

Toolbars y menús

App Bar



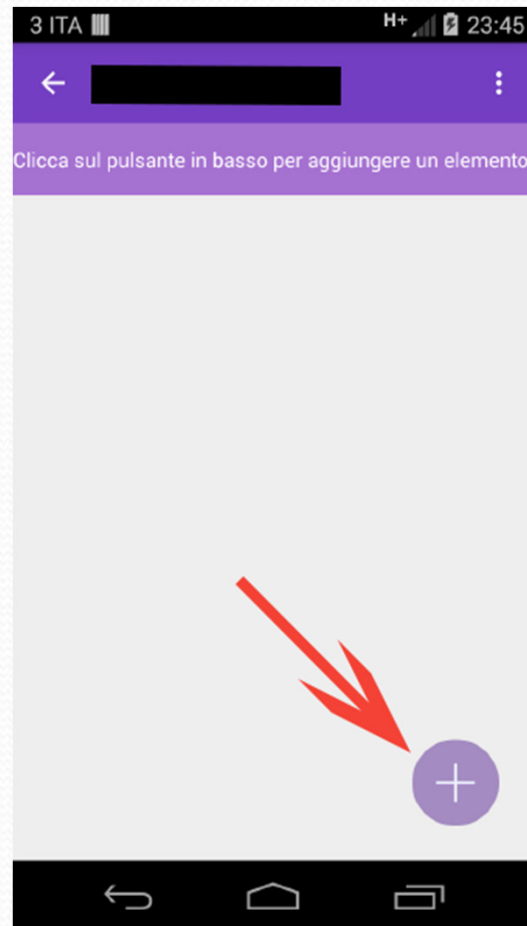
App bar structure

On the left: Nav icon, title, and filter icon

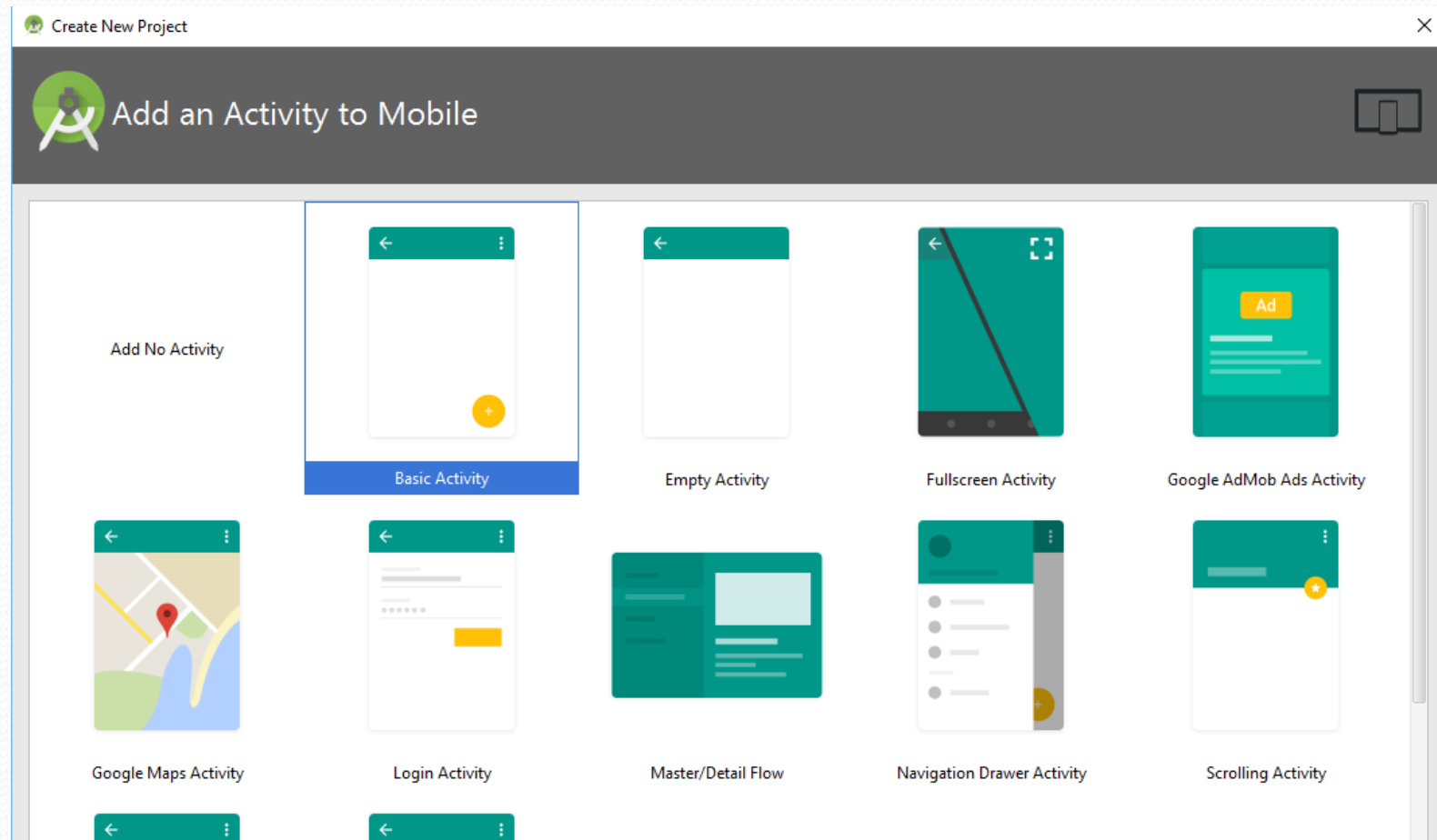
On the right: Action and menu icons

- <https://material.google.com/layout/structure.html#structure-app-bar>

Botón flotante (floating button)



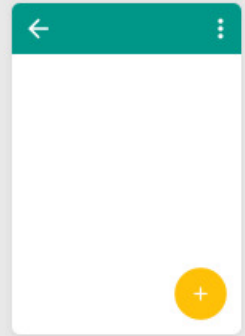
Android Studio



Android Studio

 Create New Project ✕

 Customize the Activity 



Basic Activity

Creates a new basic activity with an app bar.

Activity Name:

Layout Name:

Title:

Menu Resource Name:

☐ Use a Fragment

Layout actividad

```
<android.support.design.widget.CoordinatorLayout
    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:fitsSystemWindows="true"
    tools:context="com.tesi.pruebatoolbar.MainActivity">

    <android.support.design.widget.AppBarLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:theme="@style/AppTheme.AppBarOverlay">

        <android.support.v7.widget.Toolbar
            android:id="@+id/toolbar"
            android:layout_width="match_parent"
            android:layout_height="?attr/actionBarSize"
            android:background="?attr/colorPrimary"
            app:popupTheme="@style/AppTheme.PopupOverlay"/>

    </android.support.design.widget.AppBarLayout>
```

Layout actividad

```
<include layout="@layout/content_main"/>

<android.support.design.widget.FloatingActionButton
    android:id="@+id/fab"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="bottom|end"
    android:layout_margin="@dimen/fab_margin"
    android:src="@android:drawable/ic_dialog_email"/>

</android.support.design.widget.CoordinatorLayout>
```

Layout de usuario

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    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:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    app:layout_behavior="@string/appbar_scrolling_view_behavior"
    tools:context="com.tesi.pruebatoolbar.MainActivity"
    tools:showIn="@layout/activity_main">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"/>
</RelativeLayout>
```


Menú

```
<menu 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"
      tools:context="com.tesi.pruebatoolbar.MainActivity">
    <item
        android:id="@+id/action_settings"
        android:orderInCategory="100"
        android:title="@string/action_settings"
        app:showAsAction="never"/>
</menu>
```

Actividad

```
public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Toolbar toolbar = (Toolbar) findViewById(R.id.toolbar);
        setSupportActionBar(toolbar);

        FloatingActionButton fab = (FloatingActionButton) findViewById(R.id.fab);
        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();
            }
        });
    }
}
```

Actividad

```
@Override
public boolean onCreateOptionsMenu(Menu menu)
{
    // Inflate the menu; this adds items to the action bar if it is present.
    getMenuInflater().inflate(R.menu.menu_main, menu);
    return true;
}

@Override
public boolean onOptionsItemSelected(MenuItem item)
{
    // Handle action bar item clicks here. The action bar will
    // automatically handle clicks on the Home/Up button, so long
    // as you specify a parent activity in AndroidManifest.xml.
    int id = item.getItemId();

    //noinspection SimplifiableIfStatement
    if (id == R.id.action_settings) {
        return true;
    }

    return super.onOptionsItemSelected(item);
}
}
```

Agregar grupos e ítems al menú

```
<menu xmlns:android="http://schemas.android.com/apk/res/android">
  <group android:id="@+id/menuGroup_Main">
    <item android:id="@+id/menu_item1"
      android:orderInCategory="1"
      android:title="item1 text" />
    <item android:id="@+id/menu_item2"
      android:orderInCategory="2"
      android:enabled="true"
      android:icon="@drawable/some-file"
      android:title="item2 text" />
    <item android:id="@+id/menu_item3"
      android:orderInCategory="3"
      android:title="item3 text" />
  </group>
</menu>
```


Métodos para grupos de menús

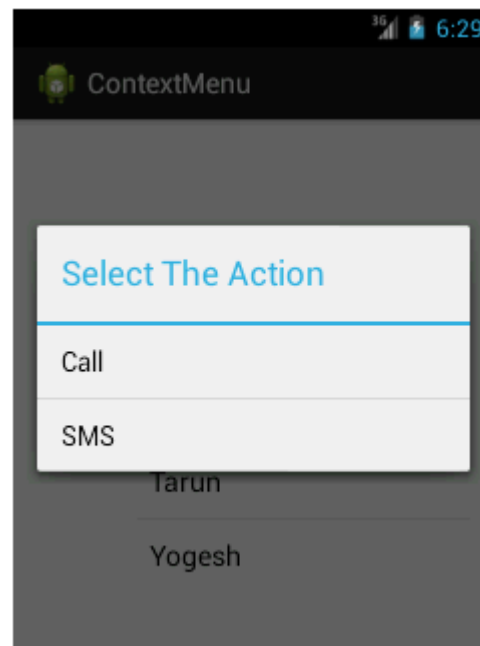
- *removeGroup(id)*; Borra los menús del grupo *id*.
- *setGroupCheckable(id, checkable, exclusive)*; Agrega checks (palomitas) al grupo *id*. Si *exclusive* es true, solo puede haber una palomita.
- *setGroupEnabled(id, enabled)*; Habilita o deshabilita los menús del grupo *id*.
- *setGroupVisible(id, visible)*; Hace visibles o invisibles los menús del grupo *id*.

Submenús

```
private void addSubMenu(Menu menu){  
    //Secondary items are shown just like everything else  
    int base=Menu.FIRST + 100;  
    SubMenu sm = menu.addSubMenu(base,base+1,Menu.NONE,"submenu");  
    sm.add(base,base+2,base+2,"sub item1");  
    sm.add(base,base+3,base+3,"sub item2");  
    sm.add(base,base+4,base+4,"sub item3");  
  
    //the following is ok  
    sm.setIcon(R.drawable.icon48x48_1);  
  
    //This will result in runtime exception  
    //sm.addSubMenu("try this");  
}
```

Context menu

- Es un menú asociado a un view (TextView, ListView, EditText, etc.)
- Se abre al hacer un click largo sobre el view.



Registrar el context menu

```
@Override
public void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.main);

    TextView tv = (TextView)this.findViewById(R.id.textViewId);
    registerForContextMenu(tv);
}
```


Agregar opciones al context menu

```
@Override  
public void onCreateContextMenu(ContextMenu menu, View v, ContextMenuInfo menuInfo){  
    menu.setHeaderTitle("Sample Context Menu");  
    menu.add(200, 200, 200, "item1");  
}
```

Responder al context menu

```
//This method is available for all activities @Override
public boolean onContextItemSelected(MenuItem item) {
    if (item.getItemId() == some-menu-item-id) {
        //handle this menu item
        return true;
    }
    ... other exception processing
}
```

Ejemplo

- Asociar un context menu a un listView

Layout

```
<RelativeLayout 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"
    tools:context=".MainActivity" >

    <ListView
        android:id="@+id/listView1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_marginLeft="66dp"
        android:layout_marginTop="53dp" >
    </ListView>

</RelativeLayout>
```


Actividad

```
public class MainActivity extends Activity {
    ListView listView1;
    String contacts[] = {"Ana","Blanca","Carlos","Daniel","Enrique"};

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

        listView1 = (ListView) findViewById(R.id.listView1);

        ArrayAdapter<String> adapter = new ArrayAdapter<String>(this,
            android.R.layout.simple_list_item_1, contacts);
        listView1.setAdapter(adapter);

        // Register the ListView for Context menu
        registerForContextMenu(listView1);
    }
}
```

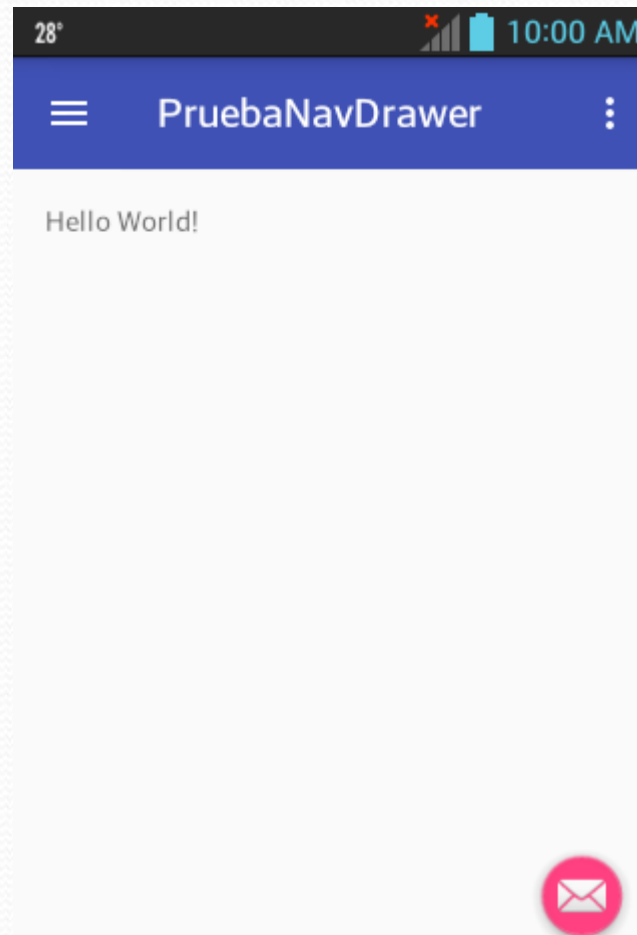
Actividad

```
@Override
public void onCreateContextMenu(ContextMenu menu, View v, ContextMenuInfo menuInfo)
{
    super.onCreateContextMenu(menu, v, menuInfo);
    menu.setHeaderTitle("Select The Action");
    menu.add(0, v.getId(), 0, "Call"); // groupId, itemId, order, title
    menu.add(0, v.getId(), 0, "SMS");
}

@Override
public boolean onContextItemSelected(MenuItem item)
{
    if (item.getTitle() == "Call") {
        Toast.makeText(getApplicationContext(), "calling code", Toast.LENGTH_LONG).show();
    }
    else if (item.getTitle() == "SMS") {
        Toast.makeText(getApplicationContext(), "sending sms code", Toast.LENGTH_LONG).show();
    }
    else {
        return false;
    }
    return true;
}
}
```

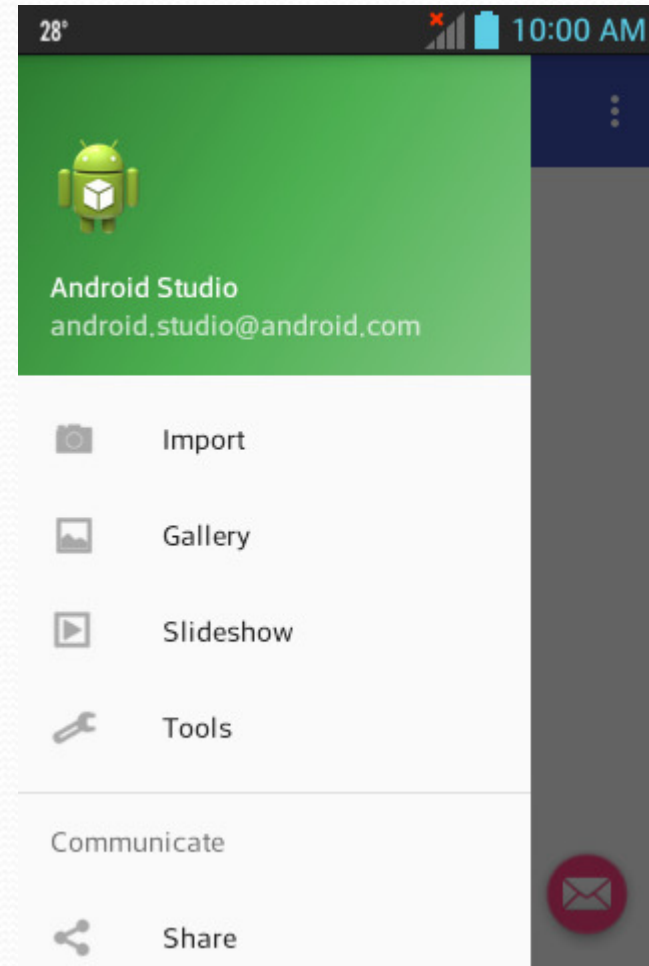
Navigation Drawer

- Cerrado

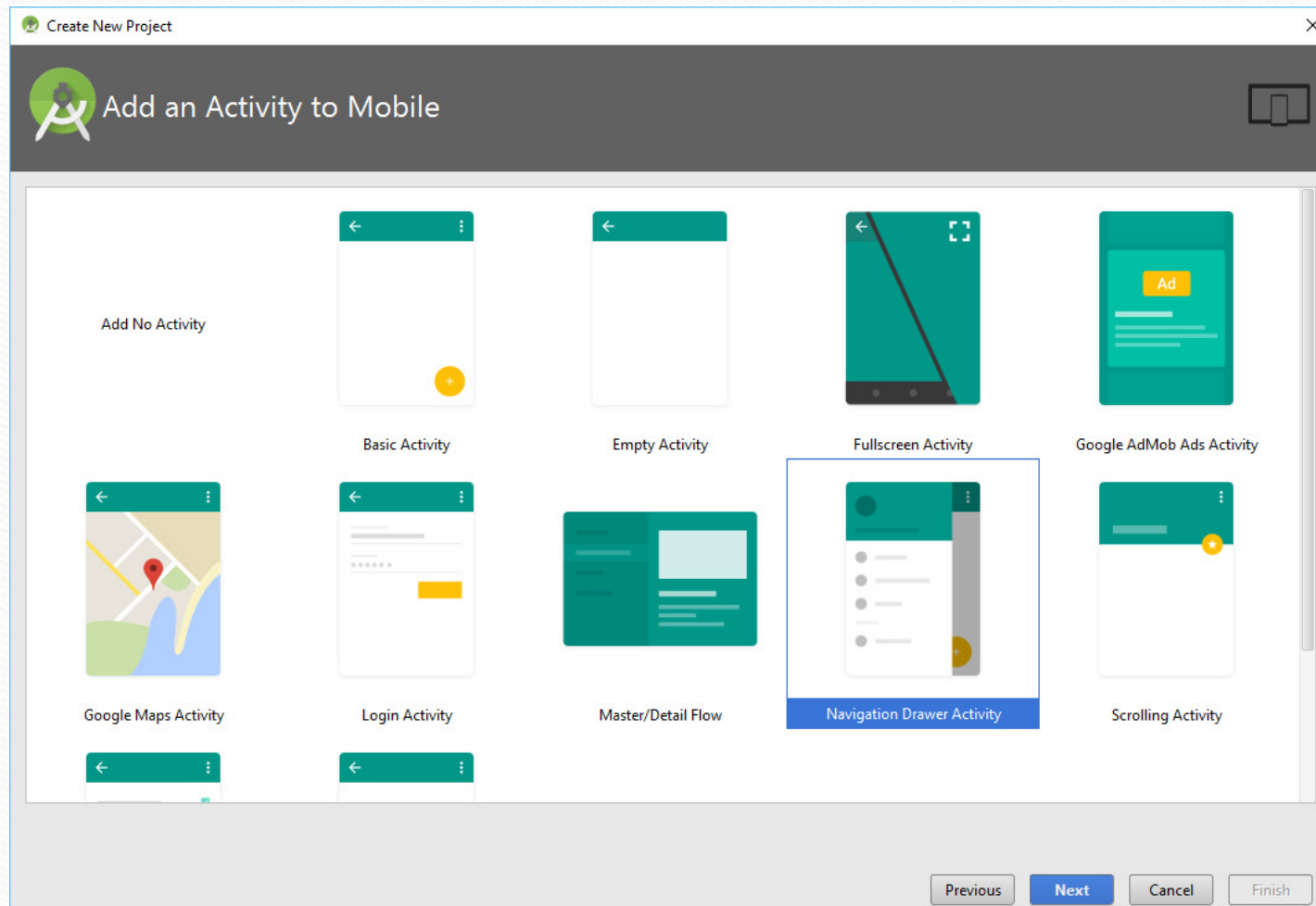


Navigation Drawer

- Abierto



Android Studio

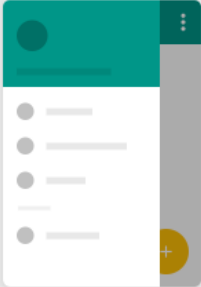


Android Studio

Create New Project

Customize the Activity





Navigation Drawer Activity

Creates a new Activity with a Navigation Drawer.

Activity Name:

Layout Name:

Title:

The name of the activity class to create

Previous

Next

Cancel

Finish

Navigation Drawer

- Genera 4 archivos de layout:
 - activity_main.xml. Layout principal de la actividad. Define el navigation drawer. Incluye a app_bar_main.xml.
 - app_bar_main.xml. Define el toolbar (App bar) y el botón flotante. Incluye content_main.xml.
 - content_main.xml. Disponible para el usuario.
 - nav_header_main.xml. Define el header del navigation drawer. Modificable por el usuario.

Navigation Drawer

- Genera 2 archivos de menús:
 - menu_main.xml. Menú que se despliega al oprimir los tres puntos verticales del toolbar.
 - activity_main_drawer.xml. Menú del navigation drawer.

activity_main.xml

```
<?xml version="1.0" encoding="utf-8" ?>
<android.support.v4.widget.DrawerLayout
    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:id="@+id/drawer_layout"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:fitsSystemWindows="true"
    tools:openDrawer="start">

    <include
        layout="@layout/app_bar_main"
        android:layout_width="match_parent"
        android:layout_height="match_parent"/>

    <android.support.design.widget.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"/>

</android.support.v4.widget.DrawerLayout>
```

app_bar_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.design.widget.CoordinatorLayout
    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:fitsSystemWindows="true"
    tools:context="com.tesi.navdrawerastudio.MainActivity">

    <android.support.design.widget.AppBarLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:theme="@style/AppTheme.AppBarOverlay">

        <android.support.v7.widget.Toolbar
            android:id="@+id/toolbar"
            android:layout_width="match_parent"
            android:layout_height="?attr/actionBarSize"
            android:background="?attr/colorPrimary"
            app:popupTheme="@style/AppTheme.PopupOverlay" />

    </android.support.design.widget.AppBarLayout>

    <include layout="@layout/content_main" />

    <android.support.design.widget.FloatingActionButton
        android:id="@+id/fab"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="bottom|end"
        android:layout_margin="@dimen/fab_margin"
        android:src="@android:drawable/ic_dialog_email" />

</android.support.design.widget.CoordinatorLayout>
```

content_main.xml

```
<?xml version="1.0" encoding="utf-8" ?>
<RelativeLayout
    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="com.tesi.navdrawerastudio.MainActivity"
    tools:showIn="@layout/app_bar_main">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"/>
</RelativeLayout>
```


nav_header_main.xml

```
<?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="@dimen/nav_header_height"
    android:background="@drawable/side_nav_bar"
    android:gravity="bottom"
    android:orientation="vertical"
    android:theme="@style/ThemeOverlay.AppCompat.Dark">

    <ImageView
        android:id="@+id/imageView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:paddingTop="@dimen/nav_header_vertical_spacing"
        android:src="@android:drawable/sym_def_app_icon"/>

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:paddingTop="@dimen/nav_header_vertical_spacing"
        android:text="Android Studio"
        android:textAppearance="@style/TextAppearance.AppCompat.Body1"/>

    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="android.studio@android.com"/>

</LinearLayout>
```

menu_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android"
      xmlns:app="http://schemas.android.com/apk/res-auto">
  <item
    android:id="@+id/action_settings"
    android:orderInCategory="100"
    android:title="@string/action_settings"
    app:showAsAction="never"/>
</menu>
```

activity_main_drawer.xml

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

    <group android:checkableBehavior="single">
        <item
            android:id="@+id/nav_camera"
            android:icon="@drawable/ic_menu_camera"
            android:title="Import"/>
        <item
            android:id="@+id/nav_gallery"
            android:icon="@drawable/ic_menu_gallery"
            android:title="Gallery"/>
        <item
            android:id="@+id/nav_slideshow"
            android:icon="@drawable/ic_menu_slideshow"
            android:title="Slideshow"/>
        <item
            android:id="@+id/nav_manage"
            android:icon="@drawable/ic_menu_manage"
            android:title="Tools"/>
    </group>

    <item android:title="Communicate">
        <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>
```


Actividad

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

    @Override
    protected void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Toolbar toolbar = (Toolbar) findViewById(R.id.toolbar);
        setSupportActionBar(toolbar);

        FloatingActionButton fab = (FloatingActionButton) findViewById(R.id.fab);
        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 = (DrawerLayout) findViewById(R.id.drawer_layout);
        ActionBarDrawerToggle toggle = new ActionBarDrawerToggle(
            this, drawer, toolbar, R.string.navigation_drawer_open,
            R.string.navigation_drawer_close);
        drawer.setDrawerListener(toggle);
        toggle.syncState();

        NavigationView navigationView = (NavigationView) findViewById(R.id.nav_view);
        navigationView.setNavigationItemSelectedListener(this);
    }
}
```

Actividad

```
@Override
public void onBackPressed()
{
    DrawerLayout drawer = (DrawerLayout) findViewById(R.id.drawer_layout);
    if (drawer.isDrawerOpen(GravityCompat.START)) {
        drawer.closeDrawer(GravityCompat.START);
    }
    else {
        super.onBackPressed();
    }
}

@Override
public boolean onCreateOptionsMenu(Menu menu)
{
    getMenuInflater().inflate(R.menu.main, menu);
    return true;
}

@Override
public boolean onOptionsItemSelected(MenuItem item)
{
    int id = item.getItemId();

    if (id == R.id.action_settings) {
        return true;
    }

    return super.onOptionsItemSelected(item);
}
```

Actividad

```
@SuppressWarnings("StatementWithEmptyBody")
@Override
public boolean onNavigationItemSelected(MenuItem item)
{
    // Handle navigation view item clicks here.
    int id = item.getItemId();

    if (id == R.id.nav_camera) {
        // Handle the camera action
    }
    else if (id == R.id.nav_gallery) {

    }
    else if (id == R.id.nav_slideshow) {

    }
    else if (id == R.id.nav_manage) {

    }
    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;
}
```