
                  fit: BoxFit.scaleDown,
                ),
              ),
            ),
          ),

          // Skip Button
          Positioned(
            top: 40,
            right: 20,
            child: TextButton(
              onPressed: () {
                debugPrint("Skipped");
                Navigator.push(context,
MaterialPageRoute(builder: (context) {
                  return Languages();
                }));
              },
              child: Row(
                mainAxisSize: MainAxisSize.min,
                children: const [
                  Text(
                    "Skip",
                    style: TextStyle(fontSize: 20,
color: Color(0xFF001A6E),fontFamily:
"CustomPoppins"),
                  ),
                  SizedBox(width: 5),
                  Icon(Icons.arrow_forward, size:
30, color: Color(0xFF001A6E)),
                ],
              ),
            ),
          ),

          // Login Card
          Align(
            alignment: Alignment.bottomCenter,
            child: Container(
              width: double.infinity,
              padding: const EdgeInsets.all(24),
              decoration: const BoxDecoration(
                color: Color.fromARGB(255, 231,
255, 246), // Light Teal Card
                borderRadius: BorderRadius.only(
                  topLeft: Radius.circular(30),
                  topRight: Radius.circular(30),
                ),
              ),
              child: Column(
                mainAxisSize: MainAxisSize.min,
                children: [
                  const Text(
                    "Welcome Back!",
                    style: TextStyle(
                      fontSize: 22,
                      fontWeight: FontWeight.bold,
                      color: Color(0xFF001A6E),
```

```dart
              fontFamily: "CustomPoppins"
            ),
          ),
          const SizedBox(height: 10),
          const Text(
            "Login to your account",
            style: TextStyle(fontSize: 16,
color: Colors.black54),
          ),
          const SizedBox(height: 20),

          // Email Field
          TextField(
            controller: emailController,
            decoration: InputDecoration(
              labelText: "Email",
              prefixIcon: const
Icon(Icons.email),
              border: OutlineInputBorder(
                borderRadius:
BorderRadius.circular(10),
              ),
            ),
          ),
          const SizedBox(height: 16),

          // Password Field
          TextField(
            controller: passwordController,
            obscureText: true,
            decoration: InputDecoration(
              labelText: "Password",
              prefixIcon: const
Icon(Icons.lock),
              border: OutlineInputBorder(
                borderRadius:
BorderRadius.circular(10),
              ),
            ),
          ),
          const SizedBox(height: 20),

          // Login Button
          ElevatedButton(
            onPressed: () {
              // TODO: Implement login
logic
            },

            style:
ElevatedButton.styleFrom(
              backgroundColor: const
Color(0xFF074799), // Deep Blue
              padding: const
EdgeInsets.symmetric(
                horizontal: 40, vertical: 12),
              shape:
RoundedRectangleBorder(
                borderRadius:
BorderRadius.circular(8),
              ),
            ),
            child: const Text(
              "Login",
              style: TextStyle(
                fontSize: 16,
                color: Color(0xFFE1FFBB), //
Light Greenish-Yellow
                fontFamily: "CustomPoppins"
              ),
            ),
          ),
          const SizedBox(height: 5),

          // Forgot Password & Signup
Text
          TextButton(
            onPressed: () {
              // TODO: Implement Forgot
Password Logic
            },
            child: const Text(
              "Forgot Password?",
              style: TextStyle(color:
Colors.black54,fontFamily:
"CustomPoppins"),
            ),
          ),
          TextButton(
            onPressed: () {
              // TODO: Implement Signup
Navigation
            },
            child: const Text(
              "Don't have an account? Sign
up",
              style: TextStyle(color:
```

```
Colors.black54,fontFamily:
"CustomPoppins"),
                ),
              ),
            ],
          ),
        ),
      ),
    ),
  ],
),
  );
}
}
```

pubspec.yaml

```
flutter:
 fonts:
   - family: CustomPoppins
    fonts:
      - asset: assets/fonts/Poppins-
Regular.ttf
      - asset: assets/fonts/Poppins-Bold.ttf
 uses-material-design: true
 assets:
   - assets/background.png
     - asset: assets/Poppins-Bold.ttf
      weight: 700
```