Experiment no 5

Aim :- To apply navigation routing gestures in flutter app

Theory :-

In Flutter, navigation refers to the process of moving between different screens (routes) in an application. A route is a widget that represents a screen, and Flutter provides multiple ways to manage navigation efficiently.

➤ **Navigation in Flutter**

Navigation is essential for defining the workflow of an application. Flutter manages navigation using the Navigator widget, which maintains a stack of routes.

Types of Navigation in Flutter:

1. Stack-Based Navigation (Using Navigator.push() & Navigator.pop())

2. Named Routes (For Structured Navigation)

3. Gesture-Based Navigation (Swipe, Tap, etc.)

1. Stack-Based Navigation

Flutter follows a stack-based approach where new screens are pushed onto the stack and removed when they are no longer needed.

- Navigator.push() – Adds a new screen (route) to the navigation stack.

- Navigator.pop() – Removes the current screen and returns to the previous one.

This approach is useful for small apps or simple screen transitions.

2. Named Routes

Named routes provide a more structured way to manage navigation by defining route names inside the MaterialApp widget.

Advantages of Named Routes:

✔ Makes navigation cleaner and more manageable.
✔ Ideal for large applications with multiple screens.
✔ Avoids code duplication for repeated navigation logic.

Named routes help in organizing navigation paths systematically.

3. Gesture-Based Navigation

Flutter provides the GestureDetector widget, which enables interaction-based navigation using gestures such as:

- Tap Gesture – Navigate to a new screen when the user taps.

- Swipe Gesture – Navigate back when the user swipes right.

- Drag Gesture – Move between screens using drag gestures.

Gestures improve user experience by making the app more interactive and intuitive.

Code :-

```
appBar: AppBar(

    backgroundColor: Colors.white,

    title: InkWell(

    /// when click on search box open search screen

    onTap: () {

    Navigator.push(context,

        MaterialPageRoute(builder:
(context) => SearchScreen()));

    },

    /// here we apply hero animation

    child: Container(

        height: 40,

        width: 280,

        decoration: BoxDecoration(

        borderRadius:
BorderRadius.circular(20),

        color:
Colors.black12.withOpacity(0.05)),

        child: Padding(

        padding: const
EdgeInsets.symmetric(horizontal: 10.0),

        child: Row(

        children: [

        const
Icon(Icons.search_rounded),

        const SizedBox(

        width: 10,

        ),

        Hero(

        tag: "anim",

        child: Text(

        "Where are you going?",

        style:
myTextStyle20(fontWeight:
FontWeight.bold),

        ),

        ),

        ],

        ),

        ),

        )),

        ),

    ),
```

```dart
      backgroundColor: Colors.white,

      ///
_____BODY_____
_____///
      body: SingleChildScrollView(

        child: Column(

          crossAxisAlignment:
CrossAxisAlignment.start,

          children: [

            Padding(

              padding: const
EdgeInsets.symmetric(horizontal: 10.0),

              child: Row(

                mainAxisAlignment:
MainAxisAlignment.spaceBetween,

                children: [

                  Text(

                    "Explore",

                    style:
myTextStyle18(fontWeight:
FontWeight.bold),

                  ),

                  /// View All Button , click on
onPress bottom Sheet
                  ///
_____VIEW
ALL_____
///
                  TextButton(

                    onPressed: () {

                      showModalBottomSheet(

                        showDragHandle: true,

                        context: context,

                        builder: (context) {

                          return Container(

                            height: 300,

                            width: double.infinity,

                            child: Column(

                              crossAxisAlignment:
CrossAxisAlignment.start,

                              children: [

                                Padding(

                                  padding: const
EdgeInsets.symmetric(

                                      horizontal: 10.0),

                                  child: Text(

                                    "All Services ",

                                    style:
myTextStyle22(

                                        fontWeight:
FontWeight.bold),

                                  ),

                                ),

                                const SizedBox(

                                  height: 10,

                                ),

                                Expanded(

                                  child:
GridView.builder(

                                      itemCount:
data.length,
```

```dart
            gridDelegate:
                const
SliverGridDelegateWithFixedCrossAxisC
ount(

crossAxisCount: 4),
                itemBuilder:
(context, index) {
                  /// here we call
my explore card
                  return InkWell(
                    onTap: () {

Navigator.pop(context);
                    },
                    child:
MyExploreCard(
                      imagePath:
data[index]['image'],
                      title:
data[index]['title'],
                    ),
                  );
                },
              ),
            )
          ],
        ),
      );
    },
  );
},
```

```dart
          child: Text(
            "View All",
            style: myTextStyle15(
              textColor:
Colors.blueAccent,
              fontWeight:
FontWeight.bold),
          ))
      ],
    ),
  ),

  /// Here we show Rapido servie
  /// Create custom Card
ExploreCard
  /// Here we call
  Padding(
    padding: const
EdgeInsets.symmetric(horizontal: 10.0),
    child: Row(
      mainAxisAlignment:
MainAxisAlignment.spaceBetween,
      children: [
        MyExploreCard(
          imagePath:
"assets/image/parcel.png",
          title: "Parcel",
        ),
        MyExploreCard(
          imagePath:
"assets/image/auto.png",
```

```dart
              title: "Auto",
            ),
            MyExploreCard(
              imagePath:
"assets/image/cab economy.png",
              title: "Cab Economy",
            ),
            MyExploreCard(
              imagePath:
"assets/image/motorbike.png",
              title: "Bike",
            ),
          ],
        ),
      ),

      const SizedBox(
        height: 20,
      ),

      /// here we show auto image
slider for banner showing

      Padding(
        padding: const
EdgeInsets.all(8.0),
        child: CarouselSlider(
          items: bannerImage,
          options: CarouselOptions(
            height: 100,
            aspectRatio: 16 / 3,

              viewportFraction: 1,
              initialPage: 0,
              enableInfiniteScroll: true,
              reverse: true,
              autoPlay: true,
              autoPlayInterval: const
Duration(seconds: 3),
              autoPlayAnimationDuration:
              const
Duration(milliseconds: 900),
              autoPlayCurve:
Curves.fastOutSlowIn,
              enlargeCenterPage: true,
              enlargeFactor: 0.3,
              scrollDirection:
Axis.horizontal,
            )),
      ),
      const SizedBox(
        height: 20,
      ),

      /// SAVE MORE WITH RAPIDO
      Padding(
        padding: const
EdgeInsets.only(left: 10.0),
        child: Text(
          "Save More With Rapido",
          style:
myTextStyle20(textColor:
Colors.black87),
```

```dart
        ),
      ),

      /// here we create custom card
      /// here we call my save card

      const SizedBox(
        height: 10,
      ),
      SingleChildScrollView(
        scrollDirection: Axis.horizontal,
        child: Padding(
          padding: const
EdgeInsets.symmetric(horizontal: 10.0),
          child: Row(
            children: [
              /// Airport
              MySaveMoreCard(
                title: "Airport",
                imagePath:
"assets/image/AirPort-icon.png"),
              const SizedBox(
                width: 15,
              ),

              /// Railway Station
              MySaveMoreCard(
                title: "Railway station",
                imagePath:
"assets/image/railway.png"),

              const SizedBox(
                width: 15,
              ),

              /// Bus stand
              MySaveMoreCard(
                title: "Bus Stand",
                imagePath:
"assets/image/bus-removebg-
preview.png"),
            ],
          ),
        ),
      ),

      /// here we show single poster
      Padding(
        padding: const
EdgeInsets.all(10.0),
        child: Container(
          height: 150,
          decoration: BoxDecoration(
            borderRadius:
BorderRadius.circular(15),
            image: const
DecorationImage(
              image: AssetImage(
                "assets/image/rapiod
poster 2.png",
              ),
              fit: BoxFit.cover)),
```

```dart
        ),
      ),
      const SizedBox(
        height: 20,
      ),


      /// last background poster show
      Stack(children: [
        Image.asset(
          "assets/image/childrens-
pattern-600nw-367289369-removebg-
preview.png",
          color: Colors.black38,
        ),
        Positioned(
          left: 0,
          top: 200,
          child: Container(
            color:
Colors.white70.withOpacity(0.9),
            child: Padding(
              padding: const
EdgeInsets.symmetric(horizontal: 10.0),
              child: Column(
                mainAxisAlignment:
MainAxisAlignment.start,
                crossAxisAlignment:
CrossAxisAlignment.start,
                children: [
                  Text(
                    "#goRapido",
                    style: myTextStyle40(
                      fontWeight:
FontWeight.bold,
                      textColor:
Colors.black54),
                  ),
                  Row(
                    mainAxisAlignment:
MainAxisAlignment.start,
                    children: [
                      Image.asset(

"assets/icon/india.png",
                        height: 20,
                        width: 20,
                      ),
                      const SizedBox(
                        width: 5,
                      ),
                      Text(
                        "Made For India",
                        style:
myTextStyle18(),
                      )
                    ],
                  ),
                  Row(
                    mainAxisAlignment:
MainAxisAlignment.start,
                    children: [
                      Image.asset(
```

```dart
                    "assets/icon/love
(1).png",
                      height: 20,
                      width: 20,
                    ),
                    const SizedBox(
                     width: 5,
                    ),
                    Text(
                      "Crafted in
Bengaluru",
                      style:
myTextStyle18(),
                    )
                  ],
                ),
               ),
              ))
          ])
        ],
       ),
      ),

   /// _____DRAWER
IMPLEMENT
HERE_____///
    drawer: Drawer(
      width: double.infinity,

      backgroundColor: Colors.white,
      child: ListView(
        children: [

///_____HEADER
PART_____///
          DrawerHeader(
            child: Column(
             children: [
              Row(
                children: [
                 IconButton(
                   onPressed: () {
                    Navigator.pop(context);
                   },
                   icon: const
Icon(Icons.arrow_back_rounded)),
                 Text(
                   "Menu",
                   style:
myTextStyle18(fontWeight:
FontWeight.bold),
                  )
                ],
               ),

               /// back icon and manu text
               Container(
                height: 80,
                decoration: BoxDecoration(
```

```dart
            boxShadow: const [
              BoxShadow(
                color: Colors.black,
                blurRadius: 1,
                spreadRadius: 1),
            ],
            borderRadius:
BorderRadius.circular(10),
            color: Colors.white,
            border: Border.all(width: 1,
color: Colors.black26)),
        child: Column(
          children: [
            ListTile(
              leading: Image.asset(
                "assets/icon/user
(2).png",
                height: 40,
              ),
              title: Text(
                "App Creator",
                style:
myTextStyle15(fontWeight:
FontWeight.bold),
              ),
              subtitle: Text(
                "1234567890",
                style: myTextStyle15(),
              ),
              trailing: const
Icon(Icons.navigate_next_rounded),
                )
              ],
            ),
          ),
        )
      ],
    )),

    /// Drawer Body

    ListTile(
      title: Text(
        "Help",
        style:
myTextStyle18(fontWeight:
FontWeight.bold),
      ),
      leading: Image.asset(
        "assets/icon/handshake.png",
        height: 30,
      ),
      trailing: const
Icon(Icons.navigate_next_outlined),
    ),
    const Divider(),

    ListTile(
      title: Text(
        "Parcel - Send Items",
```

```dart
          style:
myTextStyle18(fontWeight:
FontWeight.bold),
          ),
          leading: Image.asset(
            "assets/icon/trolley (1).png",
            height: 30,
          ),
          trailing: const
Icon(Icons.navigate_next_outlined),
          ),
          const Divider(),

          ListTile(
            title: Text(
              "Payment",
              style:
myTextStyle18(fontWeight:
FontWeight.bold),
          ),
            leading: Image.asset(
              "assets/icon/credit-card.png",
              height: 30,
          ),
            trailing: const
Icon(Icons.navigate_next_outlined),
          ),
          const Divider(),

          ListTile(
            title: Text(
```
```dart
          "My Rides",
            style:
myTextStyle18(fontWeight:
FontWeight.bold),
          ),
          leading: Image.asset(
            "assets/icon/refresh.png",
            height: 30,
          ),
          trailing: const
Icon(Icons.navigate_next_outlined),
          ),
          const Divider(),
          ListTile(
            title: Text(
              "Safety",
              style:
myTextStyle18(fontWeight:
FontWeight.bold),
          ),
            leading: Image.asset(
              "assets/icon/verified.png",
              height: 30,
          ),
            trailing: const
Icon(Icons.navigate_next_outlined),
          ),
          const Divider(),

          ListTile(
            title: Text(
```

```dart
          "Refer and Earn",
          style:
myTextStyle18(fontWeight:
FontWeight.bold),
        ),
        subtitle: Text(
          "Get 50",
          style: myTextStyle15(),
        ),
        leading: Image.asset(
          "assets/icon/cost.png",
          height: 30,
        ),
        trailing: const
Icon(Icons.navigate_next_outlined),
      ),
      const Divider(),

      ListTile(
        title: Text(
          "My Reward",
          style:
myTextStyle18(fontWeight:
FontWeight.bold),
        ),
        leading: Image.asset(
          "assets/icon/medal.png",
          height: 30,
        ),
        trailing: const
Icon(Icons.navigate_next_outlined),
      ),
      const Divider(),

      ListTile(
        title: Text(
          "Power Pass",
          style:
myTextStyle18(fontWeight:
FontWeight.bold),
        ),
        leading: Image.asset(
          "assets/icon/id-card.png",
          height: 30,
        ),
        trailing: const
Icon(Icons.navigate_next_outlined),
      ),
      const Divider(),
      ListTile(
        title: Text(
          "Rapido Coin",
          style:
myTextStyle18(fontWeight:
FontWeight.bold),
        ),
        leading: Image.asset(
          "assets/icon/dollar.png",
          height: 30,
        ),
        trailing: const
Icon(Icons.navigate_next_outlined),
```

```dart
        ),
        const Divider(),
        ListTile(
          title: Text(
            "Notifications",
            style:
myTextStyle18(fontWeight:
FontWeight.bold),
          ),
          leading: Image.asset(
            "assets/icon/notification.png",
            height: 30,
          ),
          trailing: const
Icon(Icons.navigate_next_outlined),
        ),
        const Divider(),
        ListTile(
          title: Text(
            "Claims",
            style:
myTextStyle18(fontWeight:
FontWeight.bold),
          ),
          leading: Image.asset(
            "assets/icon/security.png",
            height: 30,
          ),
          trailing: const
Icon(Icons.navigate_next_outlined),
        ),

        const Divider(),

        ListTile(
          title: Text(
            "Setting",
            style:
myTextStyle18(fontWeight:
FontWeight.bold),
          ),
          leading: Image.asset(
            "assets/icon/setting.png",
            height: 30,
          ),
          trailing: const
Icon(Icons.navigate_next_outlined),
        ),
        const Divider(),

        Padding(
          padding: const
EdgeInsets.all(8.0),
          child: Container(
            height: 100,
            decoration: BoxDecoration(
              color: const
Color(0x66ffcc75),
              borderRadius:
BorderRadius.circular(16)),
            child: Row(
              mainAxisAlignment:
MainAxisAlignment.spaceBetween,
```

```dart
          children: [
            Padding(
              padding: const
EdgeInsets.only(left: 8.0),
                child: Column(
                  mainAxisAlignment:
MainAxisAlignment.center,
                  crossAxisAlignment:
CrossAxisAlignment.start,
                    children: [
                      Text(
                        "Earn money with
Rapido",
                        style:
myTextStyle15(fontWeight:
FontWeight.bold),
                      ),
                      Text(
                        "Become a Captain!",
                        style: myTextStyle15(),
                      ),
                    ],
                  ),
                ),
              Container(
                width: 200,
                decoration: const
BoxDecoration(
                    borderRadius:
BorderRadius.only(
                        topRight:
Radius.circular(10),
                        bottomRight:
Radius.circular(10)),
                      image: DecorationImage(
                        image:
AssetImage("assets/image/Rapido_boy.
png"),
                        fit: BoxFit.cover)),
                )
            ],
```

Output

Menu screen:
- abc — 8600982074
- ⭐ 5.00 My Rating
- Help
- Parcel - Send Items
- Payment
- My Rides
- Safety
- Refer and Earn — Get ₹50
- My Rewards
- Power Pass

Help screen (3:43):

← Help   🎟 Tickets

Help topics

🔍 Search Help Topics

- Ride Fare Related Issues
- Captain and Ride Quality Issues
- Safety & Security
- Account & App
- Referrals
- Payment & Wallets
- Power Pass