

MOBILE APPLICATION TECHNOLOGIES

Lesson five: Navigation drawer, fragment, Tabs

Content

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- Login
- Navigation drawer
- Fragment
- Tabs

- Login
- Navigation drawer
- Fragment
- Tabs

Login

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- Logging in is the process by which an individual gains access to a software(such as Web-based applications, mobile applications and so on) by identifying and authenticating themselves.
- The user credentials are typically some form of “username” and a matching “password“, and these credentials themselves are sometimes referred to as a login, (or a logon or a sign-in or a sign-on)

Activity 1: Login

5

- To create the application that contains login activity,
 - First create Android project
 - Name the application “ZAHAB”
 - About activity, choose Empty activity
 - You can also choose Login Activity in the Select activity window of Android Studio

Activity_main.xml

6

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@android:color/holo_orange_dark"
    tools:context=".MainActivity">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_margin="10dp"
        android:orientation="vertical">
```


Activity_main.xml(Cont.)

7

```
<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="@string/login_message"
    android:textSize="30dp"
    android:textAlignment="center"
    android:textStyle="bold"
    android:layout_marginBottom="15dp"/>
<EditText
    android:id="@+id/username"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="@string/hint_username"
    android:layout_marginBottom="15dp"
/>
```

Activity_main.xml(Cont.)

8

```
<EditText
    android:id="@+id/password"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="@string/hint_password"
    android:layout_marginBottom="15dp"
    android:inputType="textPassword"
/>
<Button
    android:layout_width="match_parent"
    android:layout_height="60dp"
    android:text="@string/button_text"
    android:textSize="20dp"
    android:textColor="@android:color/white"
    android:background="@android:color/black"
    android:onClick="loginClick"/>
</LinearLayout>
</android.support.constraint.ConstraintLayout>
```


strings.xml

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```
<resources>
    <string name="app_name">ZAHAB</string>
    <string name="login_message">LOGIN</string>
    <string name="hint_username">Enter
username</string>
    <string name="hint_password">Enter
password</string>
    <string name="button_text">Login</string>
</resources>
```

MainActivity.java

10

```
package com.example.imfura.zahab;  
import android.content.Intent;  
import android.support.v7.app.AppCompatActivity;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.EditText;  
import android.widget.Toast;
```

MainActivity.java(Cont.)

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```
public class MainActivity extends AppCompatActivity
{

    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
}
```


MainActivity.java(Cont.)

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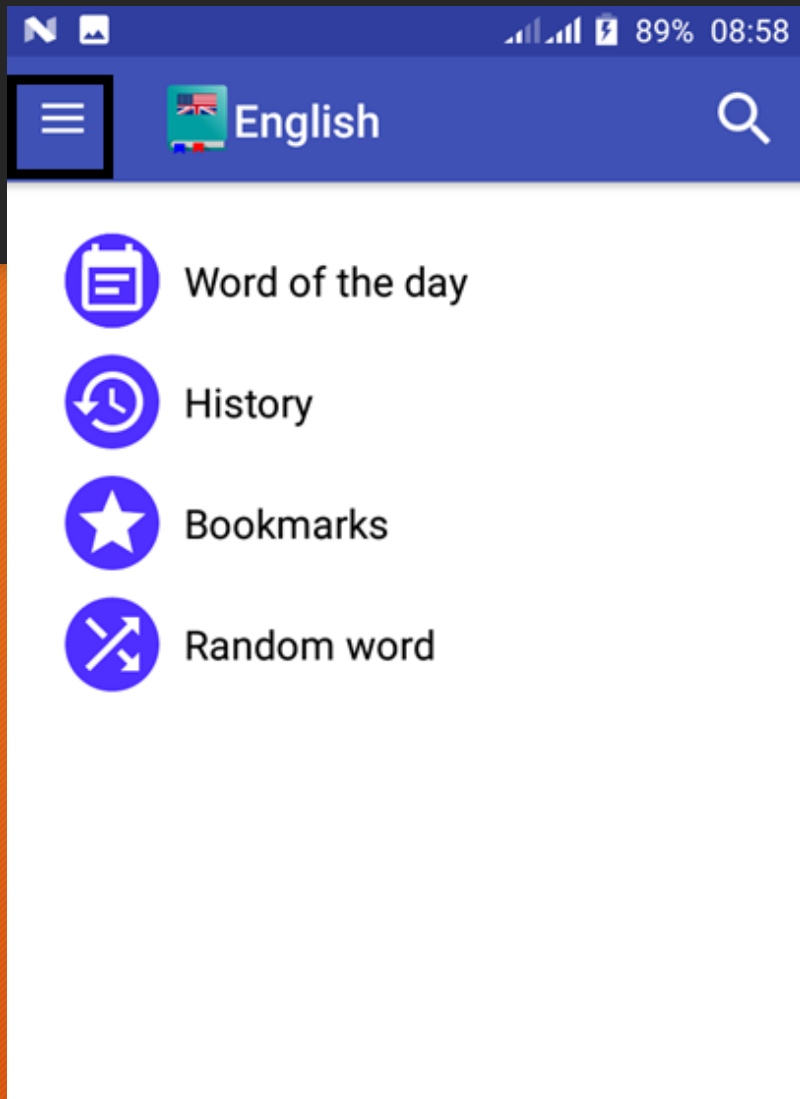
```
public void loginClick(View view)
{
    EditText txtUsername=(EditText)findViewById(R.id.username);
    EditText txtPassword=(EditText)findViewById(R.id.password);
    String username=txtUsername.getText().toString();
    String password=txtPassword.getText().toString();
    if(username.equals("admin") && password.equals("123admin")){
        Intent intent=new Intent(this,Main2Activity.class);
        startActivity(intent);
    }
    else
    {
        Toast.makeText(this,"Invalid username or
password",Toast.LENGTH_LONG).show();
    }
}
```

- Login
- Navigation drawer
- Fragment
- Tabs

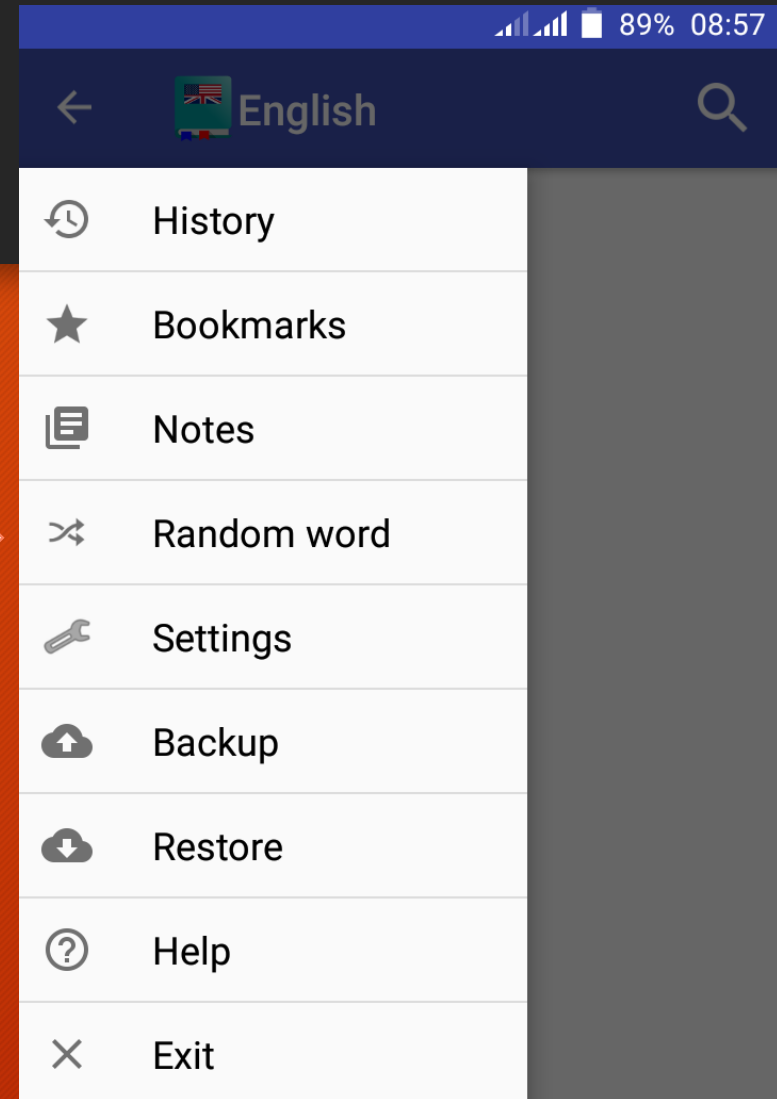
What is navigation drawer?

14

- The navigation drawer is a UI panel that shows your app's main navigation menu.
- It is hidden when not in use, but appears when the user swipes a finger from the left edge of the screen or, when at the top level of the app, the user touches the drawer icon in the app bar.



When the icon
in Square is
clicked



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Create Navigation Drawer

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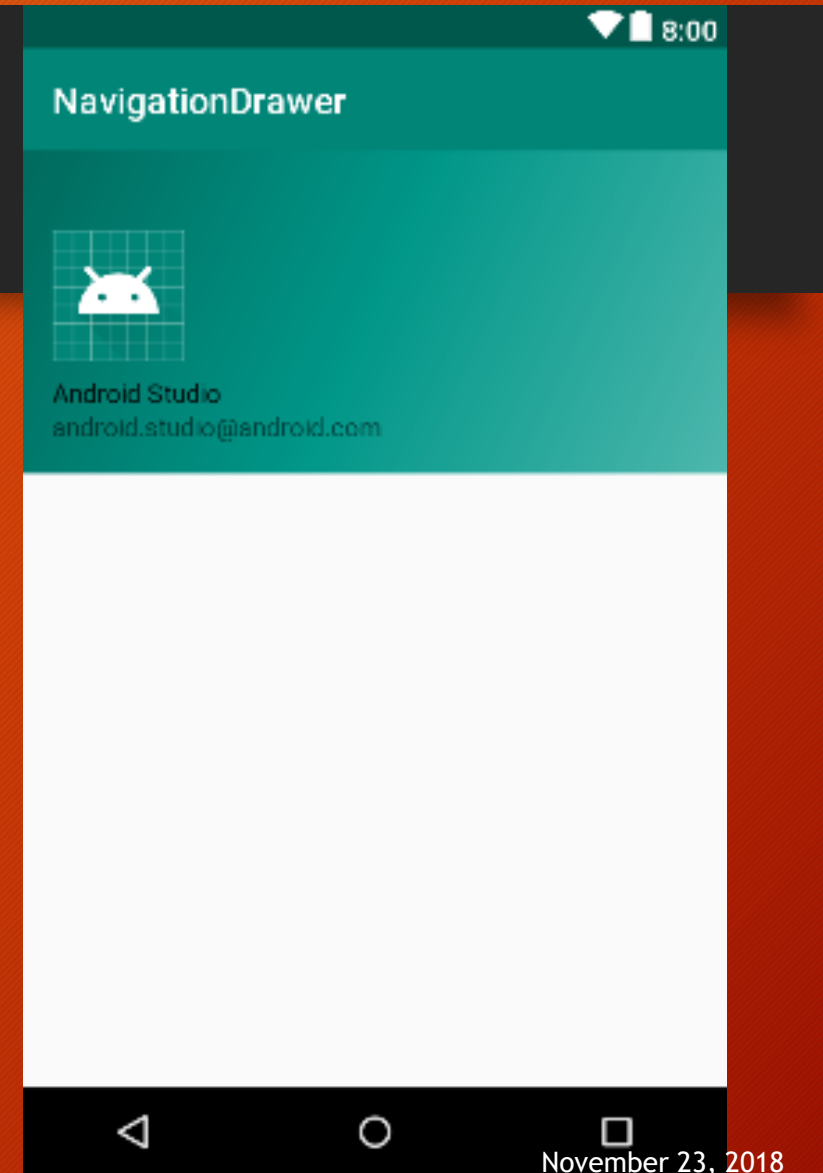
- Using the same project “ZAHAB”
- Do right click on package in java folder>New>Activity>Navigation Drawer activity
- Make sure you are connected to the internet because Library needs to be installed

Navigation Drawer Activity layout files

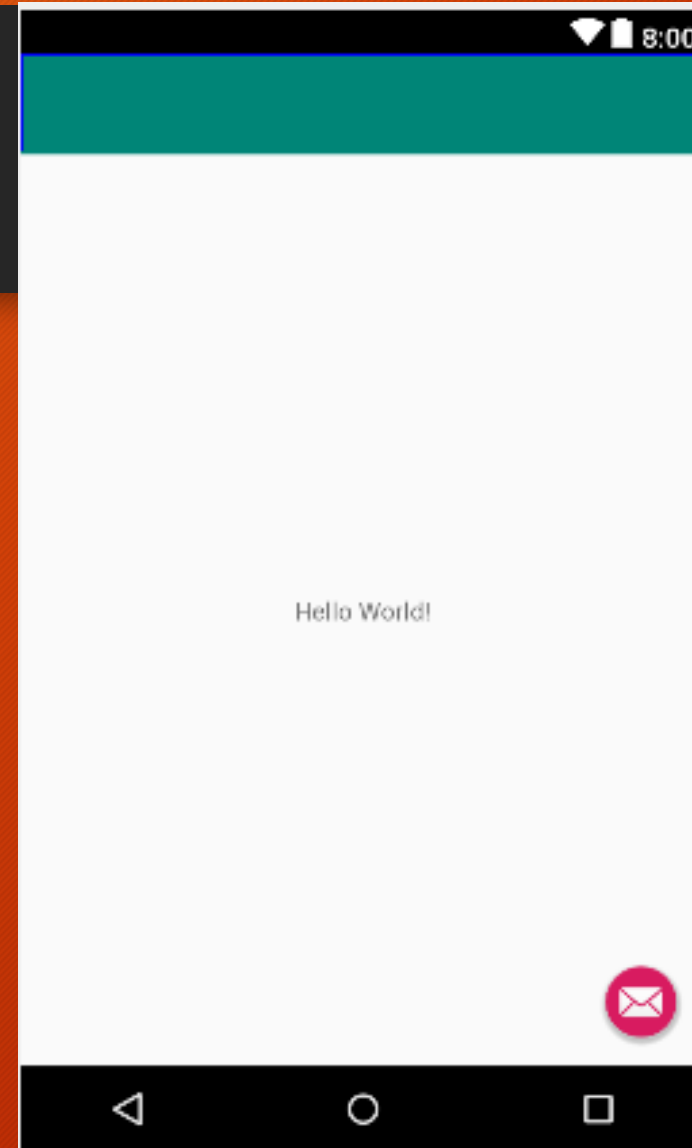
17

- nav_header_main
- App_bar_main
- Content_main
- Activity_main

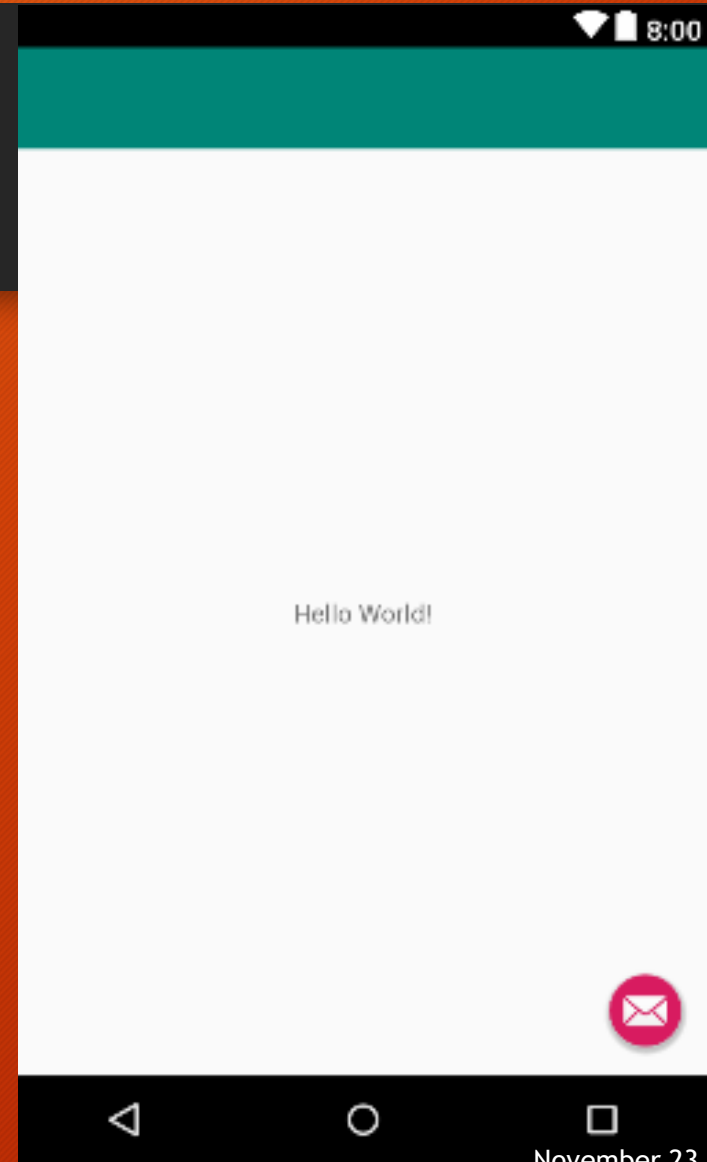
- nav_header_main
- App_bar_main
- Content_main
- Activity_main



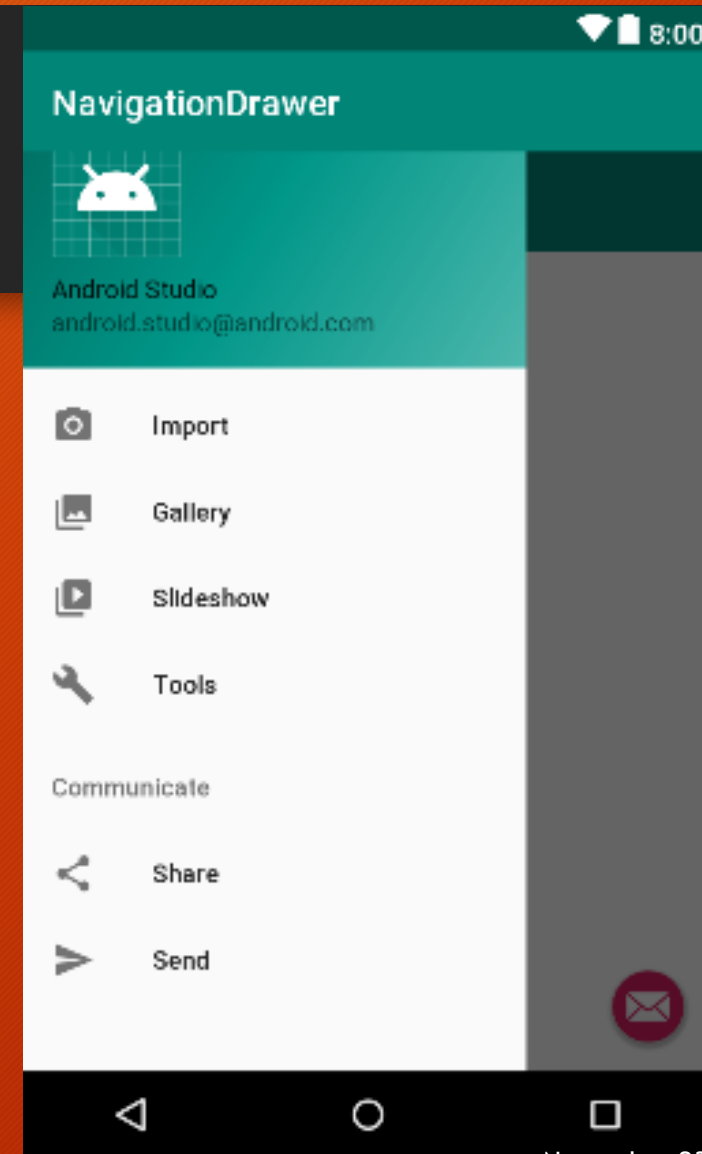
- nav_header_main
- App_bar_main
- Content_main
- Activity_main



- nav_header_main
- App_bar_main
- Content_main
- Activity_main



- nav_header_main
- App_bar_main
- Content_main
- Activity_main



activity_main2_drawer.xml

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```
<?xml version="1.0" encoding="utf-8"?>
<menu
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    tools:showIn="navigation_view">

    <group android:checkableBehavior="single">
        <item
            android:id="@+id/nav_gallery"
            android:icon="@drawable/ic_menu_gallery"
            android:title="Zahab Gallery" />
    </group>
</menu>
```

activity_main2_drawer.xml(Cont.)

23

```
<item
    android:id="@+id/nav_about"
    android:icon="@drawable/ic_menu_gallery"
    android:title="About Zahab" />
<item
    android:id="@+id/nav_contact"
    android:icon="@drawable/ic_menu_send"
    android:title="Zahab Contacts" />
</group>
```


activity_main2_drawer.xml (Cont.)

24

```
<item android:title="Tell them">
    <menu>
        <item
            android:id="@+id/nav_share"
            android:icon="@drawable/ic_menu_share"
            android:title="Share" />
        <item
            android:id="@+id/nav_send"
            android:icon="@drawable/ic_menu_send"
            android:title="Send" />
    </menu>
</item>
</menu>
```

activity_main2.xml

25

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    app:layout_behavior="@string/appbar_scrolling_view_behavior"
    tools:context=".Main2Activity"
    android:background="@android:color/holo_orange_dark"
    tools:showIn="@layout/app_bar_main2">
    <ScrollView
        android:layout_width="match_parent"
        android:layout_height="match_parent">
```

activity_main2.xml (Cont.)

26

```
<LinearLayout
    android:layout_margin="10dp"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="vertical"
>
    <Button
        android:id="@+id/gallery"
        android:layout_width="match_parent"
        android:layout_height="50dp"
        android:layout_marginTop="150dp"
        android:text="@string/button_gallery"
        android:background="@android:color/black"
        android:textColor="@android:color/white"
        android:textSize="20dp"
        android:onClick="openGallery"
    />
```


activity_main2.xml (Cont.)

27

```
<Button
    android:id="@+id/about"
    android:layout_width="match_parent"
    android:layout_height="50dp"
    android:layout_marginTop="10dp"
    android:text="@string/button_about"
    android:background="@android:color/black"
    android:textColor="@android:color/white"
    android:textSize="20dp"
    android:onClick="openAbout"
/>
```

activity_main2.xml(Cont.)

28

```
<Button
    android:id="@+id/contact"
    android:layout_width="match_parent"
    android:layout_height="50dp"
    android:layout_marginTop="10dp"
    android:text="@string/button_contact"
    android:background="@android:color/black"
    android:textColor="@android:color/white"
    android:textSize="20dp"
    android:onClick="openContact"
/>
</LinearLayout>
</ScrollView>
</android.support.constraint.ConstraintLayout>
```

Main2Activity.java

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```
package com.example.imfura.zahab;  
import android.content.Intent;  
import android.os.Bundle;  
import android.support.design.widget.FloatingActionButton;  
import android.support.design.widget.Snackbar;  
import android.view.View;  
import android.support.design.widget.NavigationView;  
import android.support.v4.view.GravityCompat;  
import android.support.v4.widget.DrawerLayout;  
import android.support.v7.app.ActionBarDrawerToggle;  
import android.support.v7.app.AppCompatActivity;  
import android.support.v7.widget.Toolbar;  
import android.view.Menu;  
import android.view.MenuItem;
```


Main2Activity.java (Cont.)

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```
public class Main2Activity extends AppCompatActivity
    implements
    NavigationView.OnNavigationItemSelectedListener {

    .
    .
    .
    .
    .
    .
}
```

Main2Activity.java (Cont.)

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```
public void openGallery(View view)
{
    Intent intent=new Intent(this,MainGallery.class);
    startActivity(intent);
}
public void openAbout(View view)
{
    Intent intent=new Intent(this,MainAbout.class);
    startActivity(intent);
}
public void openContact(View view)
{
    Intent intent=new Intent(this,MainContact.class);
    startActivity(intent);
}
```

Main2Activity.java (Cont.)

32

```
@Override
public void onBackPressed() {
    .
    .
    .
    .
    .
    .
    .}
@SuppressWarnings("StatementWithEmptyBody")
@Override
```


Main2Activity.java (Cont.)

33

```
public boolean onNavigationItemSelected(MenuItem item) {  
    // Handle navigation view item clicks here.  
    int id = item.getItemId();  
  
    if (id == R.id.nav_contact) {  
        Intent intent=new Intent(this,MainContact.class);  
        startActivity(intent);  
    } else if (id == R.id.nav_gallery) {  
        Intent intent=new Intent(this,MainGallery.class);  
        startActivity(intent);  
    } else if (id == R.id.nav_about) {  
        Intent intent=new Intent(this,MainAbout.class);  
        startActivity(intent);  
    }  
}
```

Main2Activity.java (Cont.)

34

```
    } else if (id == R.id.nav_share) {  
  
        } else if (id == R.id.nav_send) {  
        }  
        DrawerLayout drawer = (DrawerLayout)  
findViewById(R.id.drawer_layout);  
        drawer.closeDrawer(GravityCompat.START);  
        return true;  
    }  
}
```

Add three new activities

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- Gallery activity
- Contact activity
- About activity

Add three new activities

36

- Gallery activity
- Contact activity
- About activity

activity_main_gallery.xml

37

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@android:color/holo_orange_dark"
    tools:context=".MainGallery">
    <ScrollView
        android:layout_width="match_parent"
        android:layout_height="wrap_content">
```

activity_main_gallery.xml(Cont.)

38

```
<LinearLayout
    android:layout_margin="10dp"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="vertical">
    <android.support.v7.widget.CardView
        android:id="@+id/cardView1"
        android:layout_width="match_parent"
        android:layout_height="200dp"
        app:cardCornerRadius="8dp"
        android:layout_marginBottom="10dp">
```

activity_main_gallery.xml(Cont.)

39

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="200dp"
    android:orientation="vertical">

    <ImageView
        android:id="@+id/imageView1"
        android:layout_width="wrap_content"
        android:layout_height="170dp"
        app:srcCompat="@drawable/items" />
```

activity_main_gallery.xml(Cont.)

40

```
<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:textSize="20sp"
    android:text="Various items are available"
    android:textAlignment="center"/>
</LinearLayout>
</android.support.v7.widget.CardView>
<android.support.v7.widget.CardView
    android:id="@+id/cardView2"
    android:layout_width="match_parent"
    android:layout_height="200dp"
    app:cardCornerRadius="8dp"
    android:layout_marginBottom="10dp">
```


activity_main_gallery.xml(Cont.)

41

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="200dp"
    android:orientation="vertical">

    <ImageView
        android:id="@+id/imageView2"
        android:layout_width="match_parent"
        android:layout_height="170dp"
        app:srcCompat="@drawable/tubes" />
```

activity_main_gallery.xml(Cont.)

```
<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:textSize="20sp"
    android:text="We sell different tubes"
    android:textAlignment="center"/>
</LinearLayout>
</android.support.v7.widget.CardView>
<android.support.v7.widget.CardView
    android:id="@+id/cardView3"
    android:layout_width="match_parent"
    android:layout_height="200dp"
    app:cardCornerRadius="8dp"
    android:layout_marginBottom="10dp">
```

activity_main_gallery.xml(Cont.)

43

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="200dp"
    android:orientation="vertical">

    <ImageView
        android:id="@+id/imageView3"
        android:layout_width="match_parent"
        android:layout_height="170dp"
        app:srcCompat="@drawable/steels" />
```

activity_main_gallery.xml(Cont.)

44

```
<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:textSize="20sp"
    android:text="We sell all kinds of steels"
    android:textAlignment="center"/>
</LinearLayout>
</android.support.v7.widget.CardView>
<android.support.v7.widget.CardView
    android:id="@+id/cardView4"
    android:layout_width="match_parent"
    android:layout_height="200dp"
    app:cardCornerRadius="8dp"
    android:layout_marginBottom="10dp">
```


activity_main_gallery.xml(Cont.)

45

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="200dp"
    android:orientation="vertical">

    <ImageView
        android:id="@+id/imageView4"
        android:layout_width="match_parent"
        android:layout_height="170dp"
        app:srcCompat="@drawable/itemspresented" />
```

activity_main_gallery.xml(Cont.)

46

```
<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:textSize="20sp"
    android:text="Items presented at the entry"
    android:textAlignment="center"/>
</LinearLayout>
</android.support.v7.widget.CardView>
</LinearLayout>
</ScrollView>

</android.support.constraint.ConstraintLayout>
```

Add three new activities

47

- Gallery activity
- Contact activity
- About activity

activity_main_contact.xml

48

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@android:color/holo_orange_dark"
    tools:context=".MainContact">
    <ScrollView
        android:layout_width="match_parent"
        android:layout_height="match_parent">
```


activity_main_contact.xml (Cont.)

49

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:layout_margin="10dp">
    <TextView
        android:id="@+id/textView1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="ZAHAB CONTACTS"
        android:textAlignment="center"
        android:textSize="30dp"
        android:textStyle="bold"
    />
```

activity_main_contact.xml (Cont.)

50

```
<TextView
    android:id="@+id/textView2"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="@string/contact_location"
    android:textAlignment="center"
    android:layout_marginTop="10dp"
    android:textSize="20dp"
/>
<TextView
    android:id="@+id/textView3"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="@string/contact_phone"
    android:textAlignment="center"
    android:layout_marginTop="10dp"
    android:textSize="20dp"
/>
```

activity_main_contact.xml (Cont.)

51

```
<TextView
    android:id="@+id/textView4"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="@string/contact_email"
    android:textAlignment="center"
    android:layout_marginTop="10dp"
    android:textSize="20dp"
/>
```

activity_main_contact.xml (Cont.)

52

```
<TextView
    android:id="@+id/textView5"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="@string/contact_website"
    android:textAlignment="center"
    android:layout_marginTop="10dp"
    android:textSize="20dp"
/>
</LinearLayout>
</ScrollView>
</android.support.constraint.ConstraintLayout>
```


Add three new activities

53

- Gallery activity
- Contact activity
- About activity

activity_main_about.xml

54

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@android:color/holo_orange_dark"
    tools:context=".MainAbout">
    <ScrollView
        android:layout_width="match_parent"
        android:layout_height="match_parent">
```

activity_main_about.xml(Cont.)

55

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:layout_margin="10dp">
    <TextView
        android:id="@+id/textView1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="ABOUT ZAHAB"
        android:textAlignment="center"
        android:textSize="30dp"
        android:textStyle="bold"
    />
```

activity_main_about.xml (Cont.)

56

```
<TextView
    android:id="@+id/textView2"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="@string/about_zahab"
    android:textAlignment="center"
    android:layout_marginTop="10dp"
    android:textSize="20dp"
/>
</LinearLayout>
</ScrollView>

</android.support.constraint.ConstraintLayout>
```


strings.xml

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```
<resources>
    <string name="app_name">ZAHAB</string>
    <string name="login_message">LOGIN</string>
    <string name="hint_username">Enter username</string>
    <string name="hint_password">Enter password</string>
    <string name="button_text">Login</string>
    <string name="title_activity_main2">Main2Activity</string>
    <string name="navigation_drawer_open">Open navigation
drawer</string>
    <string name="navigation_drawer_close">Close navigation
drawer</string>
    <string name="nav_header_title">Zahab App</string>
    <string name="nav_header_subtitle">Email:info@zahab.com</string>
    <string name="nav_header_desc">Navigation header</string>
```

strings.xml(Cont.)

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```
<string name="action_settings">Settings</string>
  <string name="button_gallery">Open Gallery</string>
  <string name="button_about">About Zahab</string>
  <string name="button_contact">Contact Zahab</string>
  <string name="about_zahab">ZAHAB has been established in 2018, it
has been launched in March. There are many different businesses in
ZAHAB including Quincaillerie ZAHAB, we are planning to expand the
business</string>
  <string name="contact_location">Location: Musanze/ Rwanda</string>
  <string name="contact_phone">Phone: (+250) 788820291</string>
  <string name="contact_email">Email: info@zahab.com</string>
  <string name="contact_website">Website: www.zahab.com</string>
</resources>
```

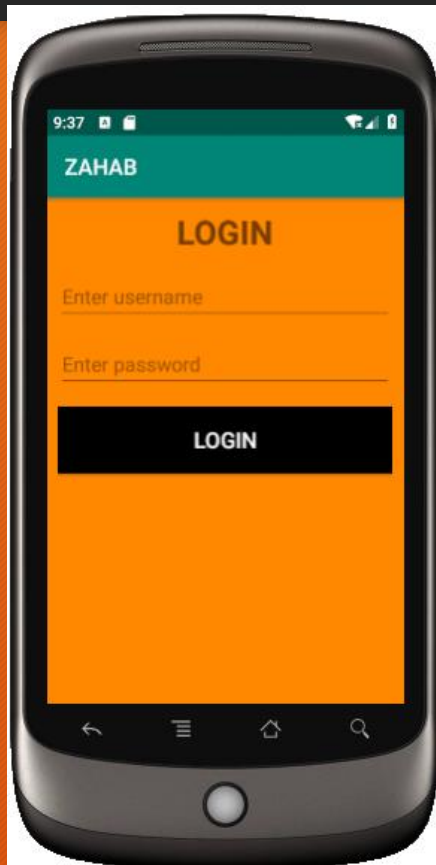
dependencies

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```
dependencies {  
    implementation fileTree(include: ['*.jar'], dir: 'libs')  
    implementation 'com.android.support:appcompat-v7:28.0.0'  
    implementation 'com.android.support.constraint:constraint-  
layout:1.1.3'  
    implementation 'com.android.support:support-v4:28.0.0'  
    implementation 'com.android.support:design:28.0.0'  
    testImplementation 'junit:junit:4.12'  
    androidTestImplementation 'com.android.support.test:runner:1.0.2'  
    androidTestImplementation  
'com.android.support.test.espresso:espresso-core:3.0.2'  
    implementation 'com.android.support:cardview-v7:28.0.0'  
}
```

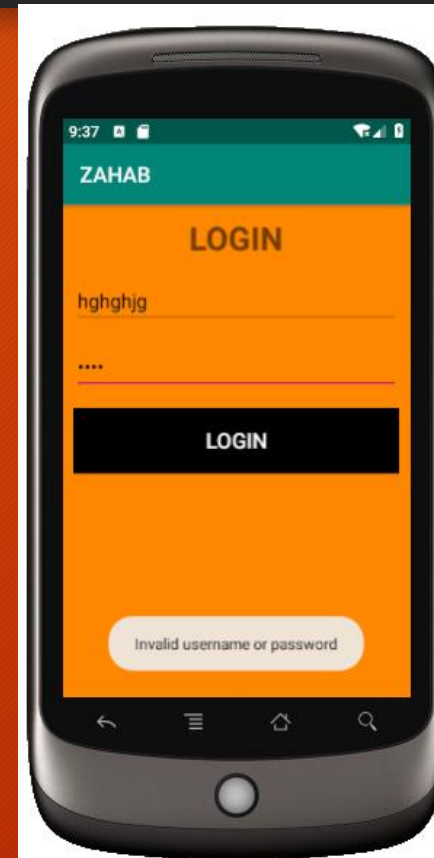
Output

60



IPRC Tumba(IT)

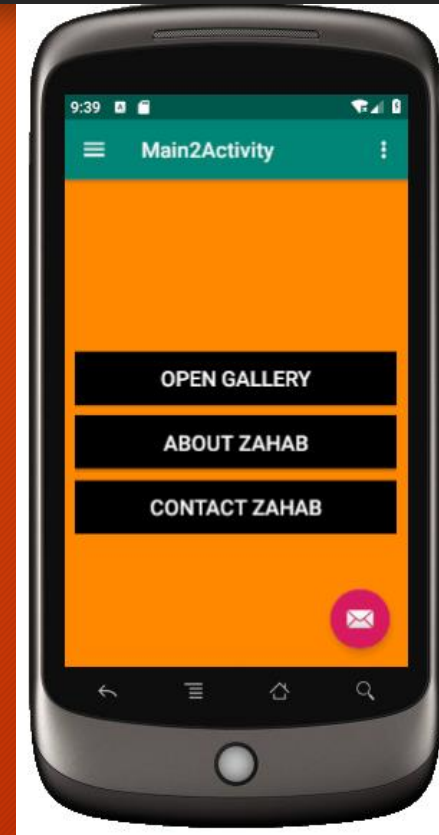
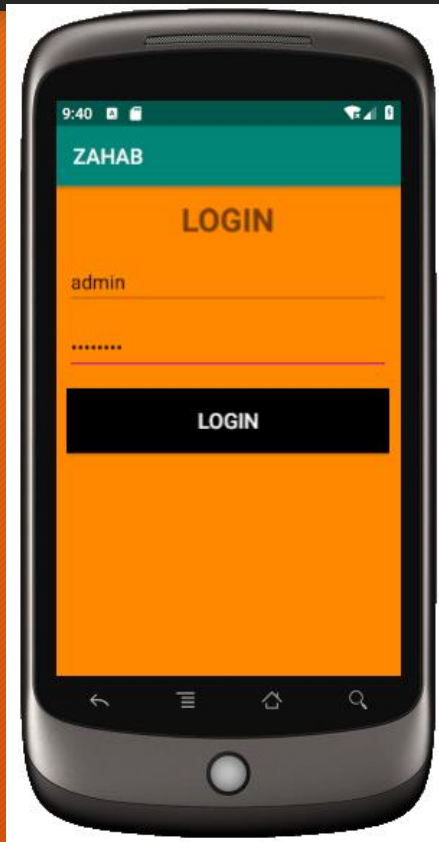
Mobile Application Technologies



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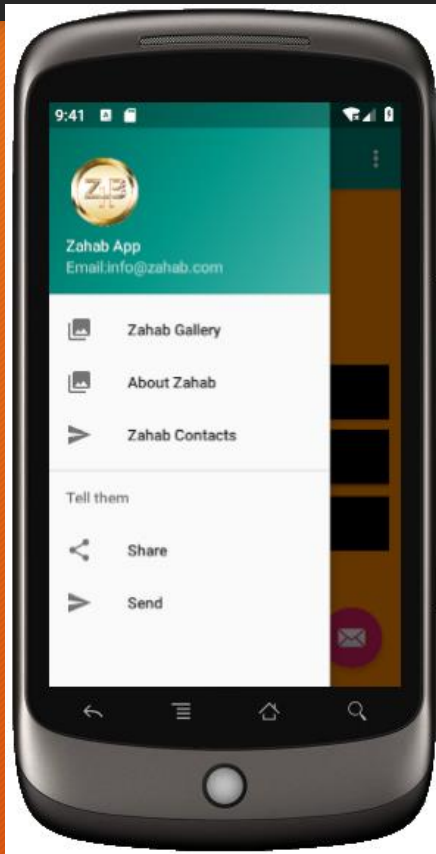
Output (Cont.)

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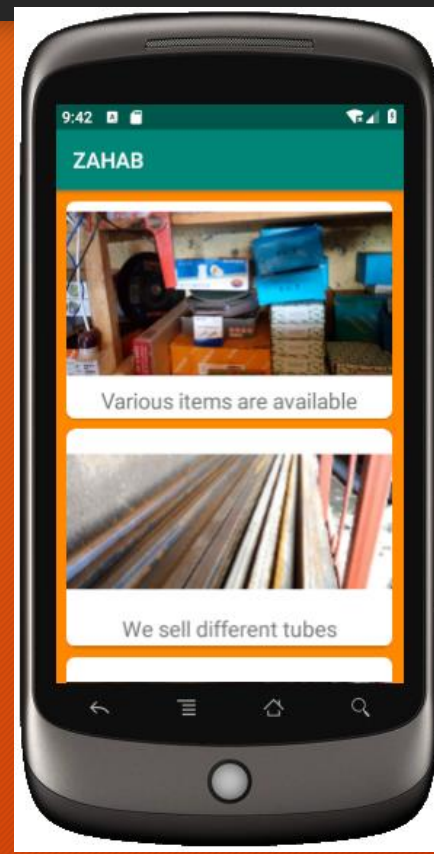


Output (Cont.)

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- Login
- Navigation drawer
- **Fragment**
- Tabs

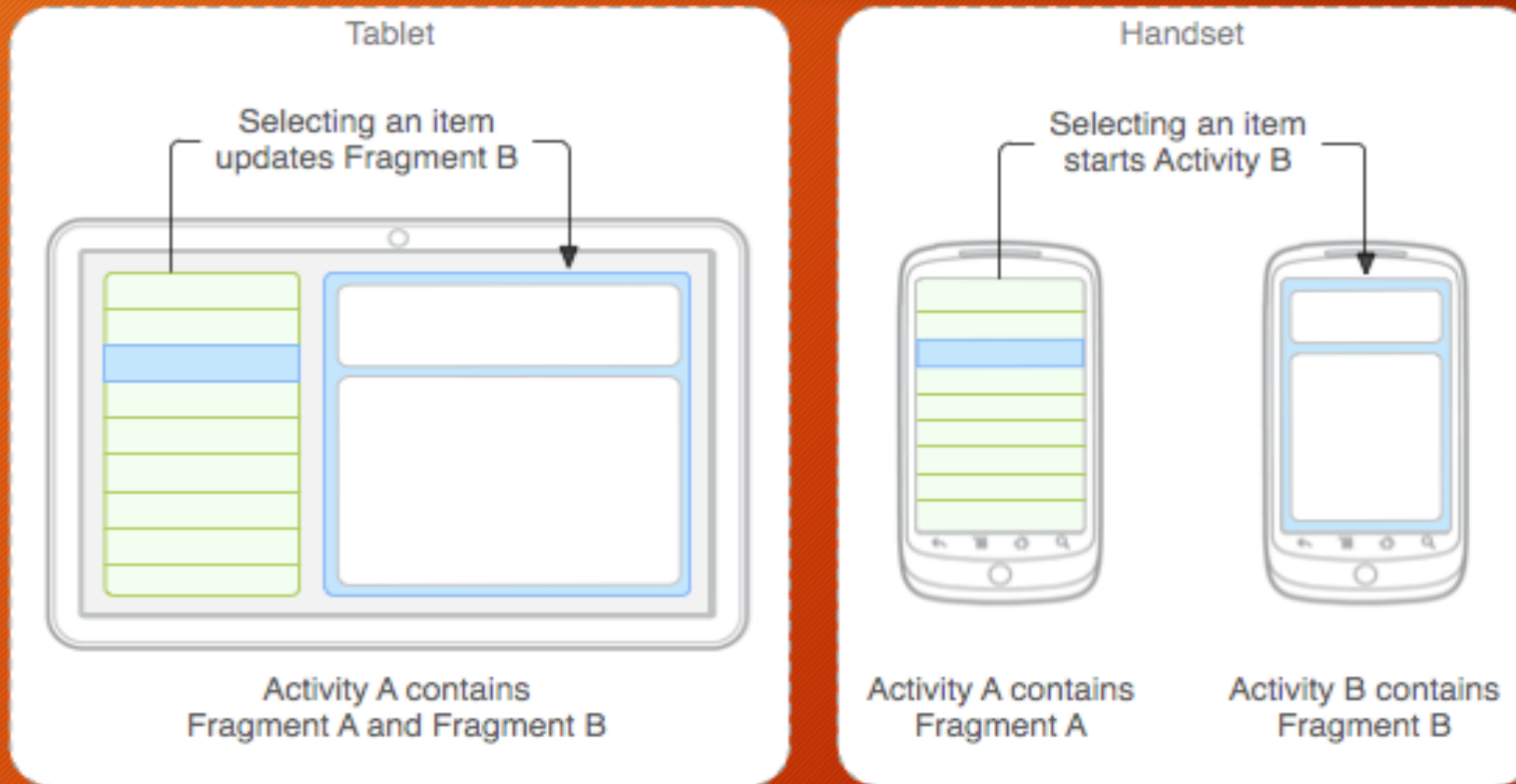
Fragment

64

- Fragment is a modular section of an activity, which has its own lifecycle, receives its own input events, and which you can add or remove while the activity is running (sort of like a "sub activity" that you can reuse in different activities).
- A fragment is a reusable class implementing a portion of an activity.
- A Fragment typically defines a part of a user interface.
- Fragments must be embedded in activities; they cannot run independently of activities.

Fragment (Cont.)

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Importance of fragment

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- **Reusing View and Logic Components** - Fragments enable re-use of parts of your screen including views and event logic over and over in different ways across many disparate activities. For example, using the same list across different data sources within an app.
- **Tablet Support** - Often within apps, the tablet version of an activity has a substantially different layout from the phone version which is different from the TV version. Fragments enable device-specific activities to reuse shared elements while also having differences.
- **Screen Orientation** - Often within apps, the portrait version of an activity has a substantially different layout from the landscape version. Fragments enable both orientations to reuse shared elements while also having differences.

Fragment Vs Activity

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- **Activities are navigation controllers** primarily responsible for:
 - Navigation to other activities through intents.
 - Presenting navigational components such as the navigation drawer or the viewpager.
 - Hiding and showing relevant fragments using the fragment manager.
 - Receiving data from intents and passing data between fragments.

Fragment Vs Activity(Cont.)

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- **Fragments are content controllers** and contain most views, layouts, and event logic including:
 - Layouts and views displaying relevant app content.
 - Event handling logic associated with relevant views.
 - View state management logic such as visibility or error handling.
 - Triggering of network request through a client object.
 - Retrieval and storage of data from persistence through model objects.

- Login
- Navigation drawer
- Fragment
- Tabs

Tabbed Activity

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- Add the new activity>Tabbed Activity(Navigation Style: Action Bar Tabs)
- ActivityName:ServiceActivity

Navigation Style:

Action Bar Tabs (with ViewPager)



Add 3 fragments

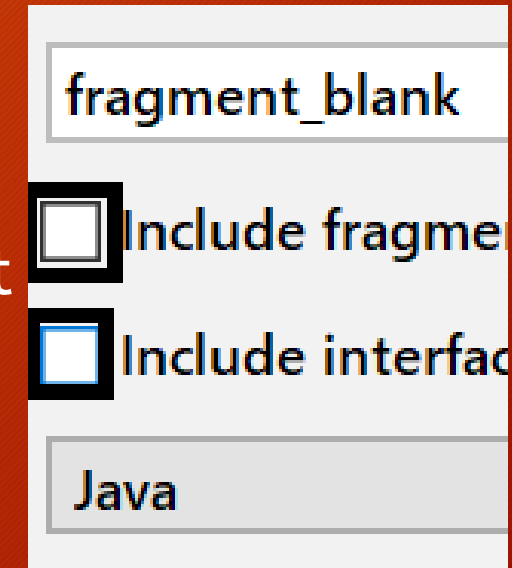
71

- Tab1
- Tab2
- Tab3
- To do it do right click on packagename>New>Fragment

Note: Make sure that the options:

1. Include fragment factory methods, and
2. Include interface callbacks

Are unchecked



fragment_tab1.xml

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```
<?xml version="1.0" encoding="utf-8"?>
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    android:background="@android:color/holo_orange_dark"
    tools:context=".Tab1">

    <!-- TODO: Update blank fragment layout -->
    <ScrollView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:padding="10dp"
    >
```


fragment_tab1.xml (Cont.)

73

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="300dp"
    android:orientation="vertical"
>
    <android.support.v7.widget.CardView
        android:layout_width="match_parent"
        android:layout_height="350dp"
        app:cardCornerRadius="10dp">
        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="350dp"
            android:orientation="vertical">
```

fragment_tab1.xml (Cont.)

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```
<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:textSize="20dp"
    android:layout_margin="20dp"
    android:textStyle="bold"
    android:text="We provide construction service" />
    <ImageView
        android:layout_width="match_parent"
        android:layout_height="300dp"
        android:layout_margin="5dp"
        app:srcCompat="@drawable/house" />
    </LinearLayout>
</android.support.v7.widget.CardView>
```

fragment_tab1.xml (Cont.)

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```
<android.support.v7.widget.CardView
    android:layout_width="match_parent"
    android:layout_height="250dp"
    app:cardCornerRadius="10dp"
    android:layout_marginTop="10dp">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="250dp"
        android:orientation="vertical">
```

fragment_tab1.xml (Cont.)

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```
<TextView  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:layout_margin="20dp"  
    android:text="We provide construction service"  
    android:textSize="20dp"  
    android:textStyle="bold" />
```


fragment_tab1.xml (Cont.)

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```
<ImageView
    android:layout_width="match_parent"
    android:layout_height="200dp"
    android:layout_margin="5dp"
    app:srcCompat="@drawable/rome" />
</LinearLayout>
</android.support.v7.widget.CardView>
</LinearLayout>
</ScrollView>

</FrameLayout>
```

fragment_tab2.xml

78

```
<?xml version="1.0" encoding="utf-8"?>
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@android:color/holo_orange_dark"
    tools:context=".Tab2">
    <TextView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:text="Bar Resto services are provired"
        android:textAlignment="center"
        android:textSize="20dp"
    />
</FrameLayout>
```

fragment_tab3.xml

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```
<?xml version="1.0" encoding="utf-8"?>
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@android:color/holo_orange_dark"
    tools:context=".Tab3">
    <TextView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:text="Different industries are manufacturing different products"
        android:textAlignment="center"
        android:textSize="20dp"
    />
</FrameLayout>
```

Modify ServiceActivity.java (SectionsPagerAdapter)

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```
public class SectionsPagerAdapter extends FragmentPagerAdapter {
    public SectionsPagerAdapter(FragmentManager fm) {
        super(fm);
    }
    @Override
    public Fragment getItem(int position) {
        switch (position)
        {
            case 0:
                Tab1 tab1=new Tab1();
                return tab1;
            case 1:
                Tab2 tab2=new Tab2();
                return tab2;
            case 2:
                Tab3 tab3=new Tab3();
                return tab3;
            default:
                return null;
        }
    }
}
```


Modify activity_main2_drawer.xml

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- Add the following code

```
<item  
    android:id="@+id/nav_service"  
    android:icon="@drawable/ic_menu_send"  
    android:title="Open Services"  
/>
```

Modify Main2Activity.java

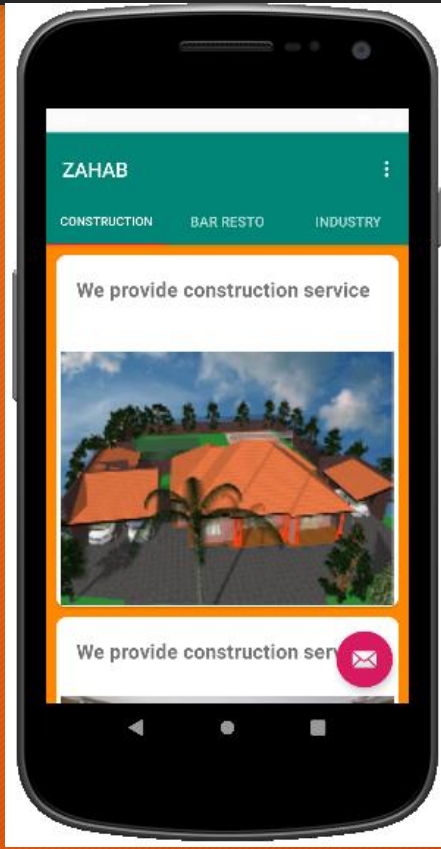
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- Add the following source code

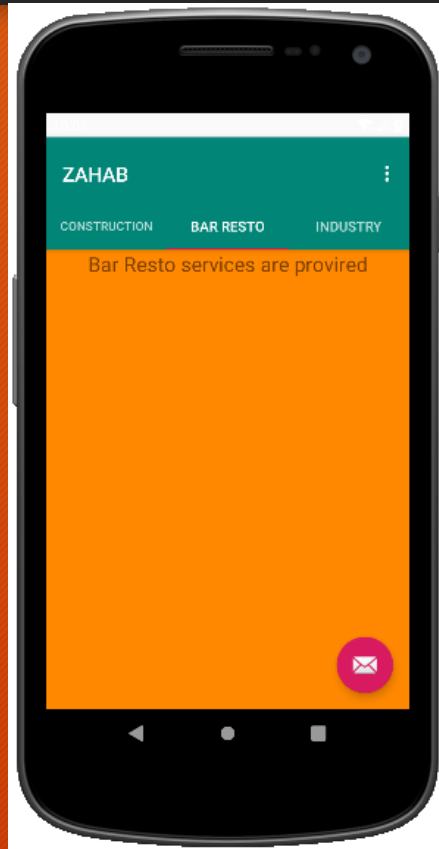
```
else if (id == R.id.nav_service) {  
    Intent intent=new  
Intent(this,ServiceActivity.class);  
    startActivity(intent);  
}
```

Output (Tabs)

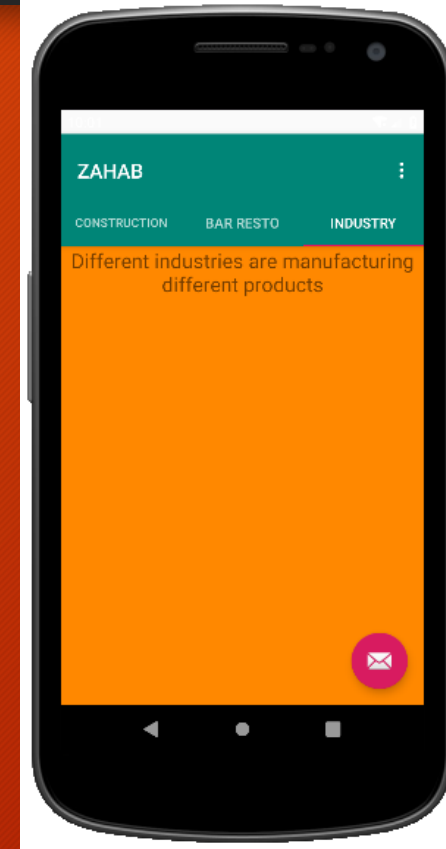
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END

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Thank you!