Name:Shamaila Ansari
Roll no: 02

EXPERIMENT NO: 05

Aim: To apply navigation, routing and gestures in Flutter App

Theory :

Navigation and routing are some of the core concepts of all mobile application, which allows the user to move between different pages. We know that every mobile application contains several screens for displaying different types of information. **For example,** an app can have a screen that contains various products. When the user taps on that product, immediately it will display detailed information about that product.

In Flutter, the screens and pages are known as **routes,** and these routes are just a widget. In Android, a route is similar to an **Activity,** whereas, in iOS, it is equivalent to a **ViewController.**

In any mobile app, navigating to different pages defines the workflow of the application, and the way to handle the navigation is known as **routing.** Flutter provides a basic routing class **MaterialPageRoute** and two methods **Navigator.push()** and **Navigator.pop()** that shows how to navigate between two routes. The following steps are required to start navigation in your application.

Flutter provides a complete system for navigating between screens and handling deep links. Small applications without complex deep linking can use Navigator, while apps with specific deep linking and navigation requirements should also use the Router to correctly handle deep links on Android and iOS, and to stay in sync with the address bar when the app is running on the web.

CODE:

Home Screen

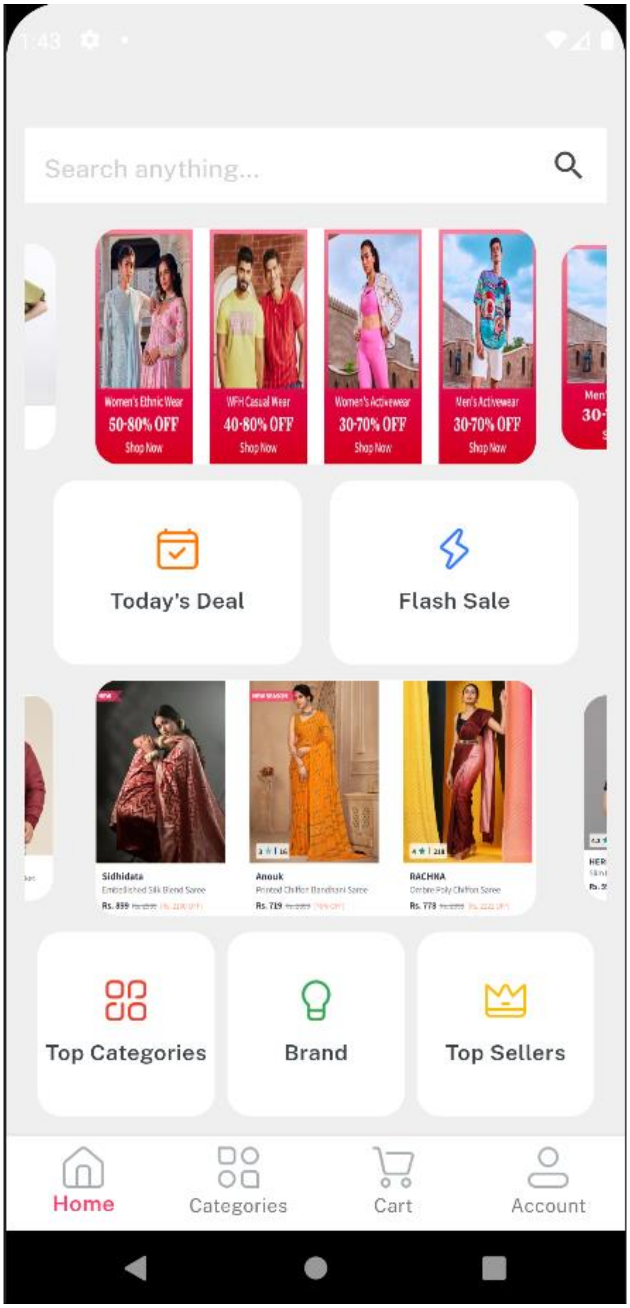
```
import 'package:myntra_clone/consts/consts.dart';
import 'package:myntra_clone/consts/lists.dart';
import 'package:myntra_clone/widgets_common/home_buttons.dart';

class HomeScreen extends StatelessWidget {
  const HomeScreen({Key? key}): super(key: key);

  @override
  Widget build(BuildContext context) {
    return Container(
     padding: const EdgeInsets.all(12),
      color: lightGrey,
      width: context.screenWidth,
      height: context.screenHeight,
      child: SafeArea(
        child:Column(
          children: [
            Container(
              alignment: Alignment.center,
              height: 60,
              color: lightGrey,
              child: TextFormField(
                decoration: InputDecoration(
                  border: InputBorder.none,
                  suffixIcon: Icon(Icons.search),
                filled:true,
                  fillColor: whiteColor,
                  hintText: searchanything,
                  hintStyle: TextStyle(color: textfieldGrey),
                ),
              ),
            ),
            10.heightBox,
            Expanded(
              child: SingleChildScrollView(
                physics: const BouncingScrollPhysics() ,
                child: Column(
                  children:[
                //Swiper brands
                VxSwiper.builder(
                  aspectRatio: 16/9,
                    autoPlay: true,
                    height: 150,
                    enlargeCenterPage: true ,
                    itemCount:slidersList.length,
                  itemBuilder: (context,index){
                  return  Image.asset(
                      slidersList[index],
                  fit: BoxFit.fill,
                ).box.rounded.clip(Clip.antiAlias).margin(const EdgeInsets.symmetric(horizontal:
8)).make();

              }),
            10.heightBox,
            //Deals button
            Row(
              mainAxisAlignment: MainAxisAlignment.spaceEvenly,
              children: List.generate(2,
                      (index) => homeButtons(
                height: context.screenHeight*0.15,
                width: context.screenWidth /2.5,
                        icon: index == 0? icTodaysDeal:icFlashDeal,
                        title: index ==0?todayDeal:flashsale,
              )),
            ),
            // 2nd swipperSwiper brands
            10.heightBox,
            VxSwiper.builder(
                aspectRatio: 16/9,
                autoPlay: true,
                height: 150,
                enlargeCenterPage: true ,
                itemCount:secondSlidersList.length,
                itemBuilder: (context,index){
                  return  Image.asset(
                    secondSlidersList[index],
                    fit: BoxFit.fill,
                  ).box.rounded.clip(Clip.antiAlias).margin(const EdgeInsets.symmetric(horizontal:
8)).make();

                }),
            10.heightBox,
            Row(
              mainAxisAlignment: MainAxisAlignment.spaceEvenly,
              children: List.generate(3, (index) => homeButtons(
                height: context.screenHeight*0.15,
                width: context.screenWidth /3.5,
                icon: index ==0? icTopCategories: index ==1? icBrands:icTopSeller,
                title: index == 0? topcategories: index == 1?brand:topSellers,



              )),
            ),
            10.heightBox,
            Align(
              alignment: Alignment.centerLeft,
                child:
featuredcategories.text.color(darkFontGrey).size(18).fontFamily(semibold).make())
                ]
                ),
              ),
            )
            //
          ],
        )
      ),
    );
  }
}
```

Category Screen

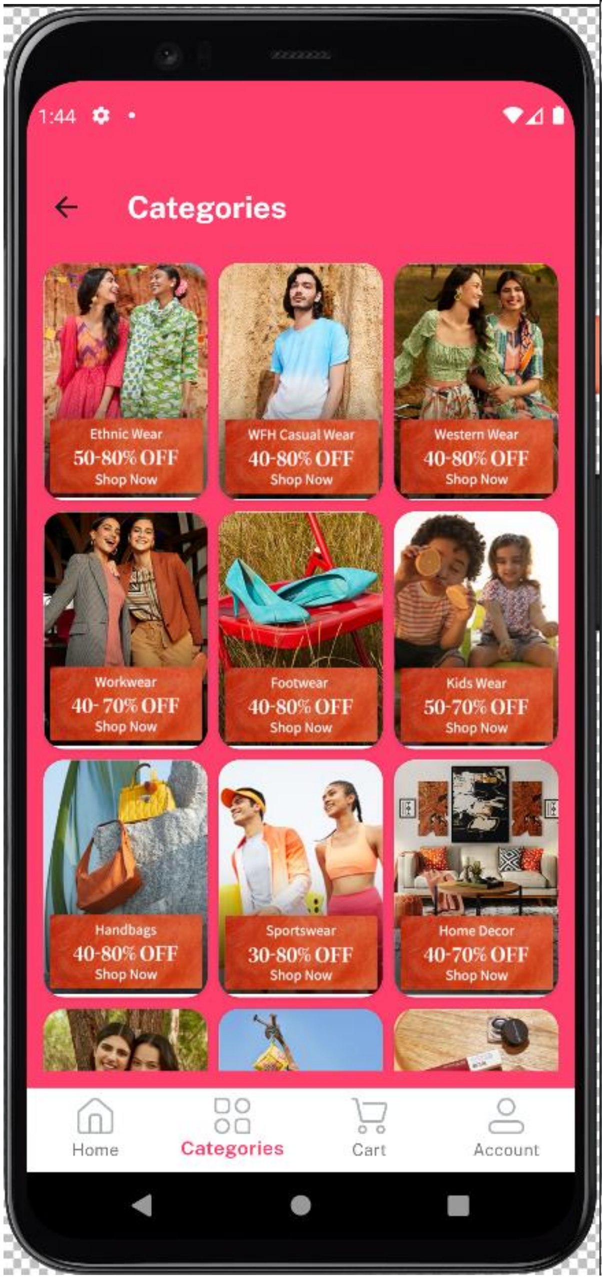
```
import 'package:myntra_clone/consts/consts.dart';
import 'package:myntra_clone/consts/lists.dart';
import 'package:myntra_clone/views/category_screen/category_details.dart';
import 'package:myntra_clone/widgets_common/bg_widget.dart';
import 'package:get/get.dart';
import 'package:get/get_core/src/get_main.dart';

class CategoryScreen extends StatelessWidget {
  const CategoryScreen({Key? key}): super(key: key);

  @override
  Widget build(BuildContext context) {
    return bgWidget(
      child: Scaffold(
        appBar: AppBar(
          title: categories.text.fontFamily(bold).white.make(),
        ),
        body: Container(
          padding: EdgeInsets.all(12),
          child: GridView.builder(
            shrinkWrap: true,
              itemCount: 12,
              gridDelegate: SliverGridDelegateWithFixedCrossAxisCount(crossAxisCount:
3,mainAxisSpacing: 8,crossAxisSpacing: 8,mainAxisExtent: 170), itemBuilder: (context,index){
            return Column(
              children:[Image.asset(categoriesImage[index]),
             // 10.heightBox,
              //categoriesList[index].text.color(darkFontGrey).align(TextAlign.center).make(),
              ],
            ).box.white.rounded.clip(Clip.antiAlias).outerShadow.make().onTap(() {
              Get.to(()=>CategoryDetails(title: categoriesList[index]));
            });

          }),
        ),
      )

    );
  }
}
```

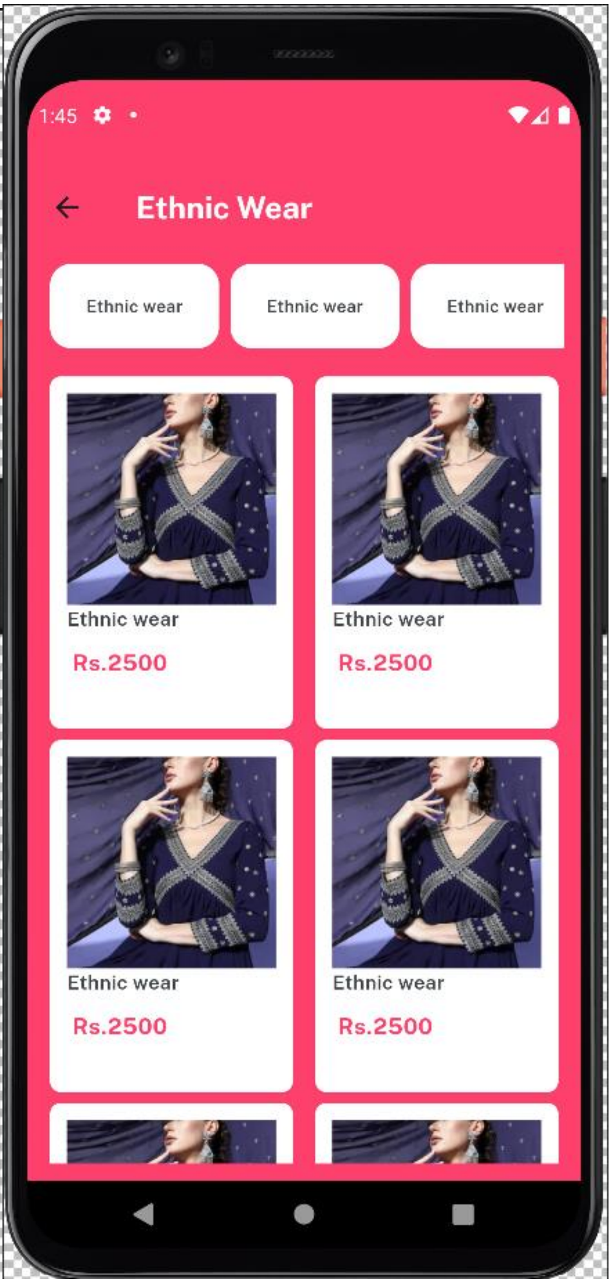
OUTPUT:

Home Screen



Category screen





Conclusion: By understanding and implementing these theoretical concepts, you can create robust and user-friendly forms in Flutter that provide a seamless experience for your users.