C. U. Shah University, Wadhwan City

Mobile Computing And Application Development (4TE07MCA1)

7th SEMESTER B. Tech

MCA

C. U. Shah College of Engineering & Technology
Wadhwan City - 363030

Faculty of Technology & Engineering

C. U. Shah College of Engineering & Technology

(Managed By Wardhman Bharti Trust)

Accredited by NAAC with B Grade

WADWAN CITY – 363030

Certificate

This is to certify that

Mr/Ms. _____

Enrollment No. _____ *Of* **__Semester**

B. Tech Courses in **Computer Engineering**

has satisfactory completed his/her Term work in

_____

with in four Walls of Laboratory / Drawing Hall of This College during the year **2025**

Staff In charge.

Date of Submission : _____Head of The Department

List Of Practical

Mobile Computing and Application Development (4TE07MCA1)

Student Name :

Student Enrollment No. :

Sr. No	Date	Practical	Page No	Marks	Sign of Faculty
01		Installation of Android studio.			
02		Development Of Hello World Application			
03		Create an application that takes the name from a text box and shows hello message along with the name entered in text box, when the user clicks the OK button			
04		Create a screen that has input boxes for User Name, Password, Address, Gender(radio buttons for male and female), Age (numeric), Date of Birth (Date Picket), State (Spinner) and a Submit button. On clicking the submit button, print all the data below the Submit Button (use any layout)			
05		Design an android application to create page using Intent and one Button and pass the Values from one Activity to second Activity			
06		Design an android application Send SMS using Intent			
07		Create an android application using Fragments			
08		Design an android application Using Radiobuttons			
09		Design an android application for menu.			
10		Create a user registration application that stores the user details in a database table.			

EXPERIMENT NO.1

AIM: INSTALLING AND RUNNING APPLICATIONS ON ANDROID STUDIO

Step 1 - System Requirements

The required tools to develop Android applications are open source and can be downloaded from the Web. Following is the list of software's you will need before you start your Android application programming.

Java JDK5 or later version

Java Runtime Environment (JRE) 6

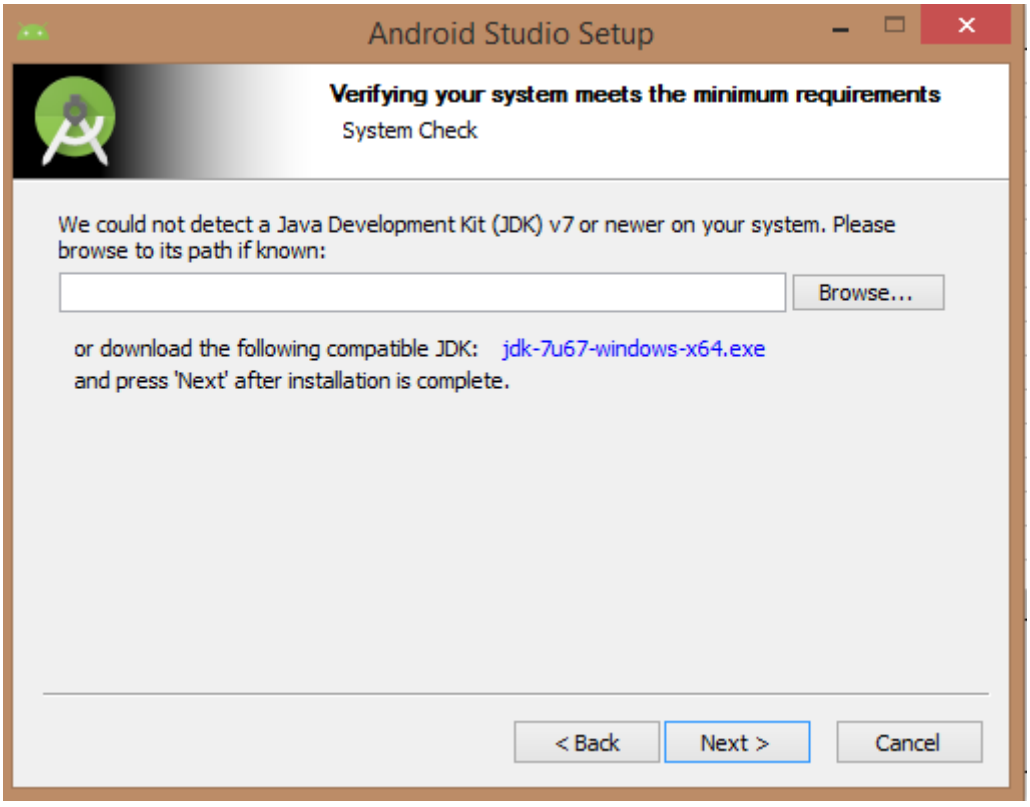
Android Studio

Step 2 - Setup Android Studio

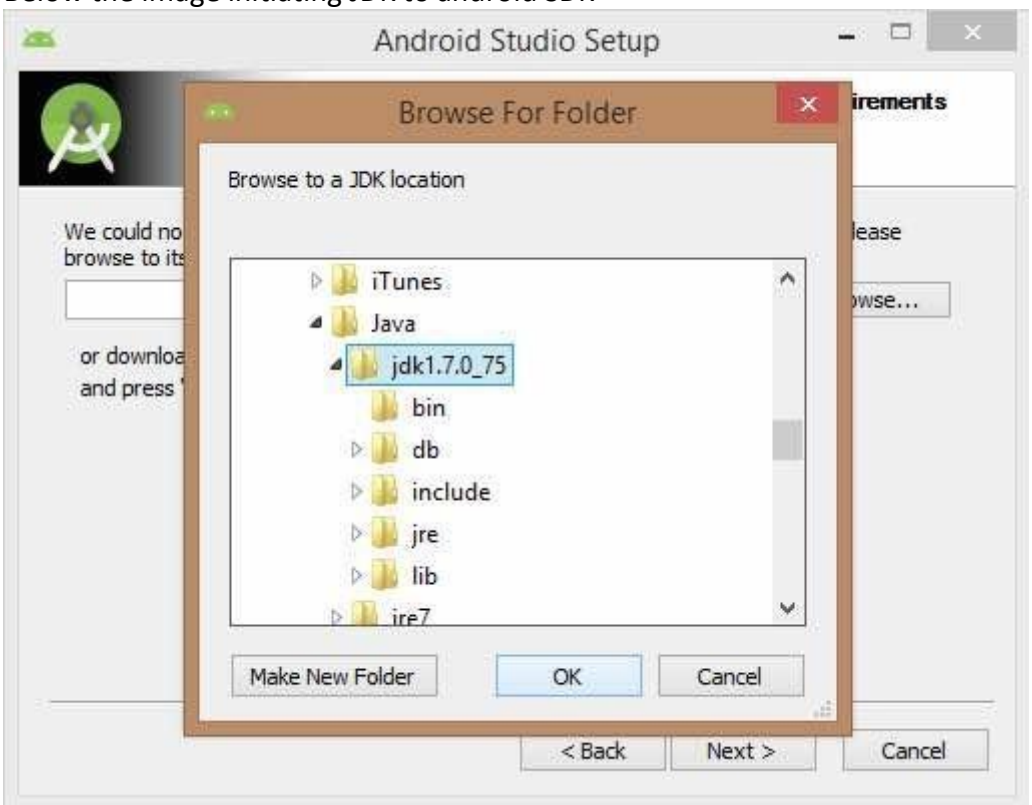
Android Studio is the official IDE for android application development.It works based on IntelliJ IDEA, You can download the latest version of android studio from Android Studio 2.2 Download, If you are new to installing Android Studio on windows,you will find a file, which is named as android-studio-bundle-143.3101438-windows.exe.So just download and run on windows machine according to android studio wizard guideline.

If you are installing Android Studio on Mac or Linux, You can download the latest version from Android Studio Mac Download,or Android Studio Linux Download, check the instructions provided along with the downloaded file for Mac OS and Linux. This tutorial will consider that you are going to setup your environment on Windows machine having Windows 8.1 operating system. Installation So let's launch Android Studio.exe,Make sure before launch Android Studio, Our Machine should required installed Java JDK. To install Java JDK,take a references of Android environment setup

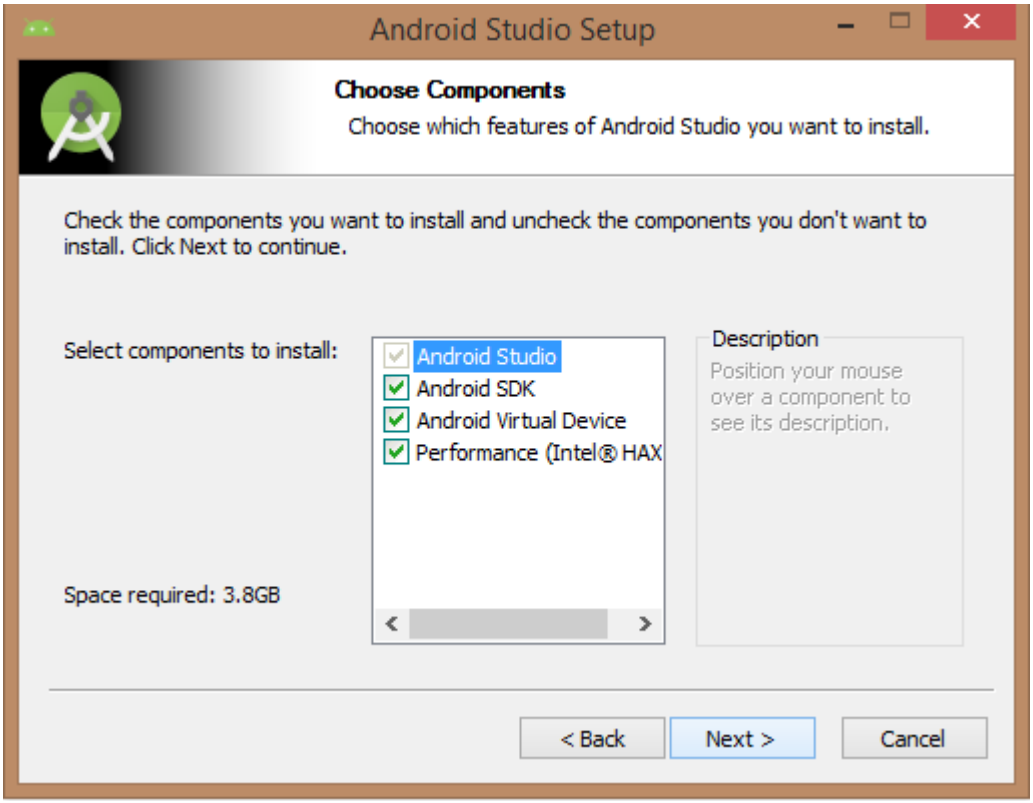
Once you launched Android Studio, its time to mention JDK7 path or later version in android studio installer.



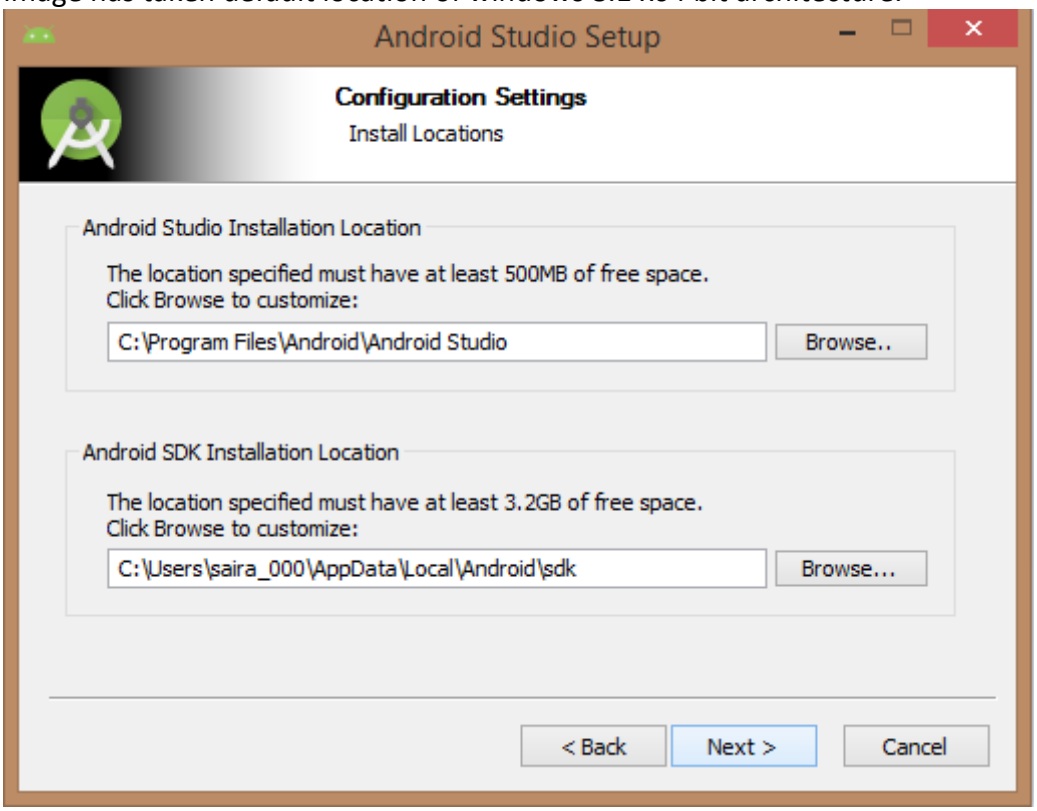
Below the image initiating JDK to android SDK



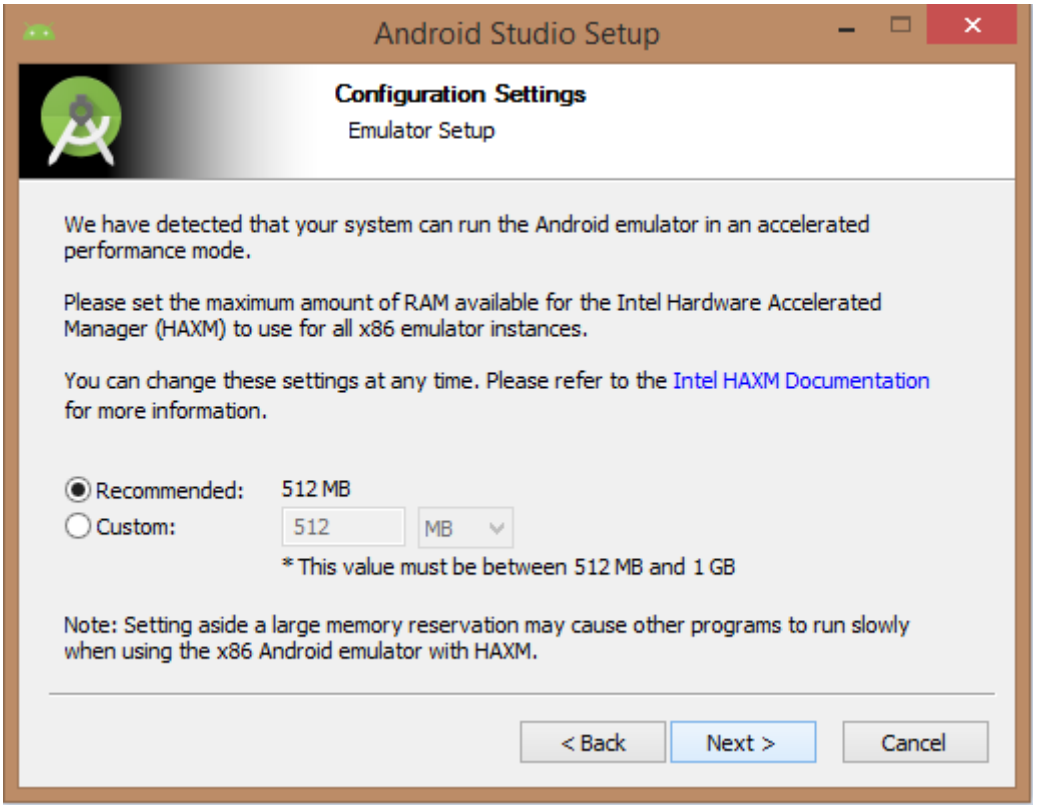
Need to check the components, which are required to create applications, below the image has selected Android Studio, Android SDK, Android Virtual Machine and performance(Intel chip).



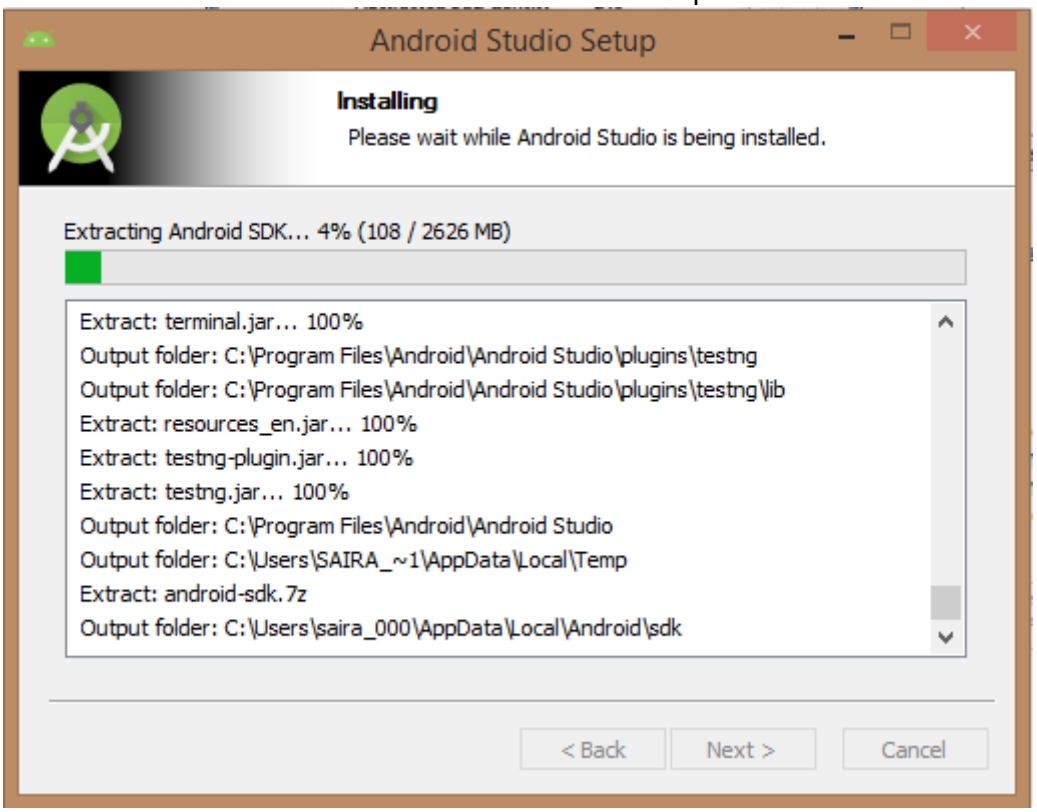
Need to specify the location of local machine path for Android studio and Android SDK, below the image has taken default location of windows 8.1 x64 bit architecture.



Need to specify the ram space for Android emulator by default it would take 512MB of local machine RAM.

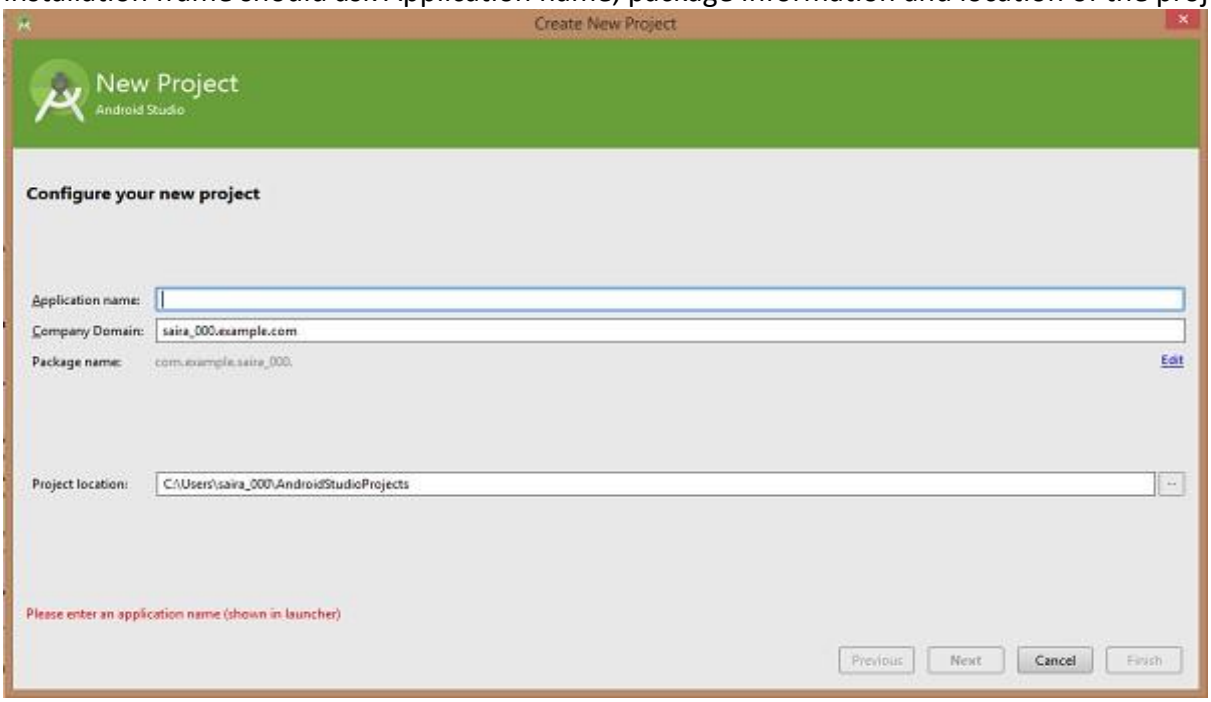


At final stage, it would extract SDK packages into our local machine, it would take a while time to finish the task and would take 2626MB of Hard disk space.

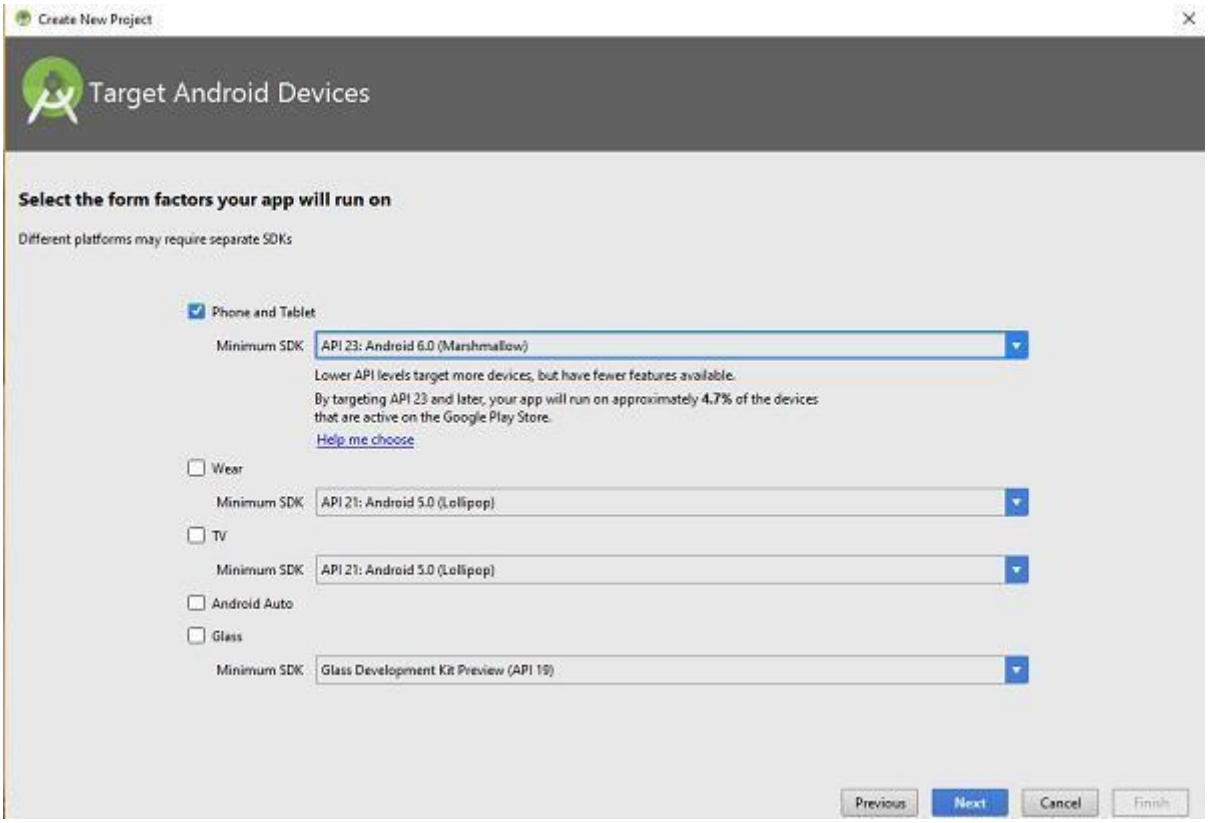


After done all above steps perfectly, you must get finish button and it gonna be open android studio project with Welcome to android studio message as shown below

You can start your application development by calling start a new android studio project. in a new installation frame should ask Application name, package information and location of the project.

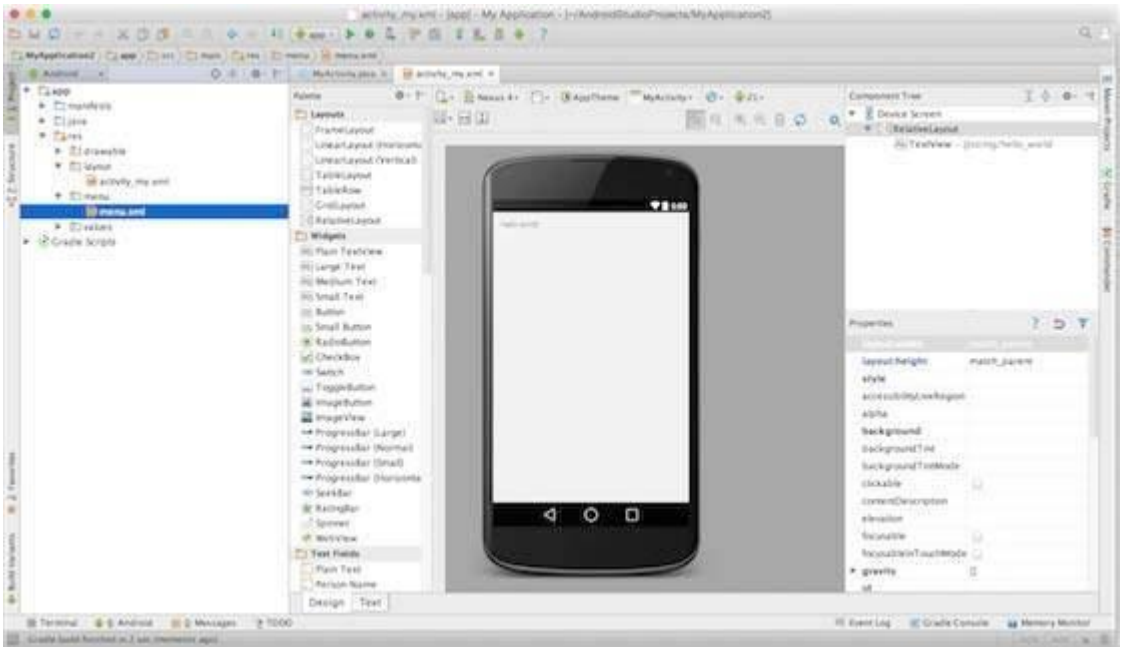


After entered application name, it going to be called select the form factors your application runs on,need to specify Minimum SDK, in our tutorial, I have declared as API23: Android 6.0(Mashmallow)



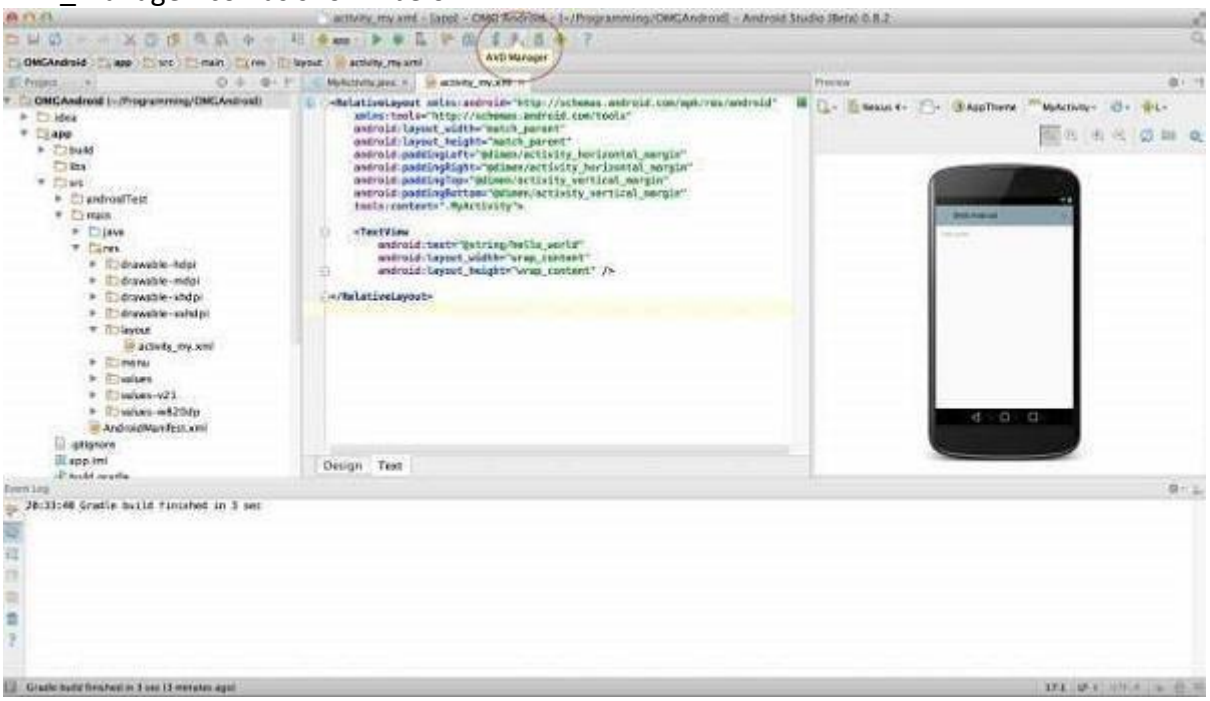
The next level of installation should contain selecting the activity to mobile, it specifies the default layout for Applications

At the final stage it going to be open development tool to write the application code.



Step 3 - Create Android Virtual Device

To test your Android applications, you will need a virtual Android device. So before we start writing our code, let us create an Android virtual device. Launch Android AVD Manager Clicking AVD_Manager icon as shown below



After Click on a virtual device icon, it going to be shown by default virtual devices which are present on your SDK, or else need to create a virtual device by clicking Create new Virtual device button

If your AVD is created successfully it means your environment is ready for Android application development. If you like, you can close this window using top-right cross button. Better you re- start your machine and once you are done with this last step, you are ready to proceed for your first Android example but before that we will see few more important concepts related to Android Application Development.

Exercise Program

Write the steps in installing Android Studio in Windows

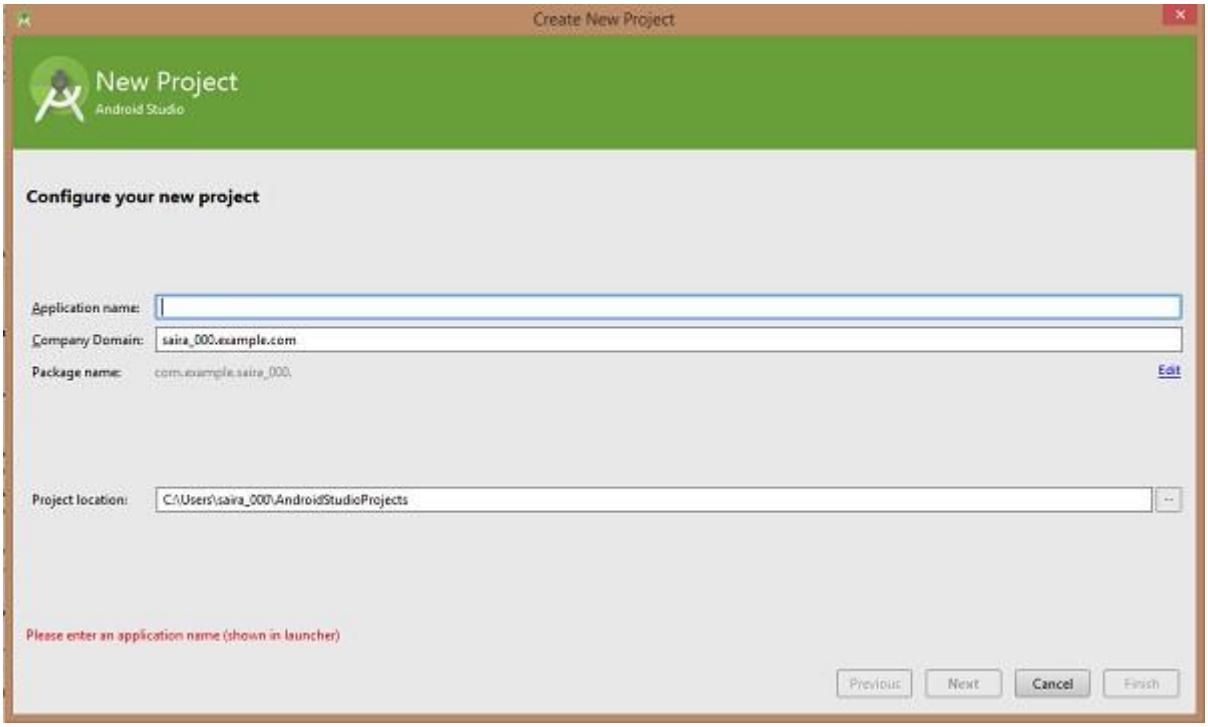
Record Notes

EXPERIMENT NO.2

AIM: Development Of Hello World Application

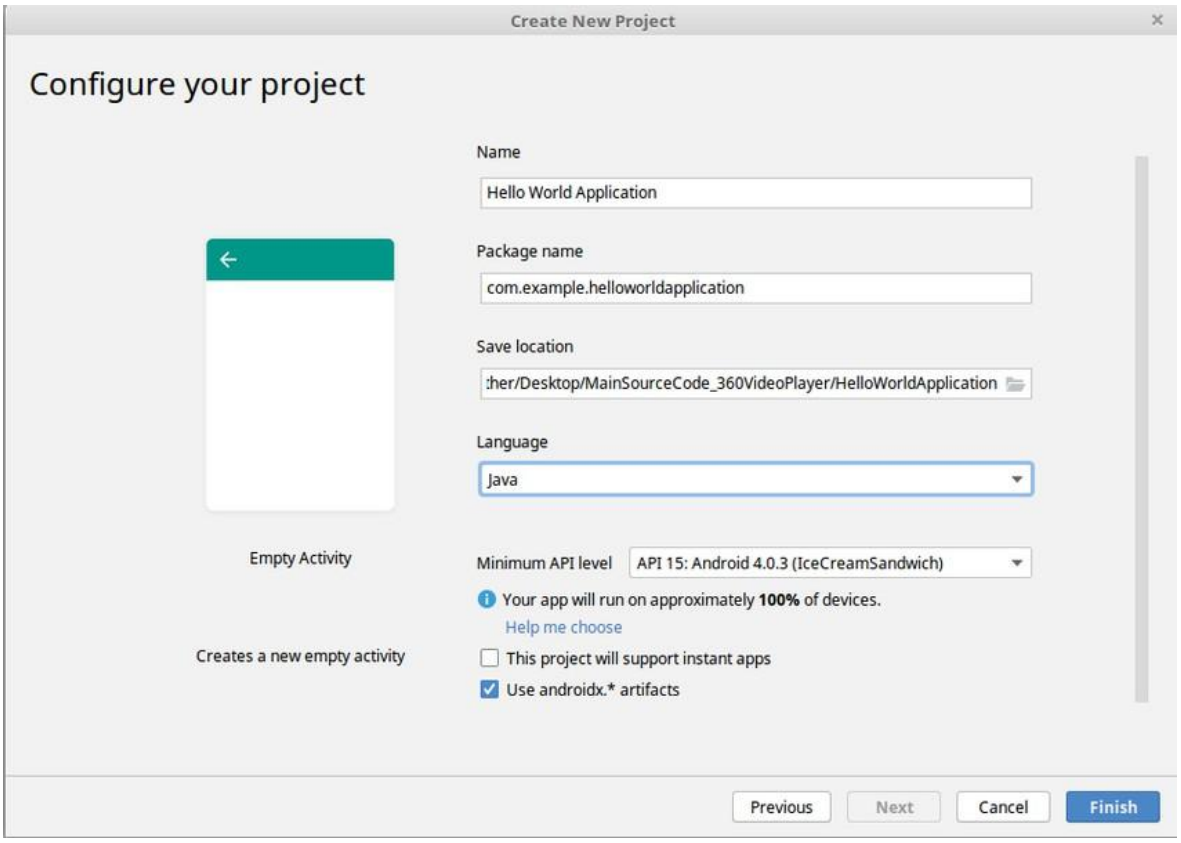
First step is to create a simple Android Application using Android studio. When you click on Android studio icon, it will show screen as shown below

You can start your application development by calling start a new android studio project. in a new installation frame should ask Application name, package information and location of the project.−



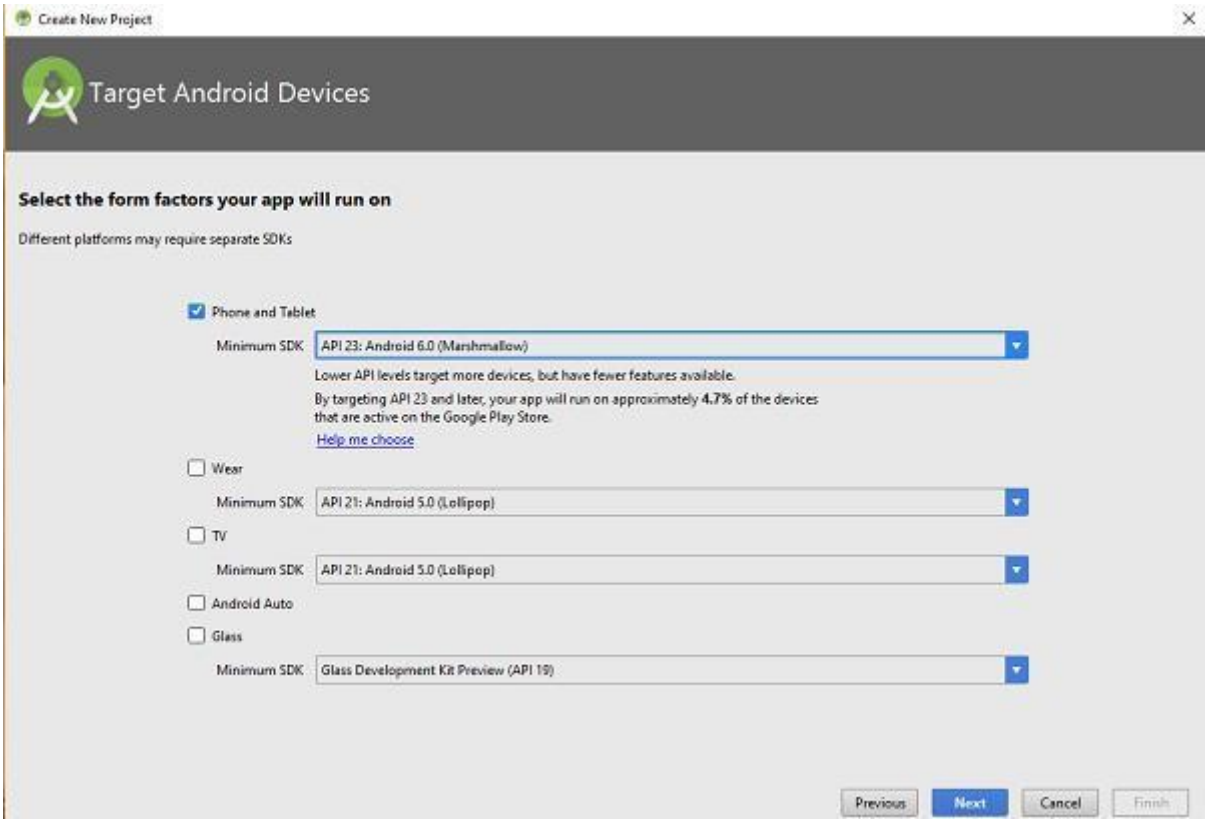
Configure the Hello World Project Details

We'll finish creating the project by configuring some details about its name, location, and the API version it



Change the name of the application. Change the default **Project location** to your preferred directory or just leave it as the default location.

On the **minimum API level**, ensure that **API 15: Android 4.0.3 IceCreamSandwich** is set as the Minimum SDK. This ensures that your application runs on almost all devices.



The next level of installation should contain selecting the activity to mobile, it specifies the default layout for Applications.

The Main Activity File

The main activity code is a Java file MainActivity.java. This is the actual application file which ultimately gets converted to a Dalvik executable and runs your application

```
package com.example.helloworldapplication;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class MainActivity extends AppCompatActivity {

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

The Layout File

The **activity_main.xml** is a layout file available in res/layout directory, that is referenced by your application when building its interface. You will modify this file very frequently to change the layout of your application. For your "Hello World!" application, this file will have following content related to default 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" >

  <TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_centerHorizontal="true"
    android:layout_centerVertical="true"
    android:padding="@dimen/padding_medium"
    android:text="@string/hello_world"
    tools:context=".MainActivity" />
```

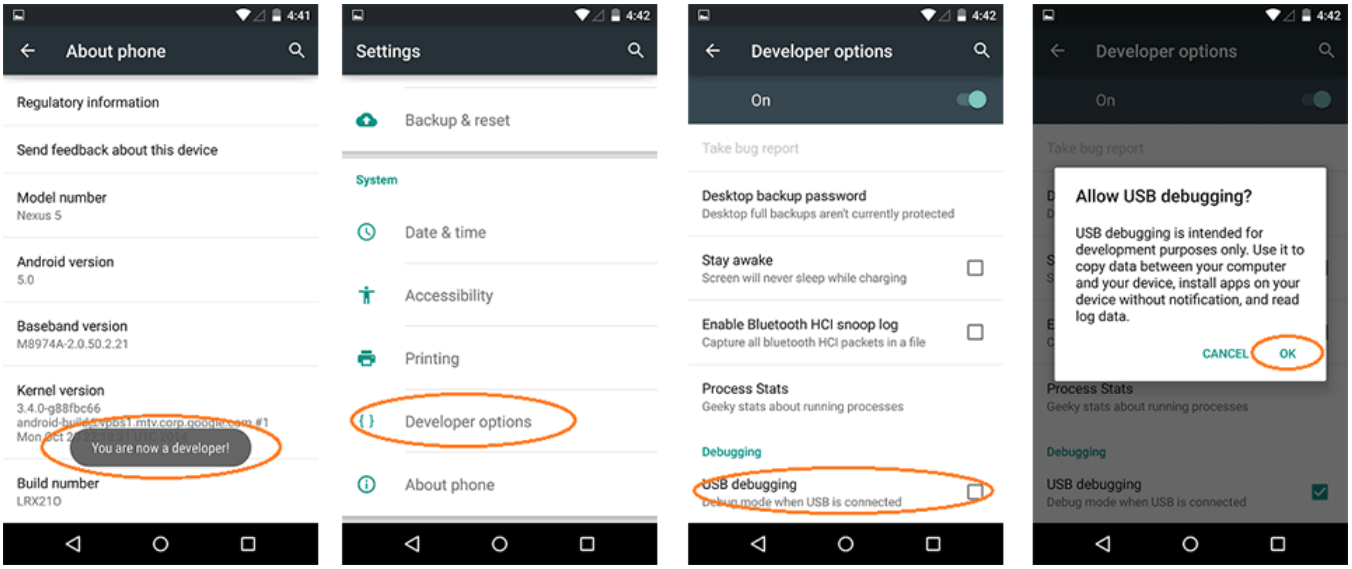
I)Running app on Phone:

Connect your Phone to Computer

Plug in your device to your computer with a USB cable. If you're developing on Windows, you might need to install this universal ADB USB driver or find your specific USB driver for your device.

Enable USB Debugging

The next step is to enable USB debugging so your phone can interact with your computer in a developer mode.



The following steps are needed:

1. (Windows Only) Install this ADB Driver
2. Plug-in your Android Device to Computer via USB
3. Open the "Settings" App on the Device
4. Scroll down to bottom to find "About phone" item
5. Scroll down to bottom to find "Build number" section
6. Tap on "Build Number" 7 times in quick succession
7. You should see the message "You are now a developer!"
8. Go back to main "Settings" page
9. Scroll down bottom to find "Developer options" item
10. Turn on "USB Debugging" switch and hit "OK"
11. Unplug and re-plug the device
12. Dialog appears "Allow USB Debugging?"
13. Check "Always allow from this computer" and then hit "OK"

Running your App

Now, we can launch apps from Android Studio onto our device:

1. Select one of your projects and click "Run" from the toolbar.
2. In the "Choose Device" window that appears, select the "Choose a running device" radio button, select the device, and click OK.

II) Running app on Emulator(AVD)

To run the app from Android studio, open one of your project's activity files and click Run icon from the tool bar. Android studio installs the app on your AVD and starts it and if everything is fine with your set-up and

application, it will display following Emulator window −Once Gradle finishes building, Android Studio should install the app on your connected device and start it.

Record Notes

EXPERIMENT NO.3

AIM: Create an application that takes the name from a text box and shows hello message along with the name entered in text box, when the user clicks the OK button.

MainActivity.java

```
package com.example.akshay.mrcet;

import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {
    // These are the global variables
    EditText editName, editPassword;
    TextView result;
    Button buttonSubmit, buttonReset;

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

        editName  = (EditText) findViewById(R.id.editName);
        editPassword = (EditText) findViewById(R.id.editPassword);
        result = (TextView) findViewById(R.id.tvResult);
        buttonSubmit = (Button) findViewById(R.id.buttonSubmit);
        buttonReset = (Button) findViewById(R.id.buttonReset);
        /*
           Submit Button
        */
        buttonSubmit.setOnClickListener(new  View.OnClickListener()  {

            @Override
            public void onClick(View v) {
                String name = editName.getText().toString();
                String password = editPassword.getText().toString();
                result.setText("Name:\t" + name + "\nPassword:\t" + password );
```

```
        }
      });
      /*
        Reset Button
      */
      buttonReset.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
          editName.setText("");
          editPassword.setText("");
          result.setText("");
          editName.requestFocus();
        }
      });
  }
}
```

activity_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"
  android:background="#FFFF8D"
  tools:context="com.example.akshay.mrcet.MainActivity">

  <TextView
    android:id="@+id/textView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"
    android:layout_alignParentTop="true"
    android:text="NAME"
    android:textSize="20sp"
    android:layout_margin="20dp" />

  <TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:textSize="20sp"
    android:text="PASSWORD"
```

```
    android:layout_marginTop="38dp"
    android:layout_below="@+id/textView"
    android:layout_alignLeft="@+id/textView"
    android:layout_alignStart="@+id/textView" />
<EditText
    android:id="@+id/editName"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textPersonName"
    android:hint="Enter Name"
    android:layout_alignParentTop="true"
    android:layout_alignParentRight="true"
    android:layout_alignParentEnd="true"
    android:layout_alignLeft="@+id/editPassword"
    android:layout_alignStart="@+id/editPassword" />

<EditText
    android:id="@+id/editPassword"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="Enter Password"
    android:inputType="textPassword"
    android:layout_alignBottom="@+id/textView2"
    android:layout_alignParentRight="true"
    android:layout_alignParentEnd="true"
    android:layout_marginRight="18dp"
    android:layout_marginEnd="18dp" />

<Button
    android:id="@+id/buttonSubmit"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"
    android:layout_below="@+id/textView2"
    android:layout_marginTop="20dp"
    android:text="SUBMIT" />
<Button
    android:id="@+id/buttonReset"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="RESET"
    android:layout_alignBaseline="@+id/buttonSubmit"
    android:layout_alignBottom="@+id/buttonSubmit"
```

```
        android:layout_centerHorizontal="true" />

    <TextView
        android:id="@+id/tvResult"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentBottom="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentStart="true"
        android:layout_marginBottom="143dp"
        android:textSize="30sp" />
</RelativeLayout>
```

Exercise Program:

Design an android application to read Employee details from text boxes and display when clicked on submit button.

Record Notes

EXPERIMENT NO.4

AIM: Create a screen that has input boxes for User Name, Password, Address, Gender(radio buttons for male and female), Age (numeric) and a Submit button. On clicking the submit button, print all the data below the Submit Button (use any layout)

Code for MainActivity.java

```
package com.example.nkredy.mrcet;

import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {
   // These are the global variables
   EditText editName, editPassword,editAddress,editAge;
   TextView result;
RadioGroup radioGenderGroup;
ivate RadioButton radioGenderButton;
   Button buttonSubmit;

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

      editName  = (EditText) findViewById(R.id.editName);
    editPassword = (EditText) findViewById(R.id.editPassword);
    editAddress = (EditText) findViewById(R.id.editAddres);
    editAge = (EditText) findViewById(R.id.editAge);
radioSexGender = (RadioGroup) findViewById(R.id.radioGender);


      result = (TextView) findViewById(R.id.tvResult);
      buttonSubmit = (Button) findViewById(R.id.buttonSubmit);
      buttonSubmit.setOnClickListener(new  View.OnClickListener()  {
```

```
        @Override
        public void onClick(View v) {
            String name = editName.getText().toString();
            String password = editPassword.getText().toString();
            String address= editAddress.getText().toString();
int selectedId = radioGenderGroup.getCheckedRadioButtonId();

        // find the radiobutton by returned id
            gen = (RadioButton) findViewById(selectedId);

            result.setText("Name:\t" + name + "\nPassword:\t" + password+ "\nAddredd:\t" +
address+ "\nAGE:\t" + age+ "\nGender:\t" + gen);

        }
      });


  }
}
```

activity_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"
  android:background="#FFFF8D"
  tools:context="com.example.akshay.mrcet.MainActivity">

  <TextView
    android:id="@+id/textView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"
    android:layout_alignParentTop="true"
    android:text="NAME"
    android:textSize="20sp"
    android:layout_margin="20dp" />

  <TextView
    android:id="@+id/textView2"
```

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:textSize="20sp"
    android:text="PASSWORD"
    android:layout_marginTop="38dp"
    android:layout_below="@+id/textView"
    android:layout_alignLeft="@+id/textView"
    android:layout_alignStart="@+id/textView" />

  <EditText
    android:id="@+id/editName"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textPersonName"
    android:hint="Enter Name"
    android:layout_alignParentTop="true"
    android:layout_alignParentRight="true"
    android:layout_alignParentEnd="true"
    android:layout_alignLeft="@+id/editPassword"
    android:layout_alignStart="@+id/editPassword" />

  <EditText
    android:id="@+id/editPassword"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="Enter Password"
    android:inputType="textPassword"
    android:layout_alignBottom="@+id/textView2"
    android:layout_alignParentRight="true"
    android:layout_alignParentEnd="true"
    android:layout_marginRight="18dp"
    android:layout_marginEnd="18dp" />
<EditText
    android:id="@+id/editAddress"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginRight="18dp"
    android:layout_marginEnd="18dp" />
<EditText
    android:id="@+id/editAge"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
        android:layout_marginRight="18dp"
    android:layout_marginEnd="18dp" />
```

```
<RadioGroup
    android:id="@+id/radioGender"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content" >

    <RadioButton
      android:id="@+id/radioMale"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="@string/radio_male"
      android:checked="true" />

    <RadioButton
      android:id="@+id/radioFemale"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="@string/radio_female" />

  </RadioGroup>


  <Button
    android:id="@+id/buttonSubmit"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"
    android:layout_below="@+id/textView2"
    android:layout_marginTop="20dp"
    android:text="SUBMIT" />

  <TextView
    android:id="@+id/tvResult"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentBottom="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"
    android:layout_marginBottom="143dp"
    android:textSize="30sp" /></RelativeLayout>
```

Excersise program: Create a screen that has input boxes for User Name, Password, Address, Gender(radio buttons for male and female), Age (numeric), Date of Birth (Date Picket), State (Spinner) and a Submit button.

On clicking the submit button, print all the data below the Submit Button (use any layout)

Record Notes:

EXPERIMENT NO.5

AIM: To design an android application to design a page using Intent and one Button and pass the Values from one Activity to second Activity.

Main Activity Java File

```
package com.example.transferofdata;
import android.os.Bundle;
import android.app.Activity;
import android.content.Intent;
import android.view.Menu;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.EditText;
public class MainActivity extends Activity
{
@Override
protected void onCreate(Bundle savedInstanceState)
{
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
final EditText et=(EditText)findViewById(R.id.editText1);
final EditText et1=(EditText)findViewById(R.id.editText2);
Button send=(Button)findViewById(R.id.button1);
send.setOnClickListener(new OnClickListener()
 {
@Override
public void onClick(View arg0)
 {
String s=et.getText().toString();
String s1=et1.getText().toString();
Intent it=new Intent(MainActivity.this,Second.class);
it.putExtra("uname", s);
```

```
it.putExtra("pwd", s1);
startActivity(it);
}
});
}
@Override
public boolean onCreateOptionsMenu(Menu menu)
{
getMenuInflater().inflate(R.menu.main, menu);
return true;
}
}
```

SecondActivity.java

```
package com.example.transferofdata;
import android.os.Bundle;
import android.app.Activity;
import android.view.Menu;
import android.widget.TextView;
public class Second extends Activity
{
@Override
protected void onCreate(Bundle savedInstanceState)
{
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_second);
TextView tv=(TextView)findViewById(R.id.textView1);
TextView tv1=(TextView)findViewById(R.id.textView2);
tv.setText(getIntent().getExtras().getString("uname"));
tv1.setText(getIntent().getExtras().getString("pwd"));
}
@Override
```

```
public boolean onCreateOptionsMenu(Menu menu)
{
getMenuInflater().inflate(R.menu.second, menu);
return true;
}
}
```

MainActivity.xml

```
<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"
android:paddingBottom="@dimen/activity_vertical_margin"
android:paddingLeft="@dimen/activity_horizontal_margin"
android:paddingRight="@dimen/activity_horizontal_margin"
android:paddingTop="@dimen/activity_vertical_margin"
tools:context=".MainActivity" >
<Button
android:id="@+id/button1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignParentLeft="true"
android:layout_alignParentTop="true"
android:layout_marginLeft="78dp"
android:layout_marginTop="154dp"
android:text="send" />
<EditText
android:id="@+id/editText1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignParentTop="true"
android:layout_alignRight="@+id/button1"
```

```
android:layout_marginTop="18dp"
android:ems="10" ><requestFocus /></EditText>
<EditText
android:id="@+id/editText2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignRight="@+id/button1"
android:layout_below="@+id/editText1"
android:layout_marginTop="37dp"
android:ems="10"
android:inputType="textPassword"  /></RelativeLayout>
```

SecondActivity.xml

```
<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"
android:paddingBottom="@dimen/activity_vertical_margin"
android:paddingLeft="@dimen/activity_horizontal_margin"
android:paddingRight="@dimen/activity_horizontal_margin"
android:paddingTop="@dimen/activity_vertical_margin"
tools:context=".Second" >
<TextView
android:id="@+id/textView1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignParentLeft="true"
android:layout_alignParentTop="true"
android:layout_marginLeft="42dp"
android:layout_marginTop="70dp"
android:text="uname" />
<TextView
```

android:id="@+id/textView2"

android:layout_width="wrap_content"

android:layout_height="wrap_content"

android:layout_alignLeft="@+id/textView1"

android:layout_below="@+id/textView1"

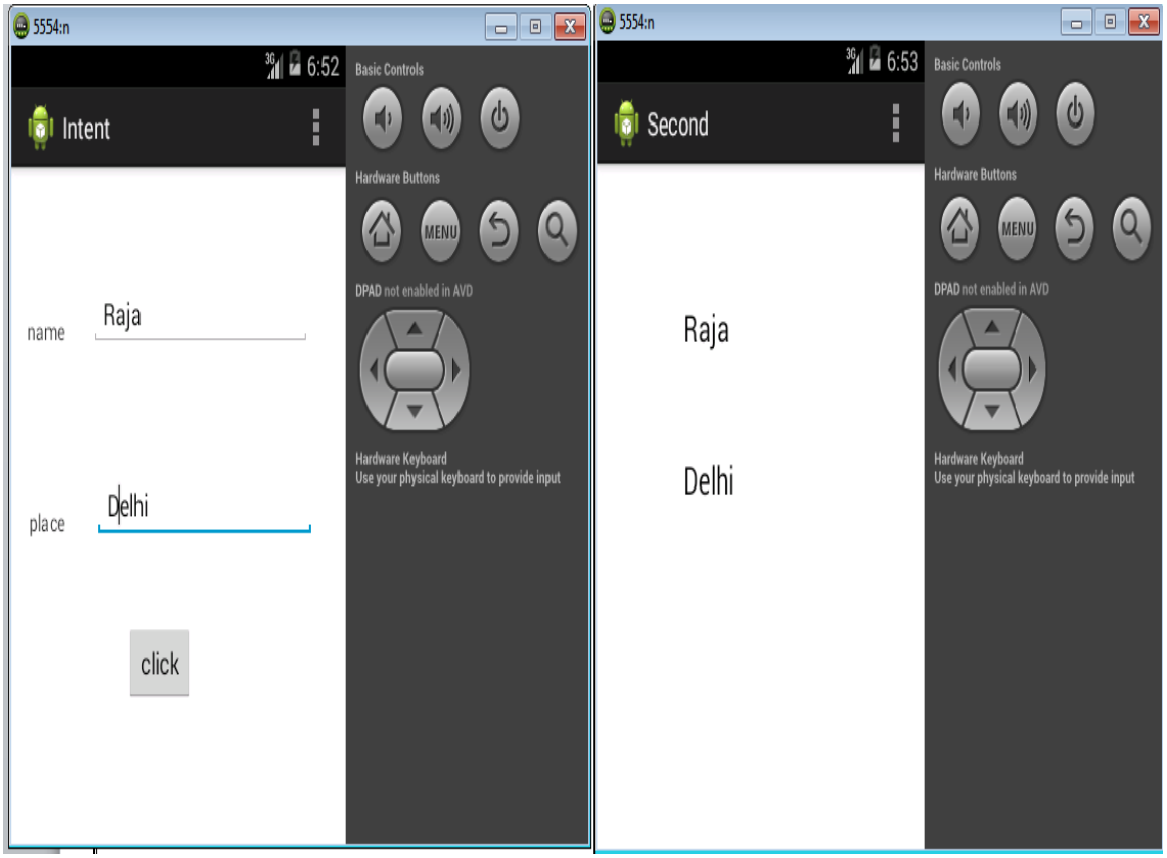
android:layout_marginLeft="15dp"

android:layout_marginTop="37dp"

android:text="password" />

</RelativeLayout>

OUTPUT:



Exercise Program: Design an android application to create page using Intent and one Button and pass the Values from one Activity to second Activity and then to the Third activity.

Record Notes

EXPERIMENT NO.6

AIM : To design an android application Send SMS using Intent.

MainActivity.java

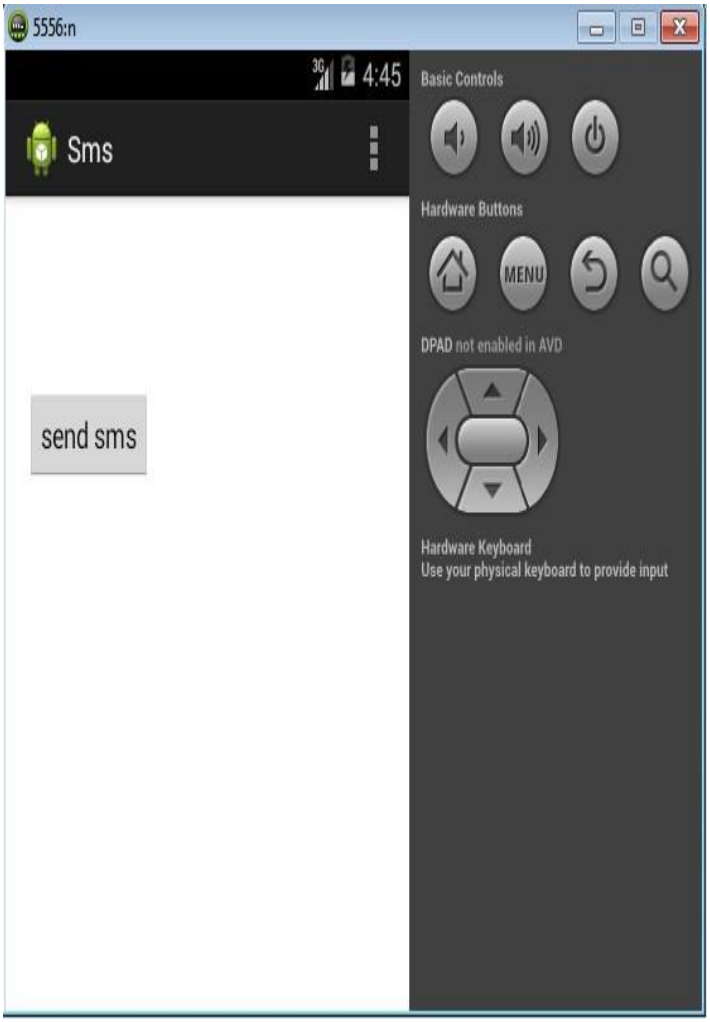
```
package com.example.sms;
import android.os.Bundle;
import android.app.Activity;
import android.telephony.gsm.SmsManager;
import android.view.Menu;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
public class MainActivity extends Activity
{
@Override
protected void onCreate(Bundle savedInstanceState
{
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
Button bt=(Button)findViewById(R.id.button1);
bt.setOnClickListener(new OnClickListener()
{
@Override
public void onClick(View v)
{
// TODO Auto-generated method stub
SmsManager sms=SmsManager.getDefault();
sms.sendTextMessage("5554", null, "hai", null, null);
}
});
}
```

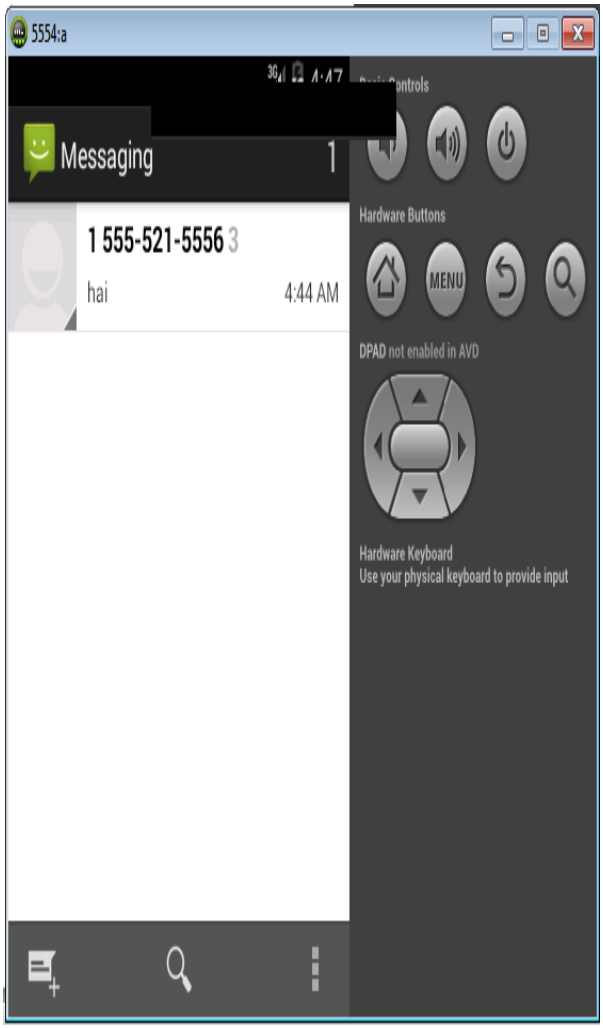
```
public boolean onCreateOptionsMenu(Menu menu)
{
// Inflate the menu; this adds items to the action bar if it is present.
getMenuInflater().inflate(R.menu.main, menu);
return true;
}
}
```

MainActivity.xml

```
<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"
android:paddingBottom="@dimen/activity_vertical_margin"
android:paddingLeft="@dimen/activity_horizontal_margin"
android:paddingRight="@dimen/activity_horizontal_margin"
android:paddingTop="@dimen/activity_vertical_margin"
tools:context=".MainActivity" >
<Button
android:id="@+id/button1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignParentLeft="true"
android:layout_alignParentTop="true"
android:layout_marginLeft="54dp"
android:layout_marginTop="166dp"
android:text="send" />
</RelativeLayout>
```

OUTPUT:


5556:n
4:45
Sms
send sms
Basic Controls
Hardware Buttons
MENU
DPAD not enabled in AVD
Hardware Keyboard
Use your physical keyboard to provide input


5554:a
Messaging
1
1 555-521-5556 3
hai
4:44 AM
Hardware Buttons
MENU
DPAD not enabled in AVD
Hardware Keyboard
Use your physical keyboard to provide input

Record Notes:

EXPERIMENT NO.7

AIM: Create an android application using Fragments

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
   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="fill_parent"
   android:layout_height="fill_parent"
   tools:context="example.javatpoint.com.fragmentexample.MainActi
   vity">

   <fragment
      android:id="@+id/fragment1"
      android:name="example.javatpoint.com.fragmentexample.Frag
      ment1" android:layout_width="0px"
      android:layout_height="match_parent"
      android:layout_weight="1"
      />

   <fragment
      android:id="@+id/fragment2"
      android:name="example.javatpoint.com.fragmentexample.Frag
      ment2" android:layout_width="0px"
      android:layout_height="match_parent"
      android:layout_weight="1"
      />

</LinearLayout>
```

fragment_fragment1.xml

```
<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="#F5F5DC"
   tools:context="example.javatpoint.com.fragmentexample.Fragmen
   t1">

   <!-- TODO: Update blank fragment layout -->
   <TextView
      android:layout_width="match_par
      ent"
      android:layout_height="match_par
      ent"
```

```
      android:text="@string/hello_blank_fragment"  />

</FrameLayout>
File: fragment_fragment2.xml
<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="#F0FFFF"
   tools:context="example.javatpoint.com.fragmentexample.Fragmen
   t2">

   <!-- TODO: Update blank fragment layout -->
   <TextView
      android:layout_width="match_par
      ent"
      android:layout_height="match_par
      ent"
      android:text="@string/hello_blank_fragment"  />

</FrameLayout
> MainActivity
class File:
MainActivity.ja
va
package example.javatpoint.com.fragmentexample;

import
android.support.v7.app.AppCompatActivity;
import android.os.Bundle;

public class MainActivity extends AppCompatActivity {

   @Override
   protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);
   }
}
File: Fragment1.java
package
example.javatpoint.com.fragmentexample;
import android.os.Bundle;
import
android.support.v4.app.Fragment;
import
android.view.LayoutInflater;
import android.view.View;
```

```
import android.view.ViewGroup;

public class Fragment1 extends

   Fragment { @Override
   public void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
   }

   @Override
   public View onCreateView(LayoutInflater inflater, ViewGroup container,
                     Bundle savedInstanceState) {
      // Inflate the layout for this fragment
      return inflater.inflate(R.layout.fragment_fragment1, container, false);
   }
 }
```

File: Fragment2.java

```
package example.javatpoint.com.fragmentexample;

import android.os.Bundle;
import
android.support.v4.app.Fragment;
import
android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;


public class Fragment2 extends


   Fragment { @Override
   public void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
   }


   @Override
   public View onCreateView(LayoutInflater inflater, ViewGroup container,
                     Bundle savedInstanceState) {
      // Inflate the layout for this fragment
      return inflater.inflate(R.layout.fragment_fragment2, container, false);
   }
    }
```

OUTPUT:


6:02
Fragment Example
Hello blank fragment 1
Hello blank fragment 2

Record notes:

EXPERIMENT NO.8

AIM: To design an android application Using Radiobuttons.

MainActivity.java

```
package com.example.radiobutton;
import android.os.Bundle;
import android.app.Activity;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.RadioGroup.OnCheckedChangeListener;
import android.widget.TextView;
import android.widget.Toast;
public class MainActivity extends Activity
{
private RadioGroup radioGroup;
private RadioButton sound, vibration, silent;
private Button button;
private TextView textView;
@Override
protected void onCreate(Bundle savedInstanceState)
{
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
radioGroup = (RadioGroup) findViewById(R.id.myRadioGroup);
radioGroup.setOnCheckedChangeListener(new OnCheckedChangeListener()
 {
@Override
public void onCheckedChanged(RadioGroup group, int checkedId)
```

```
 {
// find which radio button is selected
if(checkedId == R.id.silent)
{
Toast.makeText(getApplicationContext(), "choice: Silent",
Toast.LENGTH_SHORT).show();
}
 else if(checkedId == R.id.sound)
{
Toast.makeText(getApplicationContext(), "choice: Sound",
Toast.LENGTH_SHORT).show();
}
else
 {
Toast.makeText(getApplicationContext(), "choice: Vibration",
Toast.LENGTH_SHORT).show();
}
}
});
sound = (RadioButton) findViewById(R.id.sound);
vibration = (RadioButton) findViewById(R.id.vibrate);
silent = (RadioButton) findViewById(R.id.silent);
textView = (TextView) findViewById(R.id.textView1);
button = (Button)findViewById(R.id.button1);
button.setOnClickListener(new OnClickListener()
{
@Override
public void onClick(View v) {
int selectedId = radioGroup.getCheckedRadioButtonId();

// find which radioButton is checked by id
if(selectedId == sound.getId())
{
```

```
textView.setText("You chose 'Sound' option");
}
else if(selectedId == vibration.getId())
{
textView.setText("You chose 'Vibration' option");
}
else
{
textView.setText("You chose 'Silent' option");
}
}
});
}
}
```

MainActivity.xml

```
<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"
android:paddingBottom="@dimen/activity_vertical_margin"
android:paddingLeft="@dimen/activity_horizontal_margin"
android:paddingRight="@dimen/activity_horizontal_margin"
android:paddingTop="@dimen/activity_vertical_margin"
tools:context=".MainActivity" >
<RadioGroup
android:id="@+id/myRadioGroup"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignParentLeft="true"
android:layout_below="@+id/textView1"
android:layout_marginLeft="27dp"
```

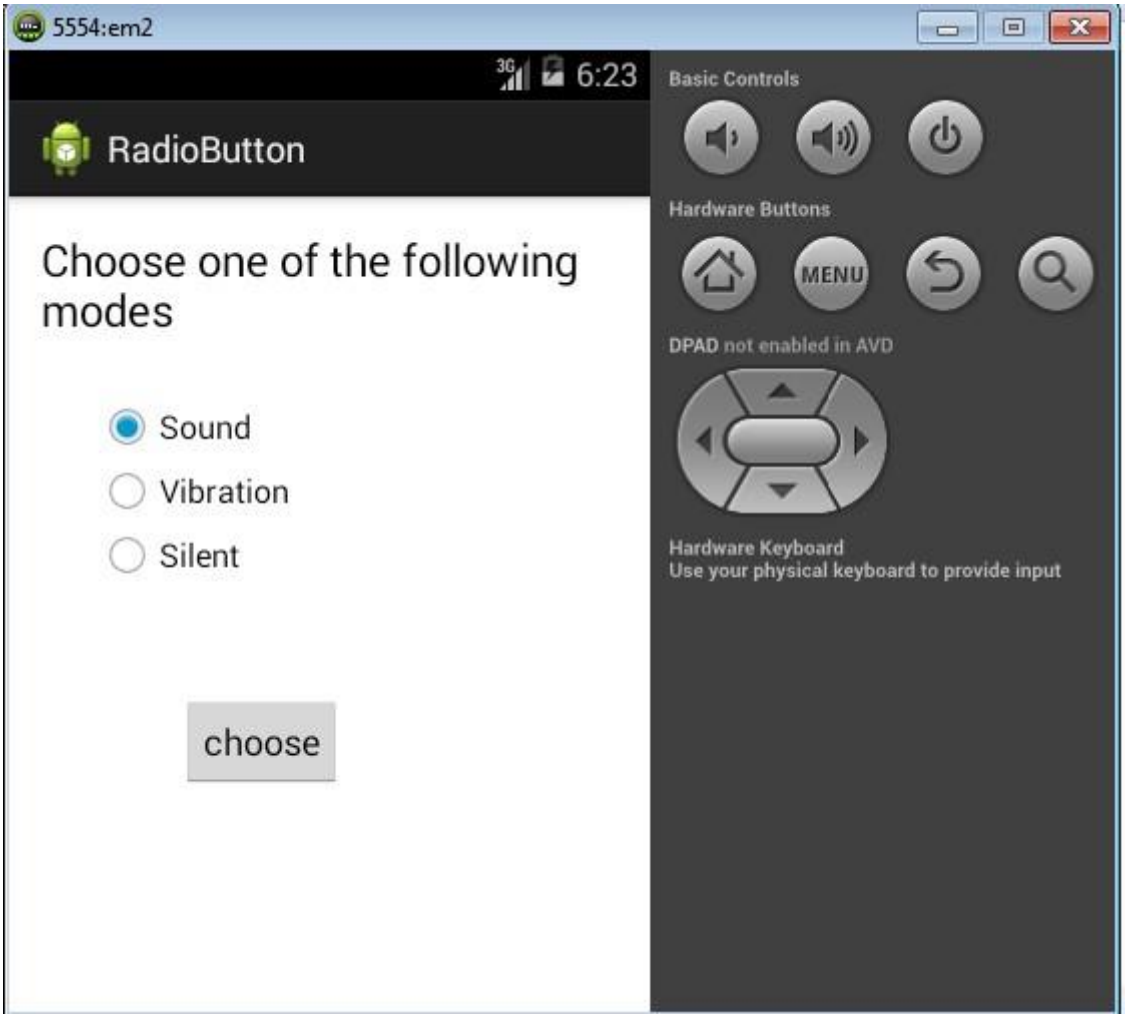
```
android:layout_marginTop="28dp" >
<RadioButton
android:id="@+id/sound"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:checked="true"
android:text="Sound" />
<RadioButton
android:id="@+id/vibrate"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Vibration" />
<RadioButton
android:id="@+id/silent"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Silent" />
</RadioGroup>
<TextView
android:id="@+id/textView1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignParentLeft="true"
android:layout_alignParentTop="true"
android:text="Choose one of the following modes"
android:textAppearance="?android:attr/textAppearanceLarge" />
<Button
android:id="@+id/button1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignLeft="@+id/myRadioGroup"
android:layout_below="@+id/myRadioGroup"
android:layout_marginLeft="42dp"
```

android:layout_marginTop="53dp"

android:text="choose" />

</RelativeLayout>

OUTPUT:


5554:em2
6:23
RadioButton
Choose one of the following modes
Sound
Vibration
Silent
choose
Basic Controls
Hardware Buttons
MENU
DPAD not enabled in AVD
Hardware Keyboard
Use your physical keyboard to provide input

Record Notes:

EXPERIMENT NO.9

AIM: To design an application options menu.

MainActivity.java

```
package com.javatpoint.optionmenu;
import android.os.Bundle;
import android.app.Activity;
import android.view.Menu;
import android.view.MenuItem;
import android.widget.Toast;
public class MainActivity extends Activity
{
@Override
protected void onCreate(Bundle savedInstanceState)
{
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
}
@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);//Menu Resource, Menu
return true;
}
@Override
public boolean onOptionsItemSelected(MenuItem item)
{
switch (item.getItemId())
{
case R.id.item1:
```

```
Toast.makeText(getApplicationContext(),"Item 1 Selected",Toast.LENGTH_LONG).show();
return true;
case R.id.item2:
Toast.makeText(getApplicationContext(),"Item 2 Selected",Toast.LENGTH_LONG).show();
return true; case R.id.item3:
Toast.makeText(getApplicationContext(),"Item 3 Selected",Toast.LENGTH_LONG).show();
return true;
default:
return super.onOptionsItemSelected(item);
}
}
}
```

MainActivity.xml

```
<RelativeLayout xmlns:androclass="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:paddingBottom="@dimen/activity_vertical_margin"
android:paddingLeft="@dimen/activity_horizontal_margin"
android:paddingRight="@dimen/activity_horizontal_margin"
android:paddingTop="@dimen/activity_vertical_margin"
tools:context=".MainActivity" >
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="@string/hello_world" />
</RelativeLayout>
```

SecondActivity.xml

```
<menu xmlns:androclass="http://schemas.android.com/apk/res/android" >
<item android:id="@+id/item1"
android:title="Item 1"/>
```

<item android:id="@+id/item2"

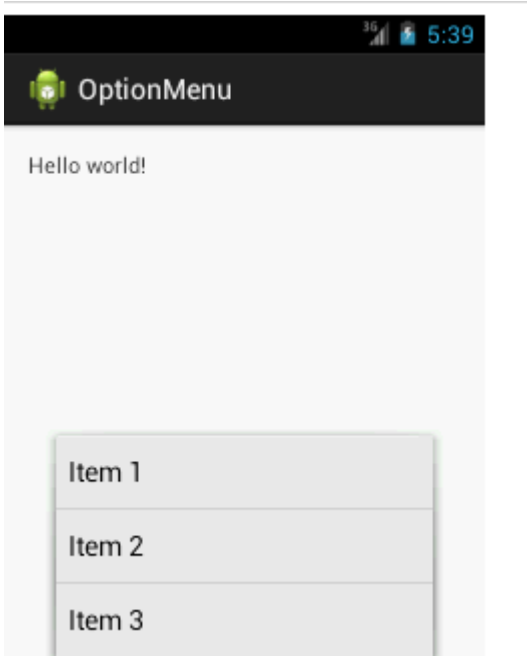
android:title="Item 2"/>

<item android:id="@+id/item3"

android:title="Item 3"/>

</menu>

OUTPUT:



Record Notes:

EXPERIMENT NO.10

AIM: Create a user registration application that stores the user details in a database table.

DbHandler.java

```
package com.tutlane.sqliteexample;
import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;
import java.util.ArrayList;
import java.util.HashMap;

/**
 * Created by tutlane on 06-01-2018.
 */

public class DbHandler extends SQLiteOpenHelper {
   private static final int DB_VERSION = 1;
   private static final String DB_NAME = "usersdb";
   private static final String TABLE_Users = "userdetails";
   private static final String KEY_ID = "id";
   private static final String KEY_NAME = "name";
   private static final String KEY_LOC = "location";
   private static final String KEY_DESG = "designation";
   public DbHandler(Context context){
      super(context,DB_NAME, null, DB_VERSION);
   }
   @Override
   public void onCreate(SQLiteDatabase db){
      String CREATE_TABLE = "CREATE TABLE " + TABLE_Users + "("
            + KEY_ID + " INTEGER PRIMARY KEY AUTOINCREMENT," + KEY_NAME + " TEXT,"
```

```
        + KEY_LOC + " TEXT,"
        + KEY_DESG + " TEXT"+ ")";
    db.execSQL(CREATE_TABLE);
}
@Override
public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion){
    // Drop older table if exist
    db.execSQL("DROP TABLE IF EXISTS " + TABLE_Users);
    // Create tables again
    onCreate(db);
}
// **** CRUD (Create, Read, Update, Delete) Operations ***** //

// Adding new User Details
void insertUserDetails(String name, String location, String designation){
    //Get the Data Repository in write mode
    SQLiteDatabase db = this.getWritableDatabase();
    //Create a new map of values, where column names are the keys
    ContentValues cValues = new ContentValues();
    cValues.put(KEY_NAME, name);
    cValues.put(KEY_LOC, location);
    cValues.put(KEY_DESG, designation);
    // Insert the new row, returning the primary key value of the new row
    long newRowId = db.insert(TABLE_Users,null, cValues);
    db.close();
}
// Get User Details
public ArrayList<HashMap<String, String>> GetUsers(){
    SQLiteDatabase db = this.getWritableDatabase();
    ArrayList<HashMap<String, String>> userList = new ArrayList<>();
    String query = "SELECT name, location, designation FROM "+ TABLE_Users;
    Cursor cursor = db.rawQuery(query,null);
    while (cursor.moveToNext()){
```

```
        HashMap<String,String> user = new HashMap<>();
        user.put("name",cursor.getString(cursor.getColumnIndex(KEY_NAME)));
        user.put("designation",cursor.getString(cursor.getColumnIndex(KEY_DESG)));
        user.put("location",cursor.getString(cursor.getColumnIndex(KEY_LOC)));
        userList.add(user);
      }
      return  userList;
    }
    // Get User Details based on userid
    public ArrayList<HashMap<String, String>> GetUserByUserId(int userid){
      SQLiteDatabase db = this.getWritableDatabase();
      ArrayList<HashMap<String, String>> userList = new ArrayList<>();
      String query = "SELECT name, location, designation FROM "+ TABLE_Users;
      Cursor cursor = db.query(TABLE_Users, new String[]{KEY_NAME, KEY_LOC, KEY_DESG}, KEY_ID+
"=?",new String[]{String.valueOf(userid)},null, null, null, null);
      if (cursor.moveToNext()){
        HashMap<String,String> user = new HashMap<>();
        user.put("name",cursor.getString(cursor.getColumnIndex(KEY_NAME)));
        user.put("designation",cursor.getString(cursor.getColumnIndex(KEY_DESG)));
        user.put("location",cursor.getString(cursor.getColumnIndex(KEY_LOC)));
        userList.add(user);
      }
      return  userList;
    }
    // Delete User Details
    public void DeleteUser(int userid){
      SQLiteDatabase db = this.getWritableDatabase();
      db.delete(TABLE_Users, KEY_ID+" = ?",new String[]{String.valueOf(userid)});
      db.close();
    }
    // Update User Details
    public int UpdateUserDetails(String location, String designation, int id){
      SQLiteDatabase db = this.getWritableDatabase();
```

```
    ContentValues cVals = new ContentValues();
    cVals.put(KEY_LOC, location);
    cVals.put(KEY_DESG, designation);
    int count = db.update(TABLE_Users, cVals, KEY_ID+" = ?",new String[]{String.valueOf(id)});
    return  count;
}
```

```
}
```

If you observe above code, we implemented all SQLite Database related activities to perform CRUD operations in android application.

Now open activity_main.xml file from \res\layout folder path and write the code like as shown below.

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
   android:orientation="vertical" android:layout_width="match_parent"
   android:layout_height="match_parent">
   <TextView
      android:id="@+id/fstTxt"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:layout_marginLeft="100dp"
      android:layout_marginTop="150dp"
      android:text="Name" />
   <EditText
      android:id="@+id/txtName"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:layout_marginLeft="100dp"
      android:ems="10"/>
   <TextView
      android:id="@+id/secTxt"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="Location"
      android:layout_marginLeft="100dp" />
```

```
    <EditText
        android:id="@+id/txtLocation"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="100dp"
        android:ems="10" />
    <TextView
        android:id="@+id/thirdTxt"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Designation"
        android:layout_marginLeft="100dp" />
    <EditText
        android:id="@+id/txtDesignation"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="100dp"
        android:ems="10" />
    <Button
        android:id="@+id/btnSave"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="100dp"
        android:text="Save" />
</LinearLayout>
```

Now we will create another layout resource file details.xml in \res\layout path to show the details in custom listview from SQLite Database for that right click on your layout folder à Go to New à select Layout Resource File and give name as details.xml.

Once we create a new layout resource file details.xml, open it and write the code like as shown below

details.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
   android:layout_width="fill_parent"
   android:layout_height="fill_parent"
   android:orientation="vertical" >
   <ListView
      android:id="@+id/user_list"
      android:layout_width="fill_parent"
      android:layout_height="wrap_content"
      android:dividerHeight="1dp" />
   <Button
      android:id="@+id/btnBack"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:layout_gravity="center"
      android:layout_marginTop="20dp"
      android:text="Back" />
</LinearLayout>
```

Create an another layout file (list_row.xml) in /res/layout folder to show the data in listview, for that right click on layout folder à add new Layout resource file à Give name as list_row.xml and write the code like as shown below.

list_row.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
   android:layout_width="fill_parent"
   android:layout_height="wrap_content"
   android:orientation="horizontal"
   android:padding="5dip" >
   <TextView
```

```
    android:id="@+id/name"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:textStyle="bold"
    android:textSize="17dp" />
  <TextView
    android:id="@+id/designation"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@id/name"
    android:layout_marginTop="7dp"
    android:textColor="#343434"
    android:textSize="14dp" />
  <TextView
    android:id="@+id/location"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignBaseline="@+id/designation"
    android:layout_alignBottom="@+id/designation"
    android:layout_alignParentRight="true"
    android:textColor="#343434"
    android:textSize="14dp" />
</RelativeLayout>
```

Now open your main activity file MainActivity.java from \java\com.tutlane.sqliteexample path and write the code like as shown below

MainActivity.java

```
package com.tutlane.sqliteexample;
import android.content.Intent;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
```

```
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
   EditText name, loc, desig;
   Button saveBtn;
   Intent intent;
   @Override
   protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);
      name = (EditText)findViewById(R.id.txtName);
      loc = (EditText)findViewById(R.id.txtLocation);
      desig = (EditText)findViewById(R.id.txtDesignation);
      saveBtn = (Button)findViewById(R.id.btnSave);
      saveBtn.setOnClickListener(new View.OnClickListener() {
         @Override
         public void onClick(View v) {
            String username = name.getText().toString()+"\n";
            String location = loc.getText().toString();
            String designation = desig.getText().toString();
            DbHandler dbHandler = new DbHandler(MainActivity.this);
            dbHandler.insertUserDetails(username,location,designation);
            intent = new Intent(MainActivity.this,DetailsActivity.class);
            startActivity(intent);
            Toast.makeText(getApplicationContext(),                "Details                Inserted
Successfully",Toast.LENGTH_SHORT).show();
         }
      });
   }
}
```

OUTPUT:


4:07
SQLite Example
Name
Trishika Dasari
Location
Guntur
Designation
Chartered Accountant
SAVE
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Record Notes: