# AIM:

Implement a Navigation drawer.

# PROGRAM CODE:

**JAVA CODE:**

**MainActivity.java**

package com.example.navigationco4\_q5;

import android.os.Bundle;

import android.view.View;

import android.view.Menu;

import com.google.android.material.snackbar.Snackbar;

import com.google.android.material.navigation.NavigationView;

import androidx.navigation.NavController;

import androidx.navigation.Navigation;

import androidx.navigation.ui.AppBarConfiguration;

import androidx.navigation.ui.NavigationUI;

import androidx.drawerlayout.widget.DrawerLayout;

import androidx.appcompat.app.AppCompatActivity;

import com.example.navigationco4\_q5.databinding.ActivityMainBinding;

public class MainActivity extends AppCompatActivity {

private AppBarConfiguration mAppBarConfiguration; private ActivityMainBinding binding;

@Override

protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState);

binding = ActivityMainBinding.inflate(getLayoutInflater()); setContentView(binding.getRoot());

setSupportActionBar(binding.appBarMain.toolbar); binding.appBarMain.fab.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

Snackbar.make(view, "Replace with your own action", Snackbar.LENGTH\_LONG)

.setAction("Action", null).show();

}

});

DrawerLayout drawer = binding.drawerLayout;

NavigationView navigationView = binding.navView;

// Passing each menu ID as a set of Ids because each

// menu should be considered as top level destinations. mAppBarConfiguration = new AppBarConfiguration.Builder(

R.id.nav\_home, R.id.nav\_gallery, R.id.nav\_slideshow , R.id.nav\_contacts)

.setOpenableLayout(drawer)

.build();

NavController navController = Navigation.findNavController(this, R.id.nav\_host\_fragment\_content\_main); NavigationUI.setupActionBarWithNavController(this, navController, mAppBarConfiguration); NavigationUI.setupWithNavController(navigationView, navController);

}

@Override

public boolean onCreateOptionsMenu(Menu menu) {

// Inflate the menu; this adds items to the action bar if it is present. getMenuInflater().inflate(R.menu.main, menu);

return true;

}

@Override

public boolean onSupportNavigateUp() {

NavController navController = Navigation.findNavController(this, R.id.nav\_host\_fragment\_content\_main); return NavigationUI.navigateUp(navController, mAppBarConfiguration)

|| super.onSupportNavigateUp();

}

}

# ContactsFragments.java

package com.example.navigationco4\_q5.ui.contacts;

import android.os.Bundle;

import android.view.LayoutInflater; import android.view.View;

import android.view.ViewGroup; import android.widget.TextView;

import androidx.annotation.NonNull; import androidx.annotation.Nullable; import androidx.fragment.app.Fragment; import androidx.lifecycle.Observer;

import androidx.lifecycle.ViewModelProvider;

import com.example.navigationco4\_q5.R;

import com.example.navigationco4\_q5.databinding.FragmentContactsBinding; public class ContactsFragments extends Fragment {

private ContactsViewModel ContactsViewModel; private FragmentContactsBinding binding;

public View onCreateView(@NonNull LayoutInflater inflater, ViewGroup container, Bundle savedInstanceState) {

ContactsViewModel =

new ViewModelProvider(this).get(ContactsViewModel.class);

binding = FragmentContactsBinding.inflate(inflater, container, false); View root = binding.getRoot();

final TextView textView = binding.textContacts; ContactsViewModel.getText().observe(getViewLifecycleOwner(), new Observer<String>() {

@Override

public void onChanged(@Nullable String s) { textView.setText(s);

}

});

return root;

}

}

# ContactsViewModel.java

package com.example.navigationco4\_q5.ui.contacts;

import androidx.lifecycle.LiveData;

import androidx.lifecycle.MutableLiveData; import androidx.lifecycle.ViewModel;

public class ContactsViewModel extends ViewModel { private MutableLiveData<String> mText;

public ContactsViewModel() {

mText = new MutableLiveData<>(); mText.setValue("This is contacts fragment");

}

public LiveData<String> getText() {

return mText;

}

}

# GalleryFragment.java

package com.example.navigationco4\_q5.ui.gallery;

import android.os.Bundle;

import android.view.LayoutInflater; import android.view.View;

import android.view.ViewGroup; import android.widget.TextView;

import androidx.annotation.NonNull; import androidx.annotation.Nullable; import androidx.fragment.app.Fragment; import androidx.lifecycle.Observer;

import androidx.lifecycle.ViewModelProvider;

import com.example.navigationco4\_q5.R;

import com.example.navigationco4\_q5.databinding.FragmentGalleryBinding; public class GalleryFragment extends Fragment {

private GalleryViewModel galleryViewModel; private FragmentGalleryBinding binding;

public View onCreateView(@NonNull LayoutInflater inflater, ViewGroup container, Bundle savedInstanceState) {

galleryViewModel =

new ViewModelProvider(this).get(GalleryViewModel.class);

binding = FragmentGalleryBinding.inflate(inflater, container, false); View root = binding.getRoot();

final TextView textView = binding.textGallery; galleryViewModel.getText().observe(getViewLifecycleOwner(), new Observer<String>() {

@Override

public void onChanged(@Nullable String s) { textView.setText(s);

}

});

return root;

}

@Override

public void onDestroyView() { super.onDestroyView(); binding = null;

}

}

# GalleryViewModel.java

package com.example.navigationco4\_q5.ui.gallery;

import androidx.lifecycle.LiveData;

import androidx.lifecycle.MutableLiveData; import androidx.lifecycle.ViewModel;

public class GalleryViewModel extends ViewModel { private MutableLiveData<String> mText;

public GalleryViewModel() {

mText = new MutableLiveData<>(); mText.setValue("This is gallery fragment");

}

public LiveData<String> getText() { return mText;

}

}

# HomeFragment.java

package com.example.navigationco4\_q5.ui.home;

import android.os.Bundle;

import android.view.LayoutInflater; import android.view.View;

import android.view.ViewGroup; import android.widget.TextView;

import androidx.annotation.NonNull;

import androidx.annotation.Nullable; import androidx.fragment.app.Fragment; import androidx.lifecycle.Observer;

import androidx.lifecycle.ViewModelProvider;

import com.example.navigationco4\_q5.R;

import com.example.navigationco4\_q5.databinding.FragmentHomeBinding; public class HomeFragment extends Fragment {

private HomeViewModel homeViewModel; private FragmentHomeBinding binding;

public View onCreateView(@NonNull LayoutInflater inflater, ViewGroup container, Bundle savedInstanceState) {

homeViewModel =

new ViewModelProvider(this).get(HomeViewModel.class);

binding = FragmentHomeBinding.inflate(inflater, container, false); View root = binding.getRoot();

final TextView textView = binding.textHome; homeViewModel.getText().observe(getViewLifecycleOwner(), new Observer<String>() {

@Override

public void onChanged(@Nullable String s) { textView.setText(s);

}

});

return root;

}

@Override

public void onDestroyView() { super.onDestroyView(); binding = null;

}

}

# HomeViewModel.java

package com.example.navigationco4\_q5.ui.home;

import androidx.lifecycle.LiveData;

import androidx.lifecycle.MutableLiveData; import androidx.lifecycle.ViewModel;

public class HomeViewModel extends ViewModel { private MutableLiveData<String> mText;

public HomeViewModel() {

mText = new MutableLiveData<>(); mText.setValue("This is home fragment");

}

public LiveData<String> getText() { return mText;

}

}

# SlideshowFragment.java

package com.example.navigationco4\_q5.ui.slideshow;

import android.os.Bundle;

import android.view.LayoutInflater; import android.view.View;

import android.view.ViewGroup; import android.widget.TextView;

import androidx.annotation.NonNull; import androidx.annotation.Nullable; import androidx.fragment.app.Fragment; import androidx.lifecycle.Observer;

import androidx.lifecycle.ViewModelProvider;

import com.example.navigationco4\_q5.R;

import com.example.navigationco4\_q5.databinding.FragmentSlideshowBinding; public class SlideshowFragment extends Fragment {

private SlideshowViewModel slideshowViewModel; private FragmentSlideshowBinding binding;

public View onCreateView(@NonNull LayoutInflater inflater, ViewGroup container, Bundle savedInstanceState) {

slideshowViewModel =

new ViewModelProvider(this).get(SlideshowViewModel.class);

binding = FragmentSlideshowBinding.inflate(inflater, container, false); View root = binding.getRoot();

final TextView textView = binding.textSlideshow; slideshowViewModel.getText().observe(getViewLifecycleOwner(), new Observer<String>() {

@Override

public void onChanged(@Nullable String s) { textView.setText(s);

}

});

return root;

}

@Override

public void onDestroyView() { super.onDestroyView(); binding = null;

}

}

# SlideshowViewModel.java

package com.example.navigationco4\_q5.ui.slideshow;

import androidx.lifecycle.LiveData;

import androidx.lifecycle.MutableLiveData; import androidx.lifecycle.ViewModel;

public class SlideshowViewModel extends ViewModel { private MutableLiveData<String> mText;

public SlideshowViewModel() {

mText = new MutableLiveData<>(); mText.setValue("This is slideshow fragment");

}

public LiveData<String> getText() { return mText;

}

}

# XML CODE:

**Activity\_main.xml**

<?xml version="1.0" encoding="utf-8"?>

<androidx.drawerlayout.widget.DrawerLayout xmlns:andr[oid="http://schemas.android.com/apk/res/andr](http://schemas.android.com/apk/res/android)oid"

[xmlns:app="http://schemas.android.com/apk/r](http://schemas.android.com/apk/res-auto)es-auto" [xmlns:tools="http://schemas.andr](http://schemas.android.com/tools)oid.com/tools" android:id="@+id/drawer\_layout" android:layout\_width="match\_parent" android:layout\_height="match\_parent" android:fitsSystemWindows="true" tools:openDrawer="start">

<include android:id="@+id/app\_bar\_main" layout="@layout/app\_bar\_main" android:layout\_width="match\_parent"

android:layout\_height="match\_parent" />

<com.google.android.material.navigation.NavigationView android:id="@+id/nav\_view" android:layout\_width="wrap\_content" android:layout\_height="match\_parent" android:layout\_gravity="start" android:fitsSystemWindows="true" app:headerLayout="@layout/nav\_header\_main" app:menu="@menu/activity\_main\_drawer" />

</androidx.drawerlayout.widget.DrawerLayout>

# Fragments\_contacts.xml

<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout xmlns:andr[oid="http://schemas.android.com/apk/res/andr](http://schemas.android.com/apk/res/android)oid"

[xmlns:app="http://schemas.android.com/apk/r](http://schemas.android.com/apk/res-auto)es-auto" [xmlns:tools="http://schemas.andr](http://schemas.android.com/tools)oid.com/tools" android:layout\_width="match\_parent"

android:layout\_height="match\_parent" tools:context=".ui.contacts.ContactsFragments">

<TextView android:id="@+id/text\_contacts" android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:layout\_marginStart="8dp" android:layout\_marginTop="8dp" android:layout\_marginEnd="8dp" android:textAlignment="center" android:textSize="20sp"

app:layout\_constraintBottom\_toBottomOf="parent" app:layout\_constraintEnd\_toEndOf="parent" app:layout\_constraintStart\_toStartOf="parent" app:layout\_constraintTop\_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>

# Fragments\_home.xml

<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout xmlns:andr[oid="http://schemas.android.com/apk/res/andr](http://schemas.android.com/apk/res/android)oid"

[xmlns:app="http://schemas.android.com/apk/r](http://schemas.android.com/apk/res-auto)es-auto" [xmlns:tools="http://schemas.andr](http://schemas.android.com/tools)oid.com/tools" android:layout\_width="match\_parent" android:layout\_height="match\_parent" tools:context=".ui.home.HomeFragment">

<TextView android:id="@+id/text\_home" android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:layout\_marginStart="8dp" android:layout\_marginTop="8dp" android:layout\_marginEnd="8dp" android:textAlignment="center" android:textSize="20sp"

app:layout\_constraintBottom\_toBottomOf="parent" app:layout\_constraintEnd\_toEndOf="parent" app:layout\_constraintStart\_toStartOf="parent" app:layout\_constraintTop\_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>

# Fragments\_gallery.xml

<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout xmlns:andr[oid="http://schemas.android.com/apk/res/andr](http://schemas.android.com/apk/res/android)oid"

[xmlns:app="http://schemas.android.com/apk/r](http://schemas.android.com/apk/res-auto)es-auto" [xmlns:tools="http://schemas.andr](http://schemas.android.com/tools)oid.com/tools" android:layout\_width="match\_parent" android:layout\_height="match\_parent" tools:context=".ui.gallery.GalleryFragment">

<TextView android:id="@+id/text\_gallery" android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:layout\_marginStart="8dp" android:layout\_marginTop="8dp" android:layout\_marginEnd="8dp" android:textAlignment="center" android:textSize="20sp"

app:layout\_constraintBottom\_toBottomOf="parent" app:layout\_constraintEnd\_toEndOf="parent" app:layout\_constraintStart\_toStartOf="parent" app:layout\_constraintTop\_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>

# Fragments\_slideshow.xml

<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout xmlns:andr[oid="http://schemas.android.com/apk/res/andr](http://schemas.android.com/apk/res/android)oid"

[xmlns:app="http://schemas.android.com/apk/r](http://schemas.android.com/apk/res-auto)es-auto" [xmlns:tools="http://schemas.andr](http://schemas.android.com/tools)oid.com/tools" android:layout\_width="match\_parent" android:layout\_height="match\_parent" tools:context=".ui.slideshow.SlideshowFragment">

<TextView android:id="@+id/text\_slideshow" android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:layout\_marginStart="8dp"

android:layout\_marginTop="8dp" android:layout\_marginEnd="8dp" android:textAlignment="center" android:textSize="20sp" app:layout\_constraintBottom\_toBottomOf="parent" app:layout\_constraintEnd\_toEndOf="parent" app:layout\_constraintStart\_toStartOf="parent" app:layout\_constraintTop\_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>

# Nav\_header\_main.xml

<?xml version="1.0" encoding="utf-8"?>

<LinearLayout xmlns:andr[oid="http://schemas.android.com/apk/res/andr](http://schemas.android.com/apk/res/android)oid" [xmlns:app="http://schemas.android.com/apk/r](http://schemas.android.com/apk/res-auto)es-auto" android:layout\_width="match\_parent" android:layout\_height="@dimen/nav\_header\_height" android:background="@drawable/side\_nav\_bar" android:gravity="bottom"

android:orientation="vertical" android:paddingLeft="@dimen/activity\_horizontal\_margin" android:paddingTop="@dimen/activity\_vertical\_margin" android:paddingRight="@dimen/activity\_horizontal\_margin" android:paddingBottom="@dimen/activity\_vertical\_margin" android:theme="@style/ThemeOverlay.AppCompat.Dark">

<ImageView android:id="@+id/imageView" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content"

android:contentDescription="@string/nav\_header\_desc" android:paddingTop="@dimen/nav\_header\_vertical\_spacing" app:srcCompat="@drawable/puppy" />

<TextView android:layout\_width="match\_parent" android:layout\_height="wrap\_content"

android:paddingTop="@dimen/nav\_header\_vertical\_spacing" android:text="@string/nav\_header\_title" android:textAppearance="@style/TextAppearance.AppCompat.Body1" />

<TextView

android:id="@+id/textView" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:text="@string/nav\_header\_subtitle" />

</LinearLayout>

# Activity\_main\_drawer.xml

<?xml version="1.0" encoding="utf-8"?>

<menu xmlns:andr[oid="http://schemas.android.com/apk/res/andr](http://schemas.android.com/apk/res/android)oid" [xmlns:tools="http://schemas.andr](http://schemas.android.com/tools)oid.com/tools" tools:showIn="navigation\_view">

<group android:checkableBehavior="single">

<item

android:id="@+id/nav\_home" android:icon="@drawable/ic\_menu\_camera" android:title="@string/menu\_home" />

<item

android:id="@+id/nav\_gallery" android:icon="@drawable/ic\_menu\_gallery" android:title="@string/menu\_gallery" />

<item

android:id="@+id/nav\_slideshow" android:icon="@drawable/ic\_menu\_slideshow" android:title="@string/menu\_slideshow" />

<item

android:id="@+id/nav\_contacts" android:icon="@drawable/ic\_baseline\_contacts\_24" android:title="@string/menu\_contacts" />

</group>

</menu>

# Mobile\_navigation.xml

<?xml version="1.0" encoding="utf-8"?>

<navigation xmlns:andr[oid="http://schemas.android.com/apk/res/andr](http://schemas.android.com/apk/res/android)oid" [xmlns:app="http://schemas.android.com/apk/r](http://schemas.android.com/apk/res-auto)es-auto" [xmlns:tools="http://schemas.andr](http://schemas.android.com/tools)oid.com/tools" android:id="@+id/mobile\_navigation" app:startDestination="@+id/nav\_home">

<fragment android:id="@+id/nav\_home"

android:name="com.example.navigationco4\_q5.ui.home.HomeFragment" android:label="@string/menu\_home" tools:layout="@layout/fragment\_home" />

<fragment android:id="@+id/nav\_gallery"

android:name="com.example.navigationco4\_q5.ui.gallery.GalleryFragment" android:label="@string/menu\_gallery" tools:layout="@layout/fragment\_gallery" />

<fragment android:id="@+id/nav\_slideshow"

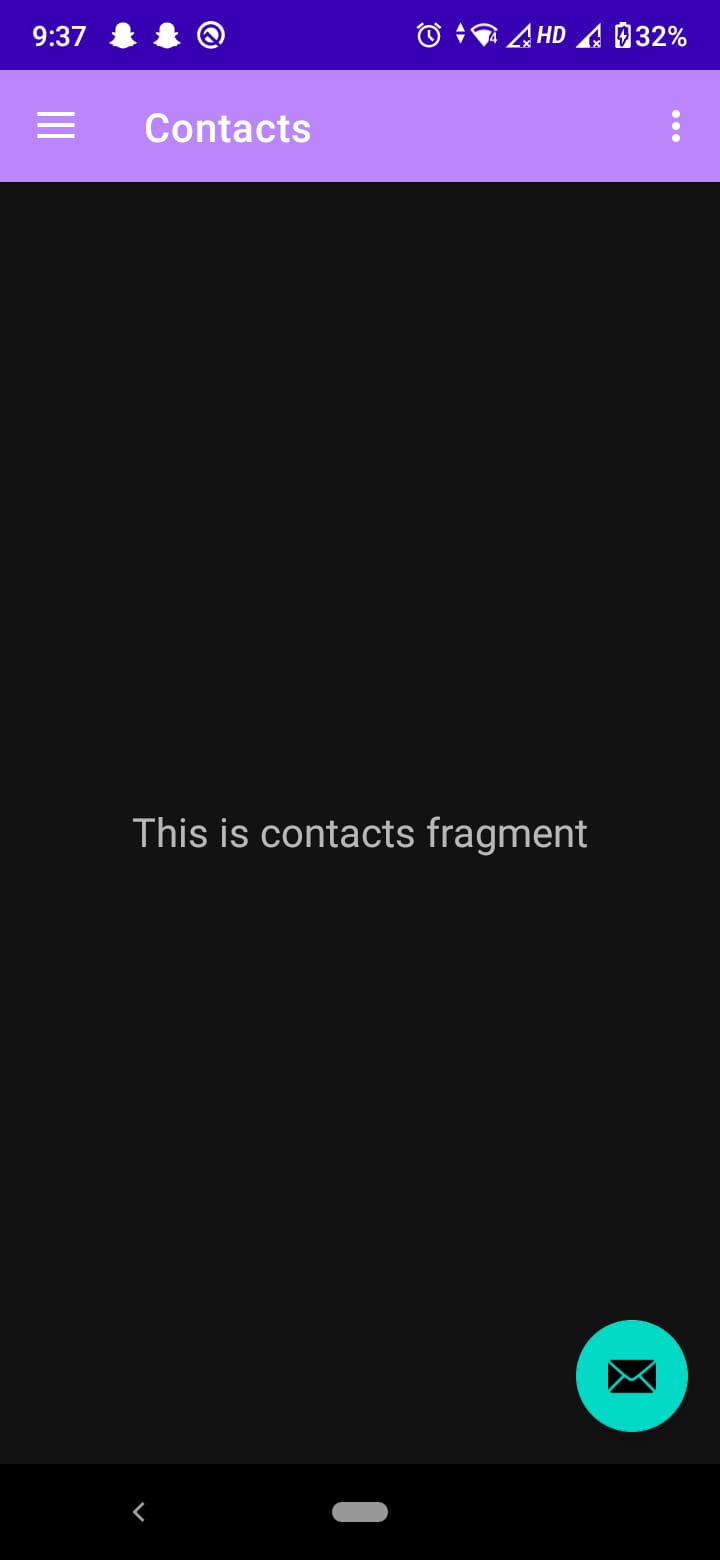
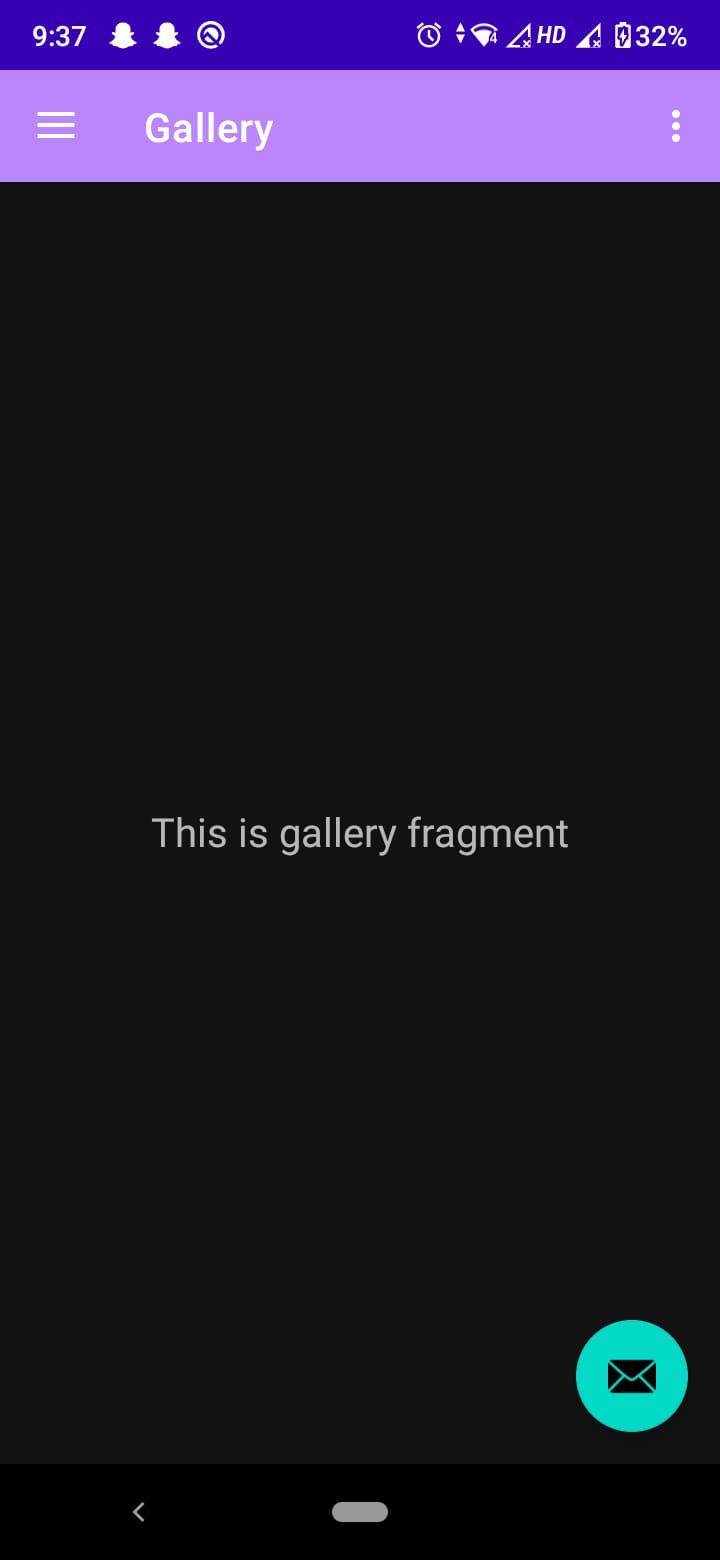
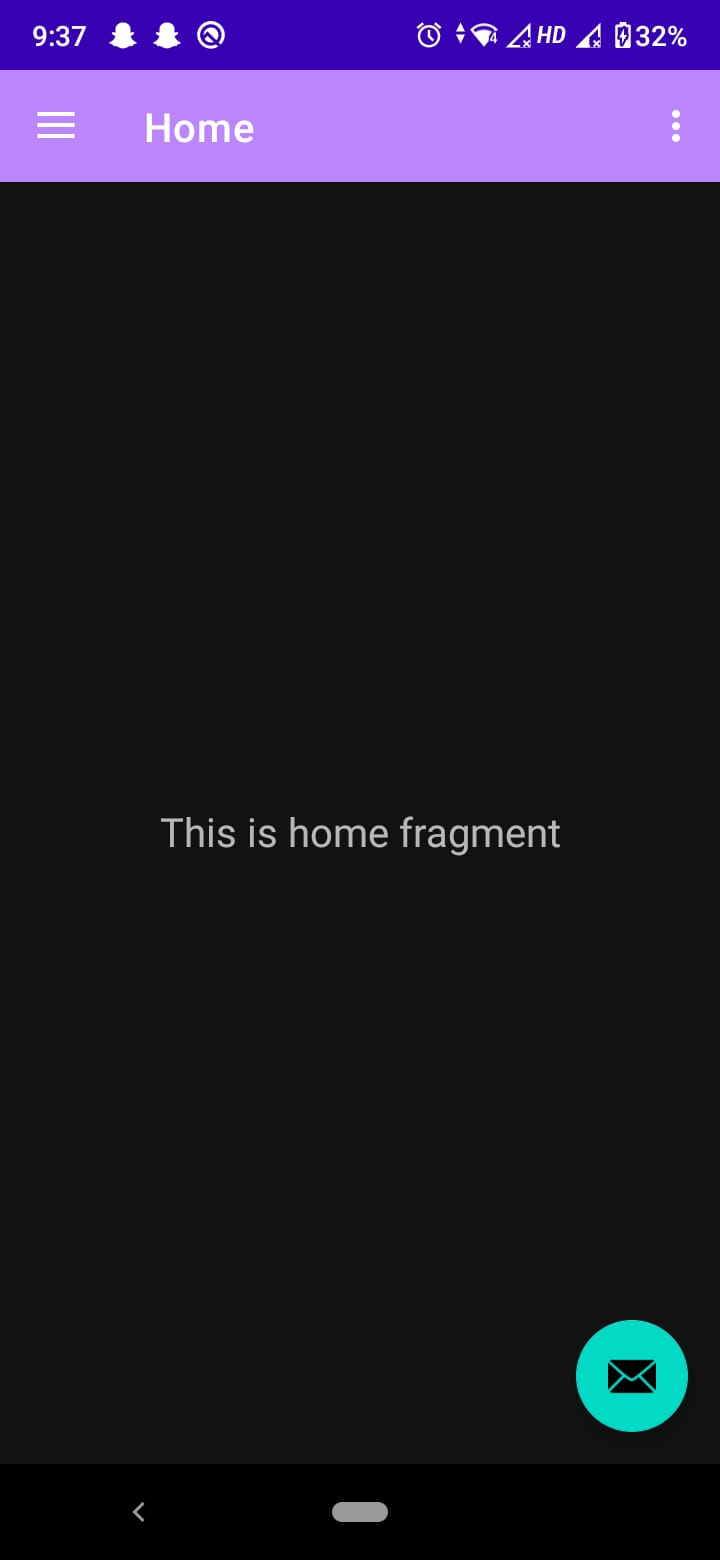
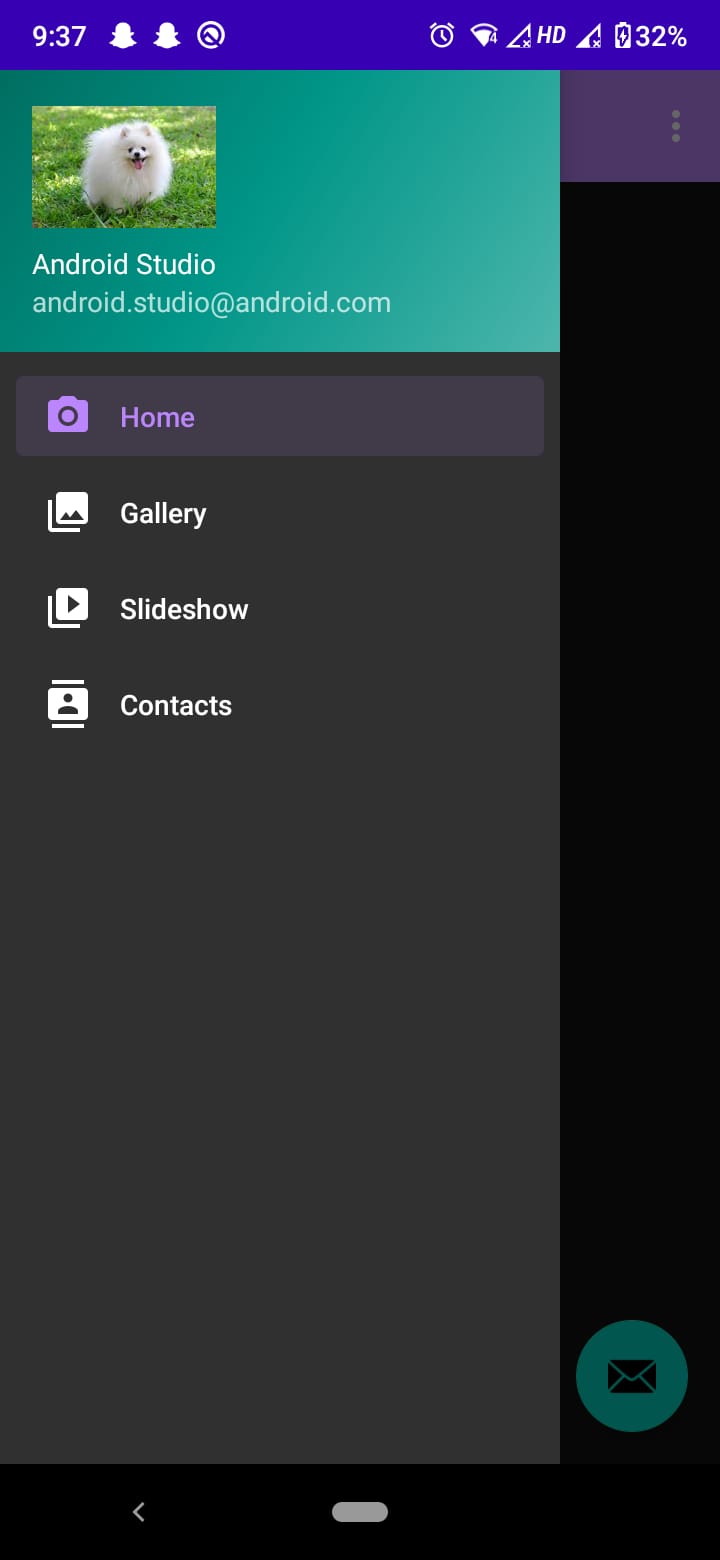
android:name="com.example.navigationco4\_q5.ui.slideshow.SlideshowFragment" android:label="@string/menu\_slideshow" tools:layout="@layout/fragment\_slideshow" />

<fragment android:id="@+id/nav\_contacts"

android:name="com.example.navigationco4\_q5.ui.contacts.ContactsFragments" android:label="@string/menu\_contacts" tools:layout="@layout/fragment\_contacts" />

</navigation>

**OUTPUT**

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