12. Develop a program to implement new activity using explicit intent and implicit intent.

An activity represents a single screen with a user interface. For example, an email application might have one activity that shows a list of new emails, another activity to compose an email, and one for reading emails.

An activity is the single screen in android. It is like window or frame of Java. By the help of activity, you can place all your UI components or widgets in a single screen. If an application has more than one activity, then one of them should be marked as the activity that is presented when the application is launched.

As in C, C++ or Java programming language program starts from main () function, android system initiates its program within an Activity starting with a call on onCreate() method. Android Activity class is the subclass of ContextThemeWrapper class. An activity class loads all the UI component using the XML file available in res/layout folder of the project. Following statement loads UI components from res/layout/activity_main.xmlfile :-

```
setContentView(R.layout.activity_main);
```

To write our own activity the new activity must be the derived from Activity class as given below

```
public class MainActivity extends Activity
{
  @Override
public void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
/*Code goes here*/
}
/** Called when the activity is about to become visible. */
@Override protected void onStart()
 {
super.onStart();
 /*Code goes here*/
}
/** Called when the activity has become visible. */
@Override protected void onResume()
 {
```

```
 super.onResume();
/*Code goeshere*/
}
/** Called when another activity is taking focus. */
@Override protected void onPause()
 {
 super.onPause();
/*Code goes here*/
}
/** Called when the activity is no longer visible. */
 @Override protected void onStop()
 { super.onStop();
/*Code goes here*/
 }
/** Called just before the activity is destroyed. */
 @Override public void onDestroy()
 {
 super.onDestroy();
/*Code goes here*/
 }
}
```

Android Intent is the message that is passed between components such as activities, content providers, broadcast receivers, services etc. It facilitates communication between different android components.

Android application components can connect to other Android applications. This connection is based on a task description represented by an Intent object. Intents are asynchronous messages which allow application components to request functionality from other Android components. Intents allow you to interact with components from the same applications as well as with components contributed by other applications. For example, an activity can start an external activity for taking a picture.

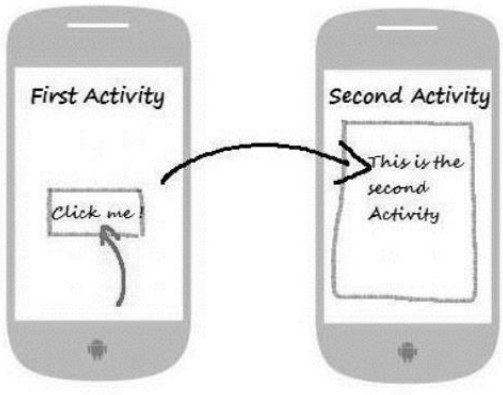
Mostly Intents are used for:

a. For Launching an Activity

b. To start a New Service

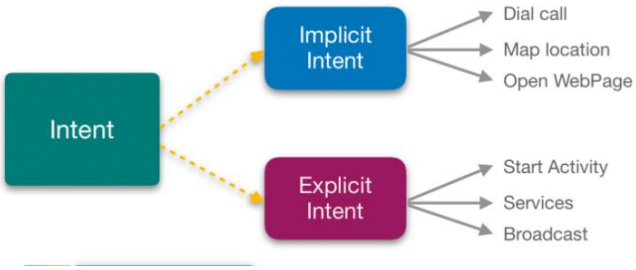
c. For Broadcasting Messages

d. To Display a list of contacts in List View



Types of intents : there are two types of intents :-

a. Implicit Intent
b. Explicit Intent



Implicit Intent – is an Intent where instead of defining the exact components, you define the action that you want to perform for different activities.

Syntax :

Intent i = new Intent();

i.setAction(Intent.ACTION_SEND);

Explicit Intent : is an Intent where you explicitly define the component that needs to be called by the android system. An explicit intent is one that you can use to launch a specific app component such as a particular activity or service in your app.

Syntax –

Intent I = new Intent(getApplicationContext(),NextActivity.class);

I.putExtra(“value1”,”This value for Next Activity”);

I.putExtra(“value2”,”This value for Next Activity”);