

Chapter 4

Android Menu

Menu

- **Menu** is a part of user interface (UI) component which is used to handle some common functionality around the application
 - useful for displaying additional options that are not directly visible on the main UI of an application
 - Menu can be defined in separate XML file and use that file in our [activities](#) or [fragments](#) based on our requirements.
 - **Define android menu**
 - create a new folder **menu** inside of our project resource directory (**res/menu/**) and add a new XML file to build the menu
 - Use menu, item and group(Optional) xml tags
 - You can also create sub menu
- ```
<item>
 <menu><item></item></menu>
</item>
```
- Use **MenuInflater.inflate()** to load the menu from an activity and define an event handler to inform what to perform when the menu is selected

- Creating Menu

```
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android">
 <item android:id="@+id/inbox" android:icon="@drawable/ic_inbox"
 android:title="@string/inbox" />
 <item android:id="@+id/compose" android:icon="@drawable/ic_compose"
 android:title="@string/compose" android:showAsAction="ifRoom" />
 <item android:id="@+id/outbox" android:icon="@drawable/ic_outbox"
 android:title="@string/outbox" />
</menu>
```

- Creating Sub menu

```
<?xml version="1.0" encoding="utf-8"?>
<menu ...>
 <item android:id="@+id/file" android:title="@string/file" >
 <!-- "file" submenu -->
 <menu>
 <item android:id="@+id/create_new" android:title="@string/create_new" />
 <item android:id="@+id/open" android:title="@string/open" />
 </menu>
 </item>
</menu>
```

# Types of Android Menu

- Options Menu
- Context Menu
- Popup Menu

## Option Menu

- useful to implement actions that have a global impact on the app, such as Settings, Search, etc

```
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android">
 <item android:id="@+id/inbox"
 android:icon="@drawable/ic_inbox"
 android:title="@string/inbox" />
 <item android:id="@+id/compose"
 android:icon="@drawable/ic_compose"
 android:title="@string/compose"
 android:showAsAction="ifRoom" />
</menu>
```

@Override

```
public boolean onCreateOptionsMenu(Menu menu) {
 MenuInflater inflater = getMenuInflater();
 inflater.inflate(R.menu.menu_example, menu);
 Return true;
}
```

- Handling android option menu click event

@Override

```
public boolean onOptionsItemSelected(MenuItem item) {
 switch (item.getItemId()) {
 case R.id.inbox:
 // do something
 return true;
 case R.id.compose:
 // do something
 return true;
 default:
 return super.onOptionsItemSelected(item);
 }
}
```

## Context Menu

- a floating menu that appears when the user performs a long click on an element
- more like the menu which displayed on right click in Windows or Linux
- It does not support any item shortcuts and item icons

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
 android:layout_width="match_parent"
 android:layout_height="match_parent"
 android:orientation="vertical" >
 <Button
 android:id="@+id/btnShow"
 android:layout_width="wrap_content"
 android:layout_height="wrap_content"
 android:text="Long press me"
 android:layout_marginTop="200dp" android:layout_marginLeft="100dp"/>
</LinearLayout>
```

@Override

```
protected void onCreate(Bundle savedInstanceState) {
 super.onCreate(savedInstanceState);
 setContentView(R.layout.activity_main);
 Button btn = (Button) findViewById(R.id.btnShow);
 registerForContextMenu(btn);
}
```

@Override

```
public void onCreateContextMenu(ContextMenu menu, View v, ContextMenu.ContextMenuInfo menuInfo) {
 super.onCreateContextMenu(menu, v, menuInfo);
 menu.setHeaderTitle("Context Menu");
 menu.add(0, v.getId(), 0, "Inbox");//groupId,ItemId,order,Title
 menu.add(0, v.getId(), 0, "Outbox");
}
```

- Handling ContextMenu click event

@Override

```
public boolean onContextItemSelected(Menu.Item item) {
 if (item.getTitle() == "Inbox") { // do your coding }
 else { return false; }
 return true;
}
```

# Popup Menu

- displays a list of items in a vertical list that's anchored to the view that invoked the menu
- It does not support any item shortcuts and item icons
- Popup menu is available with API level 11 (Android 3.0) and higher versions

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
 android:layout_width="match_parent"
 android:layout_height="match_parent"
 android:orientation="vertical" >

 <Button
 android:id="@+id/btnShow"
 android:layout_width="wrap_content"
 android:layout_height="wrap_content"
 android:text="Show Popup Menu"
 android:layout_marginTop="200dp" android:layout_marginLeft="100dp"/>
</LinearLayout>
```



```
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android" >
 <item android:id="@+id/inbox_item"
 android:title="Inbox" />
 <item android:id="@+id/compose_item"
 android:title="Compose" />
 <item android:id="@+id/outbox_item"
 android:title="Outbox" />
 <item android:id="@+id/spam_item"
 android:title="Spam" />
 <item android:id="@+id/logout_item"
 android:title="Logout" />
</menu>
```

```
public class MainActivity extends AppCompatActivity implements PopupMenu.OnMenuItemClickListener {
 @Override
 protected void onCreate(Bundle savedInstanceState) {
 super.onCreate(savedInstanceState);
 setContentView(R.layout.activity_main);
 Button btn = (Button) findViewById(R.id.btnShow);
 btn.setOnClickListener(new View.OnClickListener() {
 @Override
 public void onClick(View v) {
 PopupMenu popup = new PopupMenu(MainActivity.this, v);
 popup.setOnMenuItemClickListener(MainActivity.this);
 popup.inflate(R.menu.popup_menu);
 popup.show();
 }
 });
 }
}
```

## @Override

```
public boolean onOptionsItemSelected(MenuItem item) {
 Toast.makeText(this, "Selected Item: " +item.getTitle(), Toast.LENGTH_SHORT).s
how();
 switch (item.getItemId()) {
 case R.id.inbox_item:
 // do your code
 return true;
 case R.id.compose_item:
 // do your code
 return true;
 case R.id.outbox_item:
 // do your code
 return true;
 case R.id.spam_item:
 // do your code
 return true;
 case R.id.logout_item:
 // do your code
 return true;
 default:
 return false;
 } } }
```

# Quiz

- What is android service? List some android services.
- What is android menu?
- Discuss the differences between option, context and popup menus.