1.a) Create an Android application that shows Hello + name of the user and run it on an emulator.

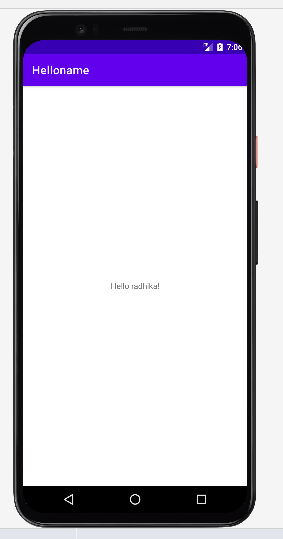
activity\_main.xml

*<?*xml version="1.0" encoding="utf-8"*?>*<androidx.constraintlayout.widget.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"  
 tools:context=".MainActivity">  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Hello radhika!"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintLeft\_toLeftOf="parent"  
 app:layout\_constraintRight\_toRightOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent" />  
  
</androidx.constraintlayout.widget.ConstraintLayout>

MainActivity.java

package com.example.helloname;  
  
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*);  
 }  
}

Ouput:



1.b) 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.

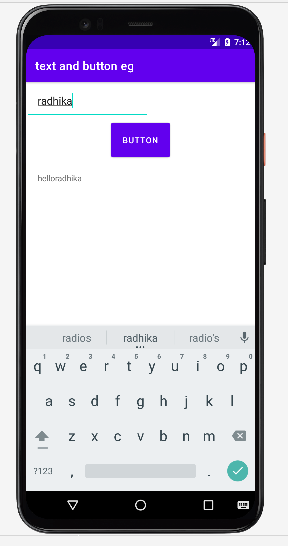
activity\_main.xml

*<?*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:gravity="center"  
 tools:context=".MainActivity">  
  
 <TextView  
 android:id="@+id/textname"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:layout\_below="@id/btnclickhere"  
 android:paddingLeft="20dp"  
 android:paddingTop="20dp"  
 android:paddingRight="20dp"  
 android:paddingBottom="20dp" />  
  
 <EditText  
 android:id="@+id/edittextname"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:ems="10"  
 android:hint="enter name"  
 android:inputType="textPersonName"  
 android:paddingLeft="20dp"  
 android:paddingTop="20dp"  
 android:paddingRight="20dp"  
 android:paddingBottom="20dp"  
 android:text="Name" />  
  
 <Button  
 android:id="@+id/btnclickhere"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/edittextname"  
 android:layout\_centerInParent="true"  
 android:paddingLeft="20dp"  
 android:paddingTop="20dp"  
 android:paddingRight="20dp"  
 android:paddingBottom="20dp"  
 android:text="Button" />  
</RelativeLayout>

MainActivity.java

package com.example.textandbuttoneg;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.TextView;  
  
public class MainActivity extends AppCompatActivity {  
 EditText edittextname;  
 Button btnclickhere;  
 TextView textname;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 edittextname = (EditText) findViewById(R.id.*edittextname*);  
 btnclickhere = (Button) findViewById(R.id.*btnclickhere*);  
 textname = (TextView) findViewById(R.id.*textname*);  
  
 btnclickhere.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 String name = edittextname.getText().toString();  
 textname.setText("hello" + name);  
 }  
 });  
 }  
}

Output:



2.a)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

**a)Linear Layout**

activity\_main.xml

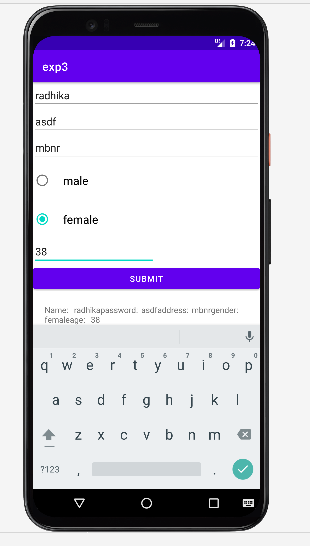
*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical"  
 tools:context=".MainActivity">  
  
 <EditText  
 android:id="@+id/edittextname1"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/edittextname2"  
 android:ems="10"  
 android:hint="enter the address"  
 android:inputType="textPersonName" />  
  
 <EditText  
 android:id="@+id/edittextname2"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/edittextname3"  
 android:ems="10"  
 android:hint="enter the password"  
 android:inputType="textPersonName" />  
  
 <EditText  
 android:id="@+id/edittextname3"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:ems="10"  
 android:hint="enter the name"  
 android:inputType="textPersonName" />  
  
 <RadioGroup  
 android:id="@+id/rdgroup"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/edittextname1">  
  
 <RadioButton  
 android:id="@+id/rdbutton"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/edittextname1"  
 android:checked="true"  
 android:padding="20dp"  
 android:text="male"  
 android:textSize="20sp" />

<RadioButton  
 android:id="@+id/rdbutton1"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/rdbutton"  
 android:padding="20dp"  
 android:text="female"  
 android:textSize="20sp" />  
  
 </RadioGroup>  
  
 <EditText  
 android:id="@+id/edittextname4"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/rdgroup"  
 android:ems="10"  
 android:hint="enter the age"  
 android:inputType="textPersonName" />  
  
  
 <Button  
 android:id="@+id/button1"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/edittextname4"  
 android:text="submit" />  
  
 <TextView  
 android:id="@+id/textname2"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/button1"  
 android:padding="20dp" />  
  
</LinearLayout>

MainActivity.java

package com.example.exp3;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.RadioButton;  
import android.widget.RadioGroup;  
import android.widget.TextView;  
  
public class MainActivity extends AppCompatActivity {  
 EditText edittextname1,edittextname2,edittextname3,edittextname4;  
 RadioGroup rdgroup;  
 RadioButton genderradiobutton;  
 Button button1;  
 TextView textname2;  
  
  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 edittextname3=(EditText)findViewById(R.id.*edittextname3*);  
 edittextname2=(EditText)findViewById(R.id.*edittextname2*);  
 edittextname1=(EditText)findViewById(R.id.*edittextname1*);  
 rdgroup=(RadioGroup)findViewById(R.id.*rdgroup*);  
 edittextname4=(EditText)findViewById(R.id.*edittextname4*);  
 button1=(Button)findViewById(R.id.*button1*);  
 textname2=(TextView)findViewById(R.id.*textname2*);  
  
 button1.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
  
 String name = edittextname3.getText().toString();  
 String name1 = edittextname2.getText().toString();  
 String name2 = edittextname1.getText().toString();  
 int selectid= rdgroup.getCheckedRadioButtonId();  
 genderradiobutton=(RadioButton)findViewById(selectid);  
 String name3=edittextname4.getText().toString();  
 textname2.setText("Name: \t"+name+"password: \t"+name1+"address: \t"+name2+"gender: \t"+genderradiobutton.getText()+"age: \t"+name3);  
 }  
 });  
  
 }  
}

Output:



**2b)Relative Layout**

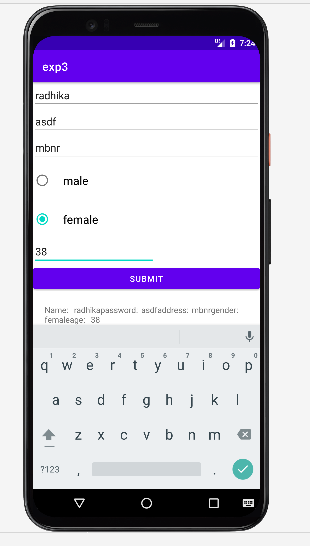
activity\_main.xml

*<?*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:orientation="vertical"  
 tools:context=".MainActivity">  
  
 <EditText  
 android:id="@+id/edittextname1"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/edittextname2"  
 android:ems="10"  
 android:hint="enter the address"  
 android:inputType="textPersonName" />  
  
 <EditText  
 android:id="@+id/edittextname2"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/edittextname3"  
 android:ems="10"  
 android:hint="enter the password"  
 android:inputType="textPersonName" />  
  
 <EditText  
 android:id="@+id/edittextname3"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:ems="10"  
 android:hint="enter the name"  
 android:inputType="textPersonName" />  
  
 <RadioGroup  
 android:id="@+id/rdgroup"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/edittextname1">  
 <RadioButton  
 android:id="@+id/rdbutton"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/edittextname1"  
 android:checked="true"  
 android:padding="20dp"  
 android:text="male"  
 android:textSize="20sp" />  
  
 <RadioButton  
 android:id="@+id/rdbutton1"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/rdbutton"  
 android:padding="20dp"  
 android:text="female"  
 android:textSize="20sp" />  
  
 </RadioGroup>  
  
 <EditText  
 android:id="@+id/edittextname4"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/rdgroup"  
 android:ems="10"  
 android:hint="enter the age"  
 android:inputType="textPersonName" />  
  
  
 <Button  
 android:id="@+id/button1"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/edittextname4"  
 android:text="submit" />  
  
 <TextView  
 android:id="@+id/textname2"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/button1"  
 android:padding="20dp" />  
  
</RelativeLayout>

**MainActivity.java**

package com.example.exp3;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.RadioButton;  
import android.widget.RadioGroup;  
import android.widget.TextView;  
  
public class MainActivity extends AppCompatActivity {  
 EditText edittextname1,edittextname2,edittextname3,edittextname4;  
 RadioGroup rdgroup;  
 RadioButton genderradiobutton;  
 Button button1;  
 TextView textname2;  
  
  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 edittextname3=(EditText)findViewById(R.id.*edittextname3*);  
 edittextname2=(EditText)findViewById(R.id.*edittextname2*);  
 edittextname1=(EditText)findViewById(R.id.*edittextname1*);  
 rdgroup=(RadioGroup)findViewById(R.id.*rdgroup*);  
 edittextname4=(EditText)findViewById(R.id.*edittextname4*);  
 button1=(Button)findViewById(R.id.*button1*);  
 textname2=(TextView)findViewById(R.id.*textname2*);  
  
 button1.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
  
 String name = edittextname3.getText().toString();  
 String name1 = edittextname2.getText().toString();  
 String name2 = edittextname1.getText().toString();  
 int selectid= rdgroup.getCheckedRadioButtonId();  
 genderradiobutton=(RadioButton)findViewById(selectid);  
 String name3=edittextname4.getText().toString();  
 textname2.setText("Name: \t"+name+"password: \t"+name1+"address: \t"+name2+"gender: \t"+genderradiobutton.getText()+"age: \t"+name3);  
 }  
 });  
  
 }  
}

output:



**2c)Table Layout:**

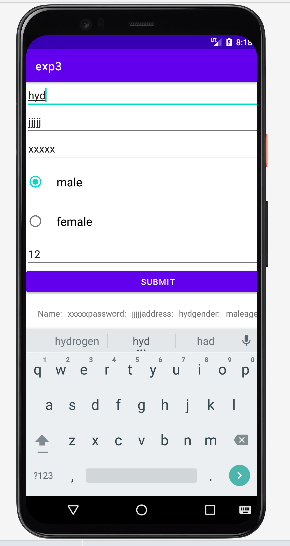
**activity\_main.xml**

*<?*xml version="1.0" encoding="utf-8"*?>*<TableLayout 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:orientation="vertical"  
 tools:context=".MainActivity">  
  
 <TableRow>  
  
 <EditText  
 android:id="@+id/edittextname1"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/edittextname2"  
 android:ems="10"  
 android:hint="enter the address"  
 android:inputType="textPersonName" />  
 </TableRow>  
  
 <TableRow>  
  
 <EditText  
 android:id="@+id/edittextname2"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/edittextname3"  
 android:ems="10"  
 android:hint="enter the password"  
 android:inputType="textPersonName" />  
 </TableRow>  
  
 <TableRow>  
  
 <EditText  
 android:id="@+id/edittextname3"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:ems="10"  
 android:hint="enter the name"  
 android:inputType="textPersonName" />  
 </TableRow>  
  
 <TableRow>  
  
 <RadioGroup  
 android:id="@+id/rdgroup"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/edittextname1">  
  
 <RadioButton  
 android:id="@+id/rdbutton"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/edittextname1"  
 android:checked="true"  
 android:padding="20dp"  
 android:text="male"  
 android:textSize="20sp" />  
  
 <RadioButton  
 android:id="@+id/rdbutton1"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/rdbutton"  
 android:padding="20dp"  
 android:text="female"  
 android:textSize="20sp" />  
  
 </RadioGroup>  
  
 </TableRow>  
  
 <TableRow>  
  
 <EditText  
 android:id="@+id/edittextname4"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/rdgroup"  
 android:ems="10"  
 android:hint="enter the age"  
 android:inputType="textPersonName" />  
  
 </TableRow>  
  
 <TableRow>  
 <Button  
 android:id="@+id/button1"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/edittextname4"  
 android:text="submit" />  
  
 </TableRow>  
  
 <TableRow>  
  
 <TextView  
 android:id="@+id/textname2"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/button1"  
 android:padding="20dp" />  
  
 </TableRow>  
  
</TableLayout>

MainActivity.java

package com.example.exp3;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.RadioButton;  
import android.widget.RadioGroup;  
import android.widget.TextView;  
  
public class MainActivity extends AppCompatActivity {  
 EditText edittextname1,edittextname2,edittextname3,edittextname4;  
 RadioGroup rdgroup;  
 RadioButton genderradiobutton;  
 Button button1;  
 TextView textname2;  
  
  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 edittextname3=(EditText)findViewById(R.id.*edittextname3*);  
 edittextname2=(EditText)findViewById(R.id.*edittextname2*);  
 edittextname1=(EditText)findViewById(R.id.*edittextname1*);  
 rdgroup=(RadioGroup)findViewById(R.id.*rdgroup*);  
 edittextname4=(EditText)findViewById(R.id.*edittextname4*);  
 button1=(Button)findViewById(R.id.*button1*);  
 textname2=(TextView)findViewById(R.id.*textname2*);  
  
 button1.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
  
 String name = edittextname3.getText().toString();  
 String name1 = edittextname2.getText().toString();  
 String name2 = edittextname1.getText().toString();  
 int selectid= rdgroup.getCheckedRadioButtonId();  
 genderradiobutton=(RadioButton)findViewById(selectid);  
 String name3=edittextname4.getText().toString();  
 textname2.setText("Name: \t"+name+"password: \t"+name1+"address: \t"+name2+"gender: \t"+genderradiobutton.getText()+"age: \t"+name3);  
 }  
 });  
  
 }  
}

OUTPUT:



**2d)Date picker**

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"  
 tools:context=".MainActivity">  
  
 <TextView  
 android:id="@+id/textView1"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_above="@+id/button1"  
 android:layout\_alignParentLeft="true"  
 android:layout\_alignParentStart="true"  
 android:layout\_marginBottom="102dp"  
 android:layout\_marginLeft="30dp"  
 android:layout\_marginStart="30dp"  
 android:text="" />  
  
 <Button  
 android:id="@+id/button1"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignParentBottom="true"  
 android:layout\_centerHorizontal="true"  
 android:layout\_marginBottom="20dp"  
 android:text="Change Date" />  
  
 <DatePicker  
 android:id="@+id/datePicker"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_above="@+id/textView1"  
 android:layout\_marginBottom="32dp" />  
  
</RelativeLayout>

**MainActivity.java**

package com.example.datepicker1;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.DatePicker;

import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

DatePicker picker;

Button displayDate;

TextView textview1;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

textview1=(TextView)findViewById(R.id.textView1);

picker=(DatePicker)findViewById(R.id.datePicker);

displayDate=(Button)findViewById(R.id.button1);

textview1.setText("Current Date: "+getCurrentDate());

displayDate.setOnClickListener(new View.OnClickListener(){

@Override

public void onClick(View view) {

textview1.setText("Change Date: "+getCurrentDate());

}

});

}

public String getCurrentDate(){

StringBuilder builder=new StringBuilder();;

builder.append((picker.getMonth() + 1)+"/");//month is 0 based

builder.append(picker.getDayOfMonth()+"/");

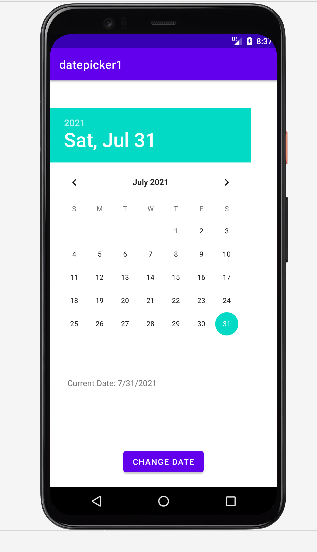
builder.append(picker.getYear());

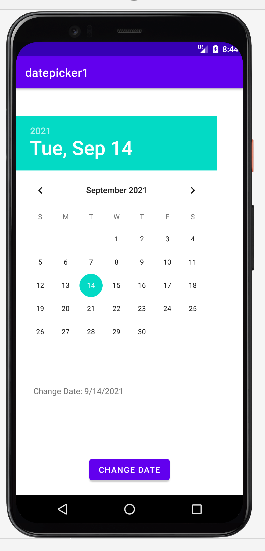
return builder.toString();

}

}

**Output:**





**2e)Spinner**

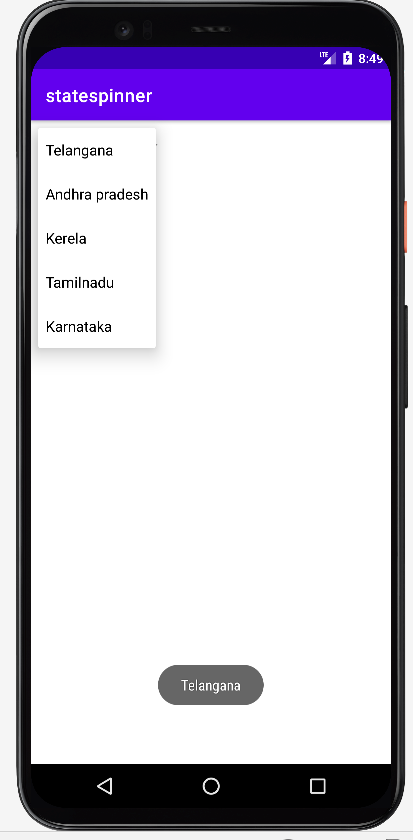
**activity\_main.xml**

*<?*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"  
 tools:context=".MainActivity">  
  
 <Spinner  
 android:id="@+id/spinner"  
 android:layout\_width="149dp"  
 android:layout\_height="40dp"  
 android:layout\_marginBottom="8dp"  
 android:layout\_marginEnd="8dp"  
 android:layout\_marginStart="8dp"  
 android:layout\_marginTop="8dp"  
 />  
  
</RelativeLayout>

**MainActivity.java**

package com.example.statespinner;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.AdapterView;  
import android.widget.ArrayAdapter;  
import android.widget.Spinner;  
import android.widget.Toast;  
  
public class MainActivity extends AppCompatActivity implements  
 AdapterView.OnItemSelectedListener {  
 String[] country = { "Telangana", "Andhra pradesh", "Kerela", "Tamilnadu", "Karnataka"};  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 *//Getting the instance of Spinner and applying OnItemSelectedListener on it* Spinner spin = (Spinner) findViewById(R.id.*spinner*);  
 spin.setOnItemSelectedListener(this);  
  
 *//Creating the ArrayAdapter instance having the country list* ArrayAdapter aa = new ArrayAdapter(this,android.R.layout.*simple\_spinner\_item*,country);  
 aa.setDropDownViewResource(android.R.layout.*simple\_spinner\_dropdown\_item*);  
 *//Setting the ArrayAdapter data on the Spinner* spin.setAdapter(aa);  
 }  
  
 *//Performing action onItemSelected and onNothing selected* @Override  
 public void onItemSelected(AdapterView<?> arg0, View arg1, int position, long id) {  
 Toast.*makeText*(getApplicationContext(),country[position] , Toast.*LENGTH\_LONG*).show();  
 }  
 @Override  
 public void onNothingSelected(AdapterView<?> arg0) {  
 *// TODO Auto-generated method stub* }  
}

**output:**



3. Develop an application that shows names as a list and on selecting a name it should show the

details of the candidate on the next screen with a “Back” button. If the screen is rotated to

landscape mode (width greater than height), then the screen should show list on left fragment

and details on right fragment instead of second screen with back button. Use Fragment

transactions and Rotation event listener.

**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">

<fragment android:id="@+id/fragment1"

android:name="com.example.fragment.fragment1"

android:layout\_width="0px"

android:layout\_height="match\_parent"

android:layout\_weight="1"

/>

<fragment android:id="@+id/fragment2"

android:name="com.example.fragment.fragment2"

android:layout\_width="0px"

android:layout\_height="match\_parent"

android:layout\_weight="1"

/>

</LinearLayout>

**MainActivity.java**

package com.example.fragment;

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);

}

**fragment\_fragment1.xml**

<?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="#F5F5DC"

tools:context="com.example.fragment.fragment1">

<!-- TODO: Update blank fragment layout -->

<TextView

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:text="hello world"

/>

</FrameLayout>

**fragment\_fragment2.xml**

<?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="#F0FFFF"

tools:context="com.example.fragment.fragment2">

<!-- TODO: Update blank fragment layout -->

<TextView

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:text="hello world1"

/>

</FrameLayout>

**fragment1.java**

package com.example.fragment;

import android.os.Bundle;

import android.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);

}

}

**fragment2.java**

package com.example.fragment;

import android.os.Bundle;

import android.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) {

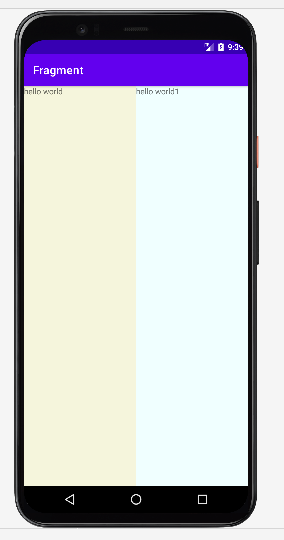
// Inflate the layout for this fragment

return inflater.inflate(R.layout.fragment\_fragment2, container, false);

}

}

Output:



4.a) Develop an application that uses a menu with 3 options for dialing a number, opening a website

and to send an SMS. On selecting an option, the appropriate action should be invoked using

intents

Dialing a number

**Activity\_main.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" >

<Button

android:id="@+id/buttonCall"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="call 0377778888" />

</LinearLayout>

**MainActivity.java**

package com.example.exp41;

import android.Manifest;

import android.content.Intent;

import android.content.pm.PackageManager;

import android.net.Uri;

import android.os.Bundle;

import androidx.core.app.ActivityCompat;

import androidx.appcompat.app.AppCompatActivity;

import android.view.View;

import android.widget.Button;

public class MainActivity extends AppCompatActivity {

private Button button;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

button = (Button) findViewById(R.id.buttonCall);

button.setOnClickListener(new View.OnClickListener() {

public void onClick(View arg0) {

Intent callIntent = new Intent(Intent.ACTION\_CALL);

callIntent.setData(Uri.parse("tel:0377778888"));

if (ActivityCompat.checkSelfPermission(MainActivity.this,

Manifest.permission.CALL\_PHONE) != PackageManager.PERMISSION\_GRANTED) {

return;

}

startActivity(callIntent);

}

});

}

}

**AndroidManifest.xml**

<?xml version="1.0" encoding="utf-8"?>

<manifest xmlns:android="http://schemas.android.com/apk/res/android"

package="com.example.exp41" >

<uses-permission android:name="android.permission.CALL\_PHONE" />

<application

android:allowBackup="true"

android:icon="@drawable/ic\_launcher\_background"

android:label="@string/app\_name"

android:theme="@style/Theme.AppCompat" >

<activity

android:name="com.example.exp41.MainActivity"

android:label="@string/app\_name" >

<intent-filter>

<action android:name="android.intent.action.MAIN" />

<category android:name="android.intent.category.LAUNCHER" />

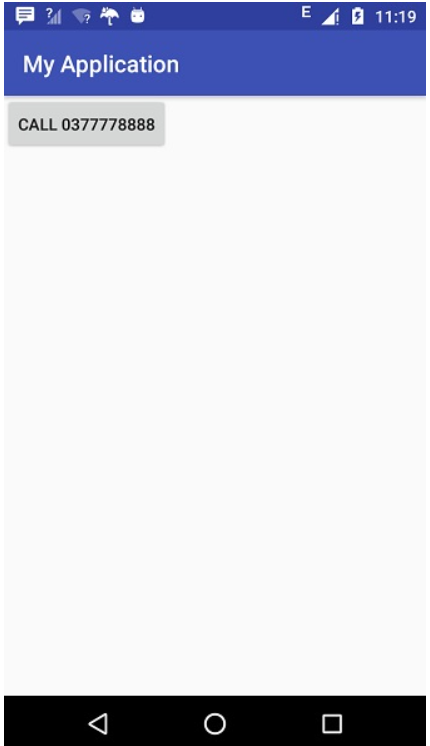
</intent-filter>

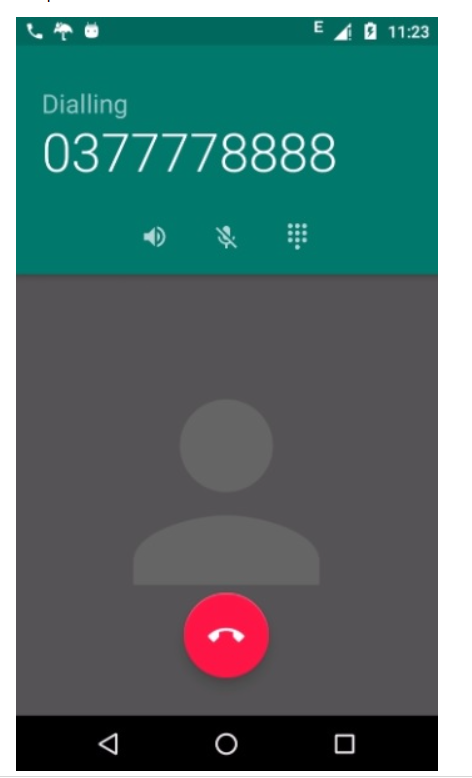
</activity>

</application>

</manifest>

Output:





4.b) Develop an application that uses a menu with 3 options for dialing a number, opening a website

and to send an SMS. On selecting an option, the appropriate action should be invoked using

intents.

Opening a website:

**Activity\_main.xml**

<?xml version="1.0" encoding="utf-8"?>

<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">

<Button

android:id="@+id/btnAmazon"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_centerInParent="true"

android:text="Amazon"

android:textStyle="bold" />

</RelativeLayout>

**MainActivity.java**

package com.example.exp43;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.content.Intent;

import android.net.Uri;

import android.view.View;

import android.widget.Button;

public class MainActivity extends AppCompatActivity {

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

Button button = findViewById(R.id.btnAmazon);

button.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

String url = "http://www.amazon.com";

startActivity(new Intent(Intent.ACTION\_VIEW, Uri.parse(url)));

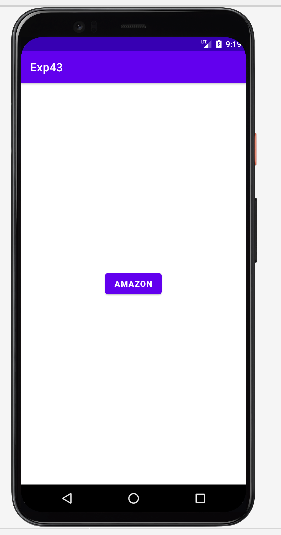
}

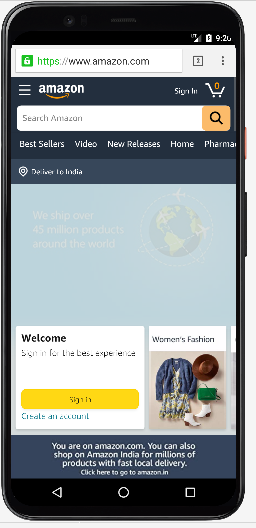
});

}

}

Output:





4.c) Develop an application that uses a menu with 3 options for dialing a number, opening a website

and to send an SMS. On selecting an option, the appropriate action should be invoked using

intents.

**Send an SMS**

**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="Mobile No" />  
 <EditText  
 android:id="@+id/mblTxt"  
 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="Message"  
 android:layout\_marginLeft="100dp" />  
 <EditText  
 android:id="@+id/msgTxt"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginLeft="100dp"  
 android:ems="10" />  
 <Button  
 android:id="@+id/btnSend"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginLeft="100dp"  
 android:text="Send SMS" />  
</LinearLayout>

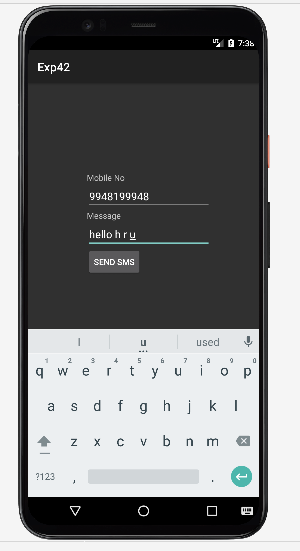
**Mainactivity.java**

package com.example.exp42;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.content.Intent;  
import android.net.Uri;  
import android.provider.Telephony;  
import android.telephony.SmsManager;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.Toast;  
  
public class MainActivity extends AppCompatActivity {  
  
 private EditText txtMobile;  
 private EditText txtMessage;  
 private Button btnSms;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 txtMobile = (EditText)findViewById(R.id.*mblTxt*);  
 txtMessage = (EditText)findViewById(R.id.*msgTxt*);  
 btnSms = (Button)findViewById(R.id.*btnSend*);  
 btnSms.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 try{  
 SmsManager smgr = SmsManager.*getDefault*();  
 smgr.sendTextMessage(txtMobile.getText().toString(),null,txtMessage.getText().toString(),null,null);  
 Toast.*makeText*(MainActivity.this, "SMS Sent Successfully", Toast.*LENGTH\_SHORT*).show();  
 }  
 catch (Exception e){  
 Toast.*makeText*(MainActivity.this, "SMS Failed to Send, Please try again", Toast.*LENGTH\_SHORT*).show();  
 }  
 }  
 });  
 }  
}

**AndroidManifest.xml**

*<?*xml version="1.0" encoding="utf-8"*?>*<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
 package="com.example.exp42">  
 <uses-permission android:name="android.permission.SEND\_SMS"/>  
 <application  
 android:allowBackup="true"  
 android:icon="@mipmap/ic\_launcher"  
 android:label="@string/app\_name"  
 android:roundIcon="@mipmap/ic\_launcher\_round"  
 android:supportsRtl="true"  
 android:theme="@style/Theme.AppCompat">  
 <activity android:name=".MainActivity">  
 <intent-filter>  
 <action android:name="android.intent.action.MAIN" />  
 <category android:name="android.intent.category.LAUNCHER" />  
 </intent-filter>  
 </activity>  
 </application>  
</manifest>

**Output:**



5)Develop an application that inserts some notifications into Notification area and whenever a

notification is inserted, it should show a toast with details of the notification.

**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"

tools:context=".MainActivity">

<TextView

android:id="@+id/textView1"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Notification Example"

android:layout\_alignParentTop="true"

android:layout\_centerHorizontal="true"

android:textSize="30dp" />

<TextView

android:id="@+id/textView2"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Tutorials point "

android:textColor="#ff87ff09"

android:textSize="30dp"

android:layout\_below="@+id/textView1"

android:layout\_centerHorizontal="true"

android:layout\_marginTop="48dp" />

<ImageButton

android:id="@+id/imageButton"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_below="@+id/textView2"

android:layout\_centerHorizontal="true"

android:layout\_marginTop="42dp" />

<Button

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Notification"

android:id="@+id/button"

android:layout\_marginTop="62dp"

android:layout\_below="@+id/imageButton"

android:layout\_centerHorizontal="true" />

</RelativeLayout>

**MainActivity.java**

package com.example.exp5;

import android.app.NotificationManager;

import android.app.PendingIntent;

import android.content.Context;

import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import androidx.appcompat.app.AppCompatActivity;

import androidx.core.app.NotificationCompat;

public class MainActivity extends AppCompatActivity {

Button b1;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

b1 = (Button)findViewById(R.id.button);

b1.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

addNotification();

}

});

}

private void addNotification() {

NotificationCompat.Builder builder =

new NotificationCompat.Builder(this)

.setContentTitle("Notifications Example")

.setContentText("This is a test notification");

Intent notificationIntent = new Intent(this, MainActivity.class);

PendingIntent contentIntent = PendingIntent.getActivity(this, 0, notificationIntent,

PendingIntent.FLAG\_UPDATE\_CURRENT);

builder.setContentIntent(contentIntent);

// Add as notification

NotificationManager manager = (NotificationManager) getSystemService(Context.NOTIFICATION\_SERVICE);

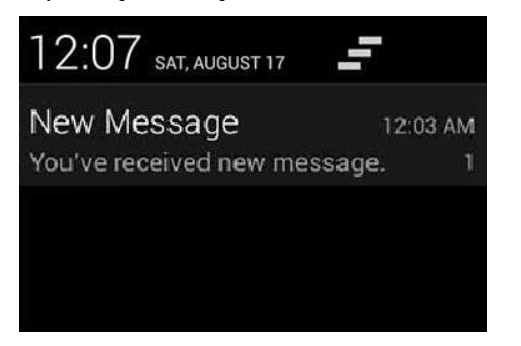
manager.notify(0, builder.build());

}

}

Output:





6. Create an application that uses a text file to store user names and passwords (tab separated

fields and one record per line). When the user submits a login name and password through a

screen, the details should be verified with the text file data and if they match, show a dialog

saying that login is successful. Otherwise, show the dialog with Login Failed message.

**Activity\_main.xml**

<?xml version="1.0" encoding="utf-8"?>

<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">

<TextView android:text = "Login" android:layout\_width="wrap\_content"

android:layout\_height = "wrap\_content"

android:id = "@+id/textview"

android:textSize = "35dp"

android:layout\_alignParentTop = "true"

android:layout\_centerHorizontal = "true" />

<TextView

android:layout\_width = "wrap\_content"

android:layout\_height = "wrap\_content"

android:text = "Tutorials point"

android:id = "@+id/textView"

android:layout\_below = "@+id/textview"

android:layout\_centerHorizontal = "true"

android:textColor = "#ff7aff24"

android:textSize = "35dp" />

<EditText

android:layout\_width = "wrap\_content"

android:layout\_height = "wrap\_content"

android:id = "@+id/editText"

android:hint = "Enter Name"

android:focusable = "true"

android:textColorHighlight = "#ff7eff15"

android:textColorHint = "#ffff25e6"

android:layout\_marginTop = "46dp"

android:layout\_below = "@+id/imageView"

android:layout\_alignParentLeft = "true"

android:layout\_alignParentStart = "true"

android:layout\_alignParentRight = "true"

android:layout\_alignParentEnd = "true" />

<ImageView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:id="@+id/imageView"

android:src="@drawable/abc"

android:layout\_below="@+id/textView"

android:layout\_centerHorizontal="true" />

<EditText

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:inputType="textPassword"

android:ems="10"

android:id="@+id/editText2"

android:layout\_below="@+id/editText"

android:layout\_alignParentLeft="true"

android:layout\_alignParentStart="true"

android:layout\_alignRight="@+id/editText"

android:layout\_alignEnd="@+id/editText"

android:textColorHint="#ffff299f"

android:hint="Password" />

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Attempts Left:"

android:id="@+id/textView2"

android:layout\_below="@+id/editText2"

android:layout\_alignParentLeft="true"

android:layout\_alignParentStart="true"

android:textSize="25dp" />

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="New Text"

android:id="@+id/textView3"

android:layout\_alignTop="@+id/textView2"

android:layout\_alignParentRight="true"

android:layout\_alignParentEnd="true"

android:layout\_alignBottom="@+id/textView2"

android:layout\_toEndOf="@+id/textview"

android:textSize="25dp"

android:layout\_toRightOf="@+id/textview" />

<Button

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="login"

android:id="@+id/button"

android:layout\_alignParentBottom="true"

android:layout\_toLeftOf="@+id/textview"

android:layout\_toStartOf="@+id/textview" />

<Button

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Cancel"

android:id="@+id/button2"

android:layout\_alignParentBottom="true"

android:layout\_toRightOf="@+id/textview"

android:layout\_toEndOf="@+id/textview" />

</RelativeLayout>

**MainActivity.java**

package com.example.exp6;

import android.os.Bundle;

import android.app.Activity;

import android.graphics.Color;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.TextView;

import android.widget.Toast;

public class MainActivity extends Activity {

Button b1,b2;

EditText ed1,ed2;

TextView tx1;

int counter = 3;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

b1 = (Button)findViewById(R.id.button);

ed1 = (EditText)findViewById(R.id.editText);

ed2 = (EditText)findViewById(R.id.editText2);

b2 = (Button)findViewById(R.id.button2);

tx1 = (TextView)findViewById(R.id.textView3);

tx1.setVisibility(View.GONE);

b1.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

if(ed1.getText().toString().equals("admin") &&

ed2.getText().toString().equals("admin")) {

Toast.makeText(getApplicationContext(),

"Redirecting...",Toast.LENGTH\_SHORT).show();

}else{

Toast.makeText(getApplicationContext(), "Wrong Credentials",Toast.LENGTH\_SHORT).show();

tx1.setVisibility(View.VISIBLE);

tx1.setBackgroundColor(Color.RED);

counter--;

tx1.setText(Integer.toString(counter));

if (counter == 0) {

b1.setEnabled(false);

}

}

}

});

b2.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

finish();

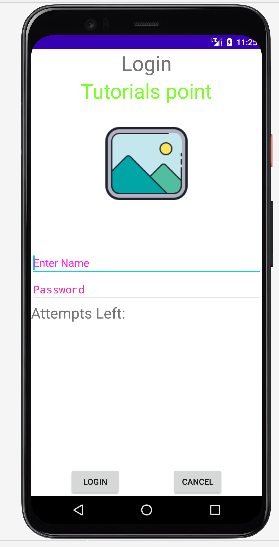
}

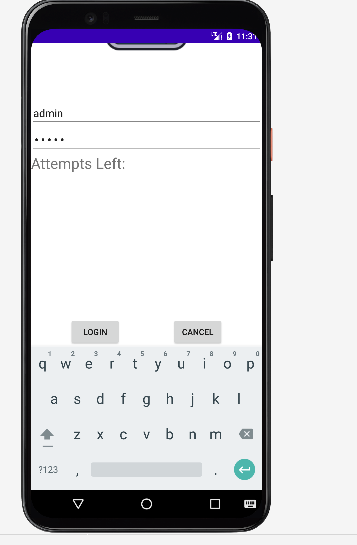
});

}

}

Output:





7.Create a user registration application that stores the user details in a database table.Activity\_main.xml

**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>

**MainActivity.java**

package com.example.exp7;

import android.content.Intent;

import androidx.appcompat.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();

}

});

}

}

**DetailsActivity.java**

package com.example.exp7;

import android.content.Intent;

import android.os.Bundle;

import androidx.appcompat.app.AppCompatActivity;

import android.view.View;

import android.widget.Button;

import android.widget.ListAdapter;

import android.widget.ListView;

import android.widget.SimpleAdapter;

import java.util.ArrayList;

import java.util.HashMap;

public class DetailsActivity extends AppCompatActivity {

Intent intent;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.details);

DbHandler db = new DbHandler(this);

ArrayList<HashMap<String, String>> userList = db.GetUsers();

ListView lv = (ListView) findViewById(R.id.user\_list);

ListAdapter adapter = new SimpleAdapter(DetailsActivity.this, userList, R.layout.list\_row,new String[]{"name","designation","location"}, new int[]{R.id.name, R.id.designation, R.id.location});

lv.setAdapter(adapter);

Button back = (Button)findViewById(R.id.btnBack);

back.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

intent = new Intent(DetailsActivity.this,MainActivity.class);

startActivity(intent);

}

});

}

}

**DbHandler.java**

package com.example.exp7;

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;

/

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;

}

}

**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>

**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"

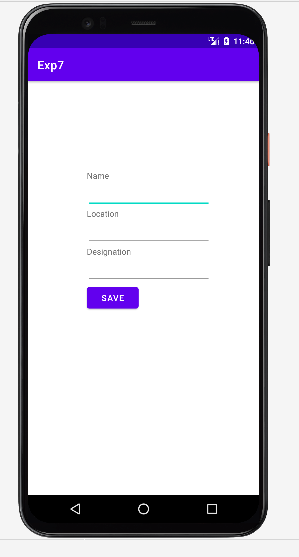
android:layout\_alignParentRight="true"

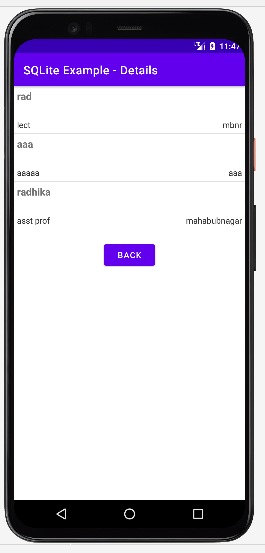
android:textColor="#343434"

android:textSize="14dp" />

</RelativeLayout>

Output:





8. Create a database and a user table where the details of login names and passwords are stored.

Insert some names and passwords initially. Now the login details entered by the user should

be verified with the database and an appropriate dialog should be shown to the user.

**Activity\_main.xml**

<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout android:layout\_width="368dp"

android:layout\_height="495dp"

xmlns:tools="http://schemas.android.com/tools"

tools:layout\_editor\_absoluteX="8dp"

tools:layout\_editor\_absoluteY="8dp"

xmlns:android="http://schemas.android.com/apk/res/android">

<TextView

android:id="@+id/textView2"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignParentTop="true"

android:layout\_centerHorizontal="true"

android:layout\_marginTop="104dp"

android:text="Sign In"

android:textColor="@android:color/holo\_red\_dark"

android:textSize="25sp" />

<EditText

android:id="@+id/Email"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_below="@+id/textView2"

android:layout\_centerHorizontal="true"

android:layout\_marginTop="26dp"

android:ems="10"

android:inputType="textPersonName"

android:text="Email ID" />

<EditText

android:id="@+id/Password"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignEnd="@+id/Email"

android:layout\_alignRight="@+id/Email"

android:layout\_centerVertical="true"

android:ems="10"

android:inputType="textPassword"

android:text="password" />

<Button

android:id="@+id/buttonSignIn"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignLeft="@+id/Password"

android:layout\_alignStart="@+id/Password"

android:layout\_below="@+id/Password"

android:layout\_marginTop="52dp"

android:backgroundTint="@color/colorAccent"

android:onClick="SignIN"

android:text="Sign In" />

<Button

android:id="@+id/buttonSignUp"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignEnd="@+id/Password"

android:layout\_alignRight="@+id/Password"

android:layout\_alignTop="@+id/buttonSignIn"

android:backgroundTint="@color/colorAccent"

android:onClick="SignUP"

android:text="Sign Up" />

</RelativeLayout>

**activity\_sign\_up.xml**

<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout android:layout\_width="368dp"

android:layout\_height="495dp"

xmlns:tools="http://schemas.android.com/tools"

tools:layout\_editor\_absoluteX="8dp"

tools:layout\_editor\_absoluteY="8dp"

xmlns:android="http://schemas.android.com/apk/res/android">

<TextView

android:id="@+id/tSignUP"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Sign Up"

android:textColor="@android:color/holo\_red\_dark"

android:textSize="25sp"

android:layout\_alignParentTop="true"

android:layout\_centerHorizontal="true"

android:layout\_marginTop="22dp" />

<EditText

android:id="@+id/tFirstName"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_below="@+id/tSignUP"

android:layout\_centerHorizontal="true"

android:layout\_marginTop="26dp"

android:ems="10"

android:inputType="textPersonName"

android:text="First Name" />

<EditText

android:id="@+id/tPassword"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:ems="10"

android:inputType="textPassword"

android:text="password"

android:layout\_below="@+id/tEmail"

android:layout\_alignLeft="@+id/tEmail"

android:layout\_alignStart="@+id/tEmail"

android:layout\_marginTop="23dp" />

<EditText

android:id="@+id/tLastName"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignLeft="@+id/tFirstName"

android:layout\_alignStart="@+id/tFirstName"

android:layout\_below="@+id/tFirstName"

android:layout\_marginTop="14dp"

android:ems="10"

android:inputType="textPersonName"

android:text="Last Name" />

<EditText

android:id="@+id/tEmail"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignEnd="@+id/tLastName"

android:layout\_alignRight="@+id/tLastName"

android:layout\_below="@+id/tLastName"

android:layout\_marginTop="25dp"

android:ems="10"

android:inputType="textPersonName"

android:text="Email ID" />

<Button

android:id="@+id/buttonOK"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignEnd="@+id/tPassword"

android:layout\_alignRight="@+id/tPassword"

android:layout\_below="@+id/tPassword"

android:layout\_marginTop="47dp"

android:background="@color/colorAccent"

android:onClick="OK"

android:text="OK" />

</RelativeLayout>

**DatabaseHelper.java**

package com.example.admin.androiddatabaseexample;

import android.content.Context;

import android.database.sqlite.SQLiteDatabase;

import android.database.sqlite.SQLiteDatabase.CursorFactory;

import android.database.sqlite.SQLiteOpenHelper;

import android.util.Log;

public class DataBaseHelper extends SQLiteOpenHelper {

public DataBaseHelper(Context context, String name, CursorFactory factory, int version) {

super(context, name, factory, version);

}

// Called when no database exists in disk and the helper class needs

// to create a new one.

@Override

public void onCreate(SQLiteDatabase \_db) {

try {

\_db.execSQL(LoginDatabaseAdapter.DATABASE\_CREATE);

}catch(Exception er){

Log.e("Error","exceptioin");

}

}

// Called when there is a database version mismatch meaning that the version

// of the database on disk needs to be upgraded to the current version.

@Override

public void onUpgrade(SQLiteDatabase \_db, int \_oldVersion, int \_newVersion)

{

// Log the version upgrade.

Log.w("TaskDBAdapter", "Upgrading from version " +\_oldVersion + " to " +\_newVersion + ", which will destroy all old data");

// Upgrade the existing database to conform to the new version. Multiple

// previous versions can be handled by comparing \_oldVersion and \_newVersion

// values.

// The simplest case is to drop the old table and create a new one.

\_db.execSQL("DROP TABLE IF EXISTS " + "LOGIN");

// Create a new one.

onCreate(\_db);

}

}

**LoginDatabaseAdapter.java**

package com.example.admin.androiddatabaseexample;

import android.app.AlertDialog;

import android.content.ContentValues;

import android.content.Context;

import android.content.DialogInterface;

import android.database.Cursor;

import android.database.SQLException;

import android.database.sqlite.SQLiteDatabase;

import android.util.Log;

import android.widget.Toast;

import java.util.ArrayList;

import java.util.List;

public class LoginDatabaseAdapter {

static final String DATABASE\_NAME = "database.db";

String ok="OK";

static final int DATABASE\_VERSION = 1;

public static String getPassword="";

public static final int NAME\_COLUMN = 1;

// TODO: Create public field for each column in your table.

// SQL Statement to create a new database.

static final String DATABASE\_CREATE = "create table LOGIN( ID integer primary key autoincrement,FIRSTNAME text,LASTNAME text,USERNAME text,PASSWORD text); ";

// Variable to hold the database instance

public static SQLiteDatabase db;

// Context of the application using the database.

private final Context context;

// Database open/upgrade helper

private static DataBaseHelper dbHelper;

public LoginDatabaseAdapter(Context \_context)

{

context = \_context;

dbHelper = new DataBaseHelper(context, DATABASE\_NAME, null, DATABASE\_VERSION);

}

// Method to openthe Database

public LoginDatabaseAdapter open() throws SQLException

{

db = dbHelper.getWritableDatabase(); return this;

}

// Method to close the Database

public void close()

{

db.close();

}

// method returns an Instance of the Database

public SQLiteDatabase getDatabaseInstance()

{

return db;

}

// method to insert a record in Table

public String insertEntry(String firstName,String lastName,String Id,String password)

{

try {

ContentValues newValues = new ContentValues();

// Assign values for each column.

newValues.put("FIRSTNAME", firstName);

newValues.put("LASTNAME", lastName);

newValues.put("USERNAME", Id);

newValues.put("PASSWORD", password);

// Insert the row into your table

db = dbHelper.getWritableDatabase();

long result=db.insert("LOGIN", null, newValues);

System.out.print(result);

Toast.makeText(context, "User Info Saved", Toast.LENGTH\_LONG).show();

}catch(Exception ex) {

System.out.println("Exceptions " +ex);

Log.e("Note", "One row entered");

}

return ok;

}

// method to delete a Record of UserName

public int deleteEntry(String UserName)

{

String where="USERNAME=?";

int numberOFEntriesDeleted= db.delete("LOGIN", where, new String[]{UserName}) ;

Toast.makeText(context, "Number fo Entry Deleted Successfully : "+numberOFEntriesDeleted, Toast.LENGTH\_LONG).show();

return numberOFEntriesDeleted;

}

// method to get the password of userName

public String getSinlgeEntry(String userName)

{

db=dbHelper.getReadableDatabase();

Cursor cursor=db.query("LOGIN", null, "USERNAME=?", new String[]{userName}, null, null, null);

if(cursor.getCount()<1) // UserName Not Exist

return "NOT EXIST";

cursor.moveToFirst();

getPassword= cursor.getString(cursor.getColumnIndex("PASSWORD"));

return getPassword;

}

// Method to Update an Existing

public void updateEntry(String userName,String password)

{

// create object of ContentValues

ContentValues updatedValues = new ContentValues();

// Assign values for each Column.

updatedValues.put("USERNAME", userName);

updatedValues.put("PASSWORD", password);

String where="USERNAME = ?";

db.update("LOGIN",updatedValues, where, new String[]{userName});

}

}

**MainActivity.java**

package com.example.admin.androiddatabaseexample;

import android.app.AlertDialog;

import android.content.Context;

import android.content.DialogInterface;

import android.content.Intent;

import android.support.v7.app.AppCompatActivity;

import android.os.Bundle;

import android.util.Log;

import android.view.View;

import android.widget.EditText;

public class MainActivity extends AppCompatActivity {

private EditText etUserEmail;

private EditText etPassword;

public String username;

private String password;

String storedPassword;

Context context=this;

LoginDatabaseAdapter loginDataBaseAdapter;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

// create the instance of Databse

loginDataBaseAdapter=new LoginDatabaseAdapter(getApplicationContext());

etUserEmail = (EditText) findViewById(R.id.Email);

etPassword = (EditText) findViewById(R.id.Password);

}

public void SignIN(View view) {

try {

loginDataBaseAdapter = loginDataBaseAdapter.open();

username = etUserEmail.getText().toString();

password = etPassword.getText().toString();

if (username.equals("") || password.equals("")) {

AlertDialog alertDialog = new AlertDialog.Builder(this).create();

alertDialog.setTitle("ALERT!");

alertDialog.setMessage("Fill All Fields");

alertDialog.setButton("OK", new DialogInterface.OnClickListener() {

public void onClick(DialogInterface dialog, int which) {

}

});

alertDialog.show();

}

// fetch the Password form database for respective user name

if (!username.equals("")) {

storedPassword = loginDataBaseAdapter.getSinlgeEntry(username);

// check if the Stored password matches with Password entered by user

if (password.equals(storedPassword)) {

Intent intent1 = new Intent(MainActivity.this, DisplayInfoActivity.class);

startActivity(intent1);

// finish();

}

else

{

AlertDialog alertDialog = new AlertDialog.Builder(this).create();

alertDialog.setTitle("ALERT!");

alertDialog.setMessage("Incorrect Username OR Password");

alertDialog.setButton("OK", new DialogInterface.OnClickListener() {

public void onClick(DialogInterface dialog, int which) {

}

});

alertDialog.show();

}

}

}

catch (Exception ex)

{

Log.e("Error", "error login");

}

}

public void SignUP(View view)

{

Intent intent = new Intent(MainActivity.this, SignUp.class);

startActivity(intent);

}

@Override

protected void onDestroy()

{

// TODO Auto-generated method stub

super.onDestroy();

// Close The Database

loginDataBaseAdapter.close();

}

}

**SignUp.java**

package com.example.admin.androiddatabaseexample;

import android.support.v7.app.AppCompatActivity;

import android.os.Bundle;

import android.app.AlertDialog;

import android.content.Context;

import android.content.DialogInterface;

import android.content.Intent;

import android.view.View;

import android.widget.EditText;

public class SignUp extends AppCompatActivity {

Context context=this;

private EditText et\_first\_name;

private EditText et\_last\_name;

private EditText et\_ID;

private EditText et\_password;

private String firstName;

private String lastName;

private String userName;

private String password;

String receieveOk;

LoginDatabaseAdapter loginDataBaseAdapter;

@Override

protected void onCreate(Bundle savedInstanceState)

{

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_sign\_up);

// get Instance of Database Adapter

loginDataBaseAdapter=new LoginDatabaseAdapter(getApplicationContext());

loginDataBaseAdapter=loginDataBaseAdapter.open();

et\_first\_name = (EditText) findViewById(R.id.tFirstName);

et\_last\_name = (EditText) findViewById(R.id.tLastName);

et\_ID = (EditText) findViewById(R.id.tEmail);

et\_password = (EditText) findViewById(R.id.tPassword);

}

public void OK(View view)

{

firstName = et\_first\_name.getText().toString();

lastName = et\_last\_name.getText().toString();

userName = et\_ID.getText().toString();

password = et\_ID.getText().toString();

if((firstName.equals(""))||(lastName.equals(""))||(userName.equals(""))||(password.equals("")))

{

//Display Message

AlertDialog alertDialog = new AlertDialog.Builder(this).create();

alertDialog.setTitle("ALERT!");

alertDialog.setMessage("All fields must be filled");

alertDialog.setButton("OK", new DialogInterface.OnClickListener() {

public void onClick(DialogInterface dialog, int which) {

}

});

alertDialog.show();

}

else

{

// Save the Data in Database

receieveOk=loginDataBaseAdapter.insertEntry(firstName,lastName,userName, password);

AlertDialog alertDialog = new AlertDialog.Builder(this).create();

alertDialog.setTitle("SUCCESSFUL!");

alertDialog.setMessage("SIGN IN NOW " + receieveOk);

alertDialog.setButton("OK", new DialogInterface.OnClickListener() {

public void onClick(DialogInterface dialog, int which) {

Intent intent = new Intent(SignUp.this, MainActivity.class);

startActivity(intent);

}

});

alertDialog.show();

finish();

}

}

@Override

protected void onDestroy()

{

// TODO Auto-generated method stub

super.onDestroy();

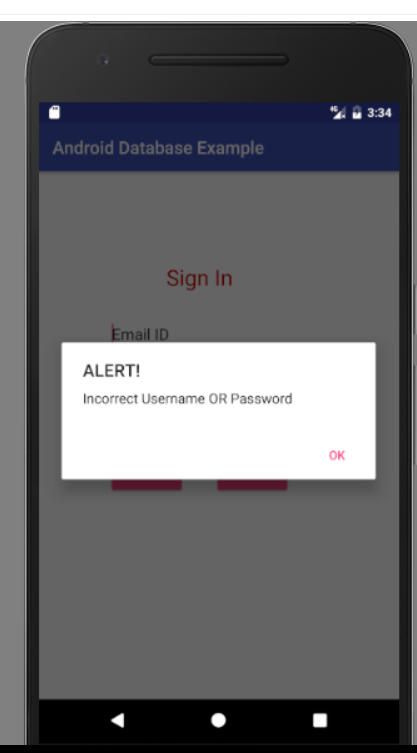
loginDataBaseAdapter.close();

}

}

Output:





9. Create an admin application for the user table, which shows all records as a list and the admin

can select any record for edit or modify. The results should be reflected in the table.

**Activity\_main.xml**

<?xml version="1.0" encoding="utf-8"?>

<LinearLayout 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"

android:orientation="vertical">

<EditText

android:id="@+id/name"

android:layout\_width="match\_parent"

android:hint="Enter Name"

android:layout\_height="wrap\_content" />

<EditText

android:id="@+id/salary"

android:layout\_width="match\_parent"

android:inputType="numberDecimal"

android:hint="Enter Salary"

android:layout\_height="wrap\_content" />

<LinearLayout

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"><Button

android:id="@+id/save"

android:text="Save"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content" />

<Button

android:id="@+id/refresh"

android:text="Refresh"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content" />

<Button

android:id="@+id/udate"

android:text="Update"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content" />

</LinearLayout>

<ListView

android:id="@+id/listView"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content">

</ListView>

</LinearLayout>

**MainActivity.java**

package com.example.andy.myapplication;

import android.os.Bundle;

import android.support.v7.app.AppCompatActivity;

import android.view.View;

import android.widget.ArrayAdapter;

import android.widget.Button;

import android.widget.EditText;

import android.widget.ListView;

import android.widget.Toast;

import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {

Button save, refresh;

EditText name, salary;

private ListView listView;

@Override

protected void onCreate(Bundle readdInstanceState) {

super.onCreate(readdInstanceState);

setContentView(R.layout.activity\_main);

final DatabaseHelper helper = new DatabaseHelper(this);

final ArrayList array\_list = helper.getAllCotacts();

name = findViewById(R.id.name);

salary = findViewById(R.id.salary);

listView = findViewById(R.id.listView);

final ArrayAdapter arrayAdapter = new ArrayAdapter(MainActivity.this, android.R.layout.simple\_list\_item\_1, array\_list);

listView.setAdapter(arrayAdapter);

findViewById(R.id.refresh).setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

array\_list.clear();

array\_list.addAll(helper.getAllCotacts());

arrayAdapter.notifyDataSetChanged();

listView.invalidateViews();

listView.refreshDrawableState();

}

});

findViewById(R.id.save).setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

if (!name.getText().toString().isEmpty() && !salary.getText().toString().isEmpty()) {

if (helper.insert(name.getText().toString(), salary.getText().toString())) {

Toast.makeText(MainActivity.this, "Inserted", Toast.LENGTH\_LONG).show();

} else {

Toast.makeText(MainActivity.this, "NOT Inserted", Toast.LENGTH\_LONG).show();

}

} else {

name.setError("Enter NAME");

salary.setError("Enter Salary");

}

}

});

}

}

**DatabaseHelper.java**

package com.example.andy.myapplication;

import android.content.ContentValues;

import android.content.Context;

import android.database.Cursor;

import android.database.sqlite.SQLiteDatabase;

import android.database.sqlite.SQLiteException;

import android.database.sqlite.SQLiteOpenHelper;

import java.io.IOException;

import java.util.ArrayList;

class DatabaseHelper extends SQLiteOpenHelper {

public static final String DATABASE\_NAME = "salaryDatabase3";

public static final String CONTACTS\_TABLE\_NAME = "SalaryDetails";

public DatabaseHelper(Context context) {

super(context,DATABASE\_NAME,null,1);

}

@Override

public void onCreate(SQLiteDatabase db) {

try {

db.execSQL(

"create table "+ CONTACTS\_TABLE\_NAME +"(id INTEGER PRIMARY KEY, name text,salary text )"

);

} catch (SQLiteException e) {

try {

throw new IOException(e);

} catch (IOException e1) {

e1.printStackTrace();

}

}

}

@Override

public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion) {

db.execSQL("DROP TABLE IF EXISTS "+CONTACTS\_TABLE\_NAME);

onCreate(db);

}

public boolean insert(String s, String s1) {

SQLiteDatabase db = this.getWritableDatabase();

ContentValues contentValues = new ContentValues();

contentValues.put("name", s);

contentValues.put("salary", s1);

db.replace(CONTACTS\_TABLE\_NAME, null, contentValues);

return true;

}

public ArrayList getAllCotacts() {

SQLiteDatabase db = this.getReadableDatabase();

ArrayList<String> array\_list = new ArrayList<String>();

Cursor res = db.rawQuery( "select \* from "+CONTACTS\_TABLE\_NAME+" WHERE salary >'10' OR name LIKE 'Sa%' ", null );

res.moveToFirst();

while(res.isAfterLast() == false) {

array\_list.add(res.getString(res.getColumnIndex("name")));

res.moveToNext();

}

return array\_list;

}

public boolean update(String s, String s1) {

SQLiteDatabase db = this.getReadableDatabase();

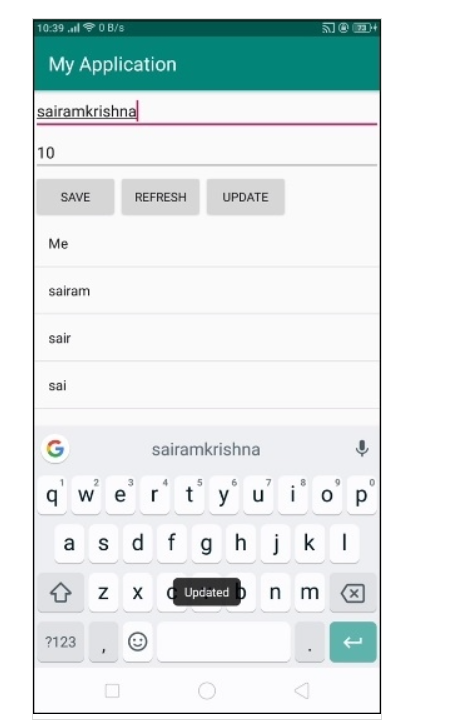
db.execSQL("UPDATE "+CONTACTS\_TABLE\_NAME+" SET name = "+"'"+s+"' "+ "WHERE salary = "+"'"+s1+"'");

return true;

}

}

Output:



10. Develop an application that shows all contacts of the phone along with details like name, phone

number, mobile number etc.

**Activity\_main.xml**

MainActivity.java

package com.jackrutorial.readcontactsexample;

import android.annotation.TargetApi;

import android.app.AlertDialog;

import android.content.ContentResolver;

import android.content.DialogInterface;

import android.content.pm.PackageManager;

import android.database.Cursor;

import android.os.Build;

import android.provider.ContactsContract;

import android.support.v4.app.ActivityCompat;

import android.support.v4.content.ContextCompat;

import android.support.v7.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.ListView;

import android.widget.Toast;

import java.util.ArrayList;

import java.util.List;

public class MainActivity extends AppCompatActivity {

public static final int PERMISSIONS\_REQUEST\_READ\_CONTACTS = 1;

MyCustomAdapter dataAdapter = null;

ListView listView;

Button btnGetContacts;

List<ContactsInfo> contactsInfoList;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

btnGetContacts = (Button) findViewById(R.id.btnGetContacts);

listView = (ListView) findViewById(R.id.lstContacts);

listView.setAdapter(dataAdapter);

btnGetContacts.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

requestContactPermission();

}

});

}

private void getContacts(){

ContentResolver contentResolver = getContentResolver();

String contactId = null;

String displayName = null;

contactsInfoList = new ArrayList<ContactsInfo>();

Cursor cursor = getContentResolver().query(ContactsContract.Contacts.CONTENT\_URI, null, null, null, ContactsContract.CommonDataKinds.Phone.DISPLAY\_NAME + " ASC");

if (cursor.getCount() > 0) {

while (cursor.moveToNext()) {

int hasPhoneNumber = Integer.parseInt(cursor.getString(cursor.getColumnIndex(ContactsContract.Contacts.HAS\_PHONE\_NUMBER)));

if (hasPhoneNumber > 0) {

ContactsInfo contactsInfo = new ContactsInfo();

contactId = cursor.getString(cursor.getColumnIndex(ContactsContract.Contacts.\_ID));

displayName = cursor.getString(cursor.getColumnIndex(ContactsContract.Contacts.DISPLAY\_NAME));

contactsInfo.setContactId(contactId);

contactsInfo.setDisplayName(displayName);

Cursor phoneCursor = getContentResolver().query(

ContactsContract.CommonDataKinds.Phone.CONTENT\_URI,

null,

ContactsContract.CommonDataKinds.Phone.CONTACT\_ID + " = ?",

new String[]{contactId},

null);

if (phoneCursor.moveToNext()) {

String phoneNumber = phoneCursor.getString(phoneCursor.getColumnIndex(ContactsContract.CommonDataKinds.Phone.NUMBER));

contactsInfo.setPhoneNumber(phoneNumber);

}

phoneCursor.close();

contactsInfoList.add(contactsInfo);

}

}

}

cursor.close();

dataAdapter = new MyCustomAdapter(MainActivity.this, R.layout.contact\_info, contactsInfoList);

listView.setAdapter(dataAdapter);

}

public void requestContactPermission() {

if (Build.VERSION.SDK\_INT >= Build.VERSION\_CODES.M) {

if (ContextCompat.checkSelfPermission(this, android.Manifest.permission.READ\_CONTACTS) != PackageManager.PERMISSION\_GRANTED) {

if (ActivityCompat.shouldShowRequestPermissionRationale(this,

android.Manifest.permission.READ\_CONTACTS)) {

AlertDialog.Builder builder = new AlertDialog.Builder(this);

builder.setTitle("Read contacts access needed");

builder.setPositiveButton(android.R.string.ok, null);

builder.setMessage("Please enable access to contacts.");

builder.setOnDismissListener(new DialogInterface.OnDismissListener() {

@TargetApi(Build.VERSION\_CODES.M)

@Override

public void onDismiss(DialogInterface dialog) {

requestPermissions(

new String[]

{android.Manifest.permission.READ\_CONTACTS}

, PERMISSIONS\_REQUEST\_READ\_CONTACTS);

}

});

builder.show();

} else {

ActivityCompat.requestPermissions(this,

new String[]{android.Manifest.permission.READ\_CONTACTS},

PERMISSIONS\_REQUEST\_READ\_CONTACTS);

}

} else {

getContacts();

}

} else {

getContacts();

}

}

@Override

public void onRequestPermissionsResult(int requestCode,

String permissions[], int[] grantResults) {

switch (requestCode) {

case PERMISSIONS\_REQUEST\_READ\_CONTACTS: {

if (grantResults.length > 0

&& grantResults[0] == PackageManager.PERMISSION\_GRANTED) {

getContacts();

} else {

Toast.makeText(this, "You have disabled a contacts permission", Toast.LENGTH\_LONG).show();

}

return;

}

}

}

}

**ContactsInfo.java**

package com.jackrutorial.readcontactsexample;

public class ContactsInfo {

private String contactId;

private String displayName;

private String phoneNumber;

public String getContactId() {

return contactId;

}

public void setContactId(String contactId) {

this.contactId = contactId;

}

public String getDisplayName() {

return displayName;

}

public void setDisplayName(String displayName) {

this.displayName = displayName;

}

public String getPhoneNumber() {

return phoneNumber;

}

public void setPhoneNumber(String phoneNumber) {

this.phoneNumber = phoneNumber;

}

}

**MyCustomAdapter.java**

package com.jackrutorial.readcontactsexample;

import android.content.Context;

import android.support.annotation.NonNull;

import android.view.LayoutInflater;

import android.view.View;

import android.view.ViewGroup;

import android.widget.ArrayAdapter;

import android.widget.CheckBox;

import android.widget.TextView;

import java.util.List;

public class MyCustomAdapter extends ArrayAdapter {

private List contactsInfoList;

private Context context;

public MyCustomAdapter(@NonNull Context context, int resource, @NonNull List objects) {

super(context, resource, objects);

this.contactsInfoList = objects;

this.context = context;

}

private class ViewHolder {

TextView displayName;

TextView phoneNumber;

}

@Override

public View getView(int position, View convertView, ViewGroup parent) {

ViewHolder holder = null;

if (convertView == null) {

LayoutInflater vi = (LayoutInflater) context.getSystemService(Context.LAYOUT\_INFLATER\_SERVICE);

convertView = vi.inflate(R.layout.contact\_info, null);

holder = new ViewHolder();

holder.displayName = (TextView) convertView.findViewById(R.id.displayName);

holder.phoneNumber = (TextView) convertView.findViewById(R.id.phoneNumber);

convertView.setTag(holder);

} else {

holder = (ViewHolder) convertView.getTag();

}

ContactsInfo contactsInfo = contactsInfoList.get(position);

holder.displayName.setText(contactsInfo.getDisplayName());

holder.phoneNumber.setText(contactsInfo.getPhoneNumber());

return convertView;

}

}

AndroidManifest.xml

<?xml version="1.0" encoding="utf-8"?>

<manifest xmlns:android="http://schemas.android.com/apk/res/android"

package="com.jackrutorial.readcontactsexample">

<uses-permission android:name="android.permission.READ\_CONTACTS" />

<application

android:allowBackup="true"

android:icon="@mipmap/ic\_launcher"

android:label="@string/app\_name"

android:roundIcon="@mipmap/ic\_launcher\_round"

android:supportsRtl="true"

android:theme="@style/AppTheme">

<activity android:name=".MainActivity">

<intent-filter>

<action android:name="android.intent.action.MAIN" />

<category android:name="android.intent.category.LAUNCHER" />

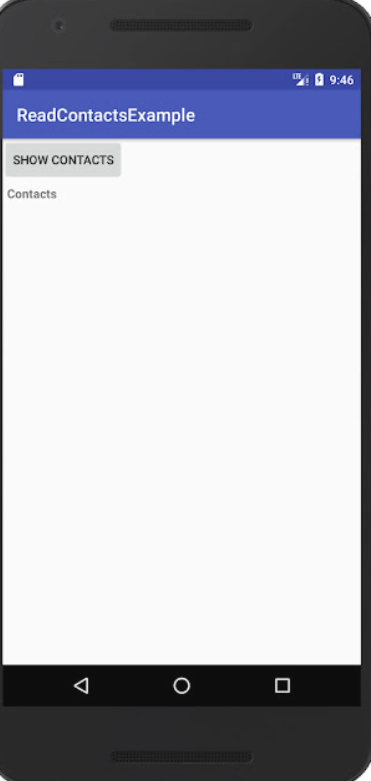
</intent-filter>

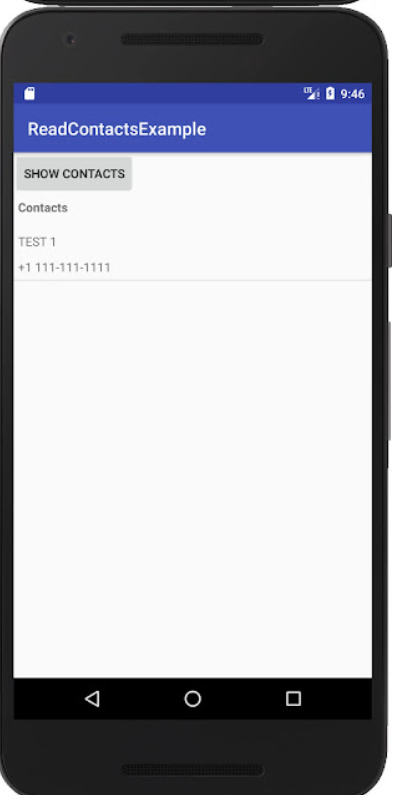
</activity>

</application>

</manifest>

Output:





11. Create an application that saves user information like name, age, gender etc. in shared

preference and retrieves them when the program restarts.

**Activity\_main.xml**

<?xml version="1.0" encoding="utf-8"?>

<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"

tools:ignore="HardcodedText">

<TextView

android:id="@+id/textview"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_centerHorizontal="true"

android:layout\_marginTop="32dp"

android:text="Shared Preferences Demo"

android:textColor="@android:color/black"

android:textSize="24sp" />

<!--EditText to take the data from the user

and save the data in SharedPreferences-->

<EditText

android:id="@+id/edit1"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_below="@+id/textview"

android:layout\_marginStart="16dp"

android:layout\_marginTop="8dp"

android:layout\_marginEnd="16dp"

android:hint="Enter your Name"

android:padding="10dp" />

<!--EditText to take the data from the user and

save the data in SharedPreferences-->

<EditText

android:id="@+id/edit2"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_below="@+id/edit1"

android:layout\_marginStart="16dp"

android:layout\_marginTop="8dp"

android:layout\_marginEnd="16dp"

android:hint="Enter your Age"

android:padding="10dp" />

</RelativeLayout>

**MainActivity.java**

package com.example.exp11;

import androidx.appcompat.app.AppCompatActivity;

import android.content.SharedPreferences;

import android.os.Bundle;

import android.widget.EditText;

public class MainActivity extends AppCompatActivity {

private EditText name, age;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

name = findViewById(R.id.edit1);

age = findViewById(R.id.edit2);

}

// Fetch the stored data in onResume()

// Because this is what will be called

// when the app opens again

@Override

protected void onResume() {

super.onResume();

// Fetching the stored data

// from the SharedPreference

SharedPreferences sh = getSharedPreferences("MySharedPref", MODE\_PRIVATE);

String s1 = sh.getString("name", "");

int a = sh.getInt("age", 0);

// Setting the fetched data

// in the EditTexts

name.setText(s1);

age.setText(String.valueOf(a));

}

// Store the data in the SharedPreference

// in the onPause() method

// When the user closes the application

// onPause() will be called

// and data will be stored

@Override

protected void onPause() {

super.onPause();

// Creating a shared pref object

// with a file name "MySharedPref"

// in private mode

SharedPreferences sharedPreferences = getSharedPreferences("MySharedPref", MODE\_PRIVATE);

SharedPreferences.Editor myEdit = sharedPreferences.edit();

// write all the data entered by the user in SharedPreference and apply

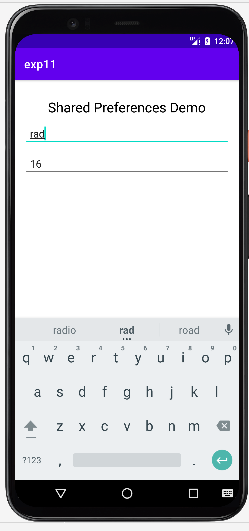
myEdit.putString("name", name.getText().toString());

myEdit.putInt("age", Integer.parseInt(age.getText().toString()));

myEdit.apply();

}

}



12. Create an alarm that rings every Sunday at 8:00 AM. Modify it to use a time picker to set alarm

time.

**Activity\_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="match\_parent"

android:orientation="vertical">

<!--Added Time picker just to pick the alarm time-->

<!--gravity is aligned to center-->

<TimePicker

android:id="@+id/timePicker"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_gravity="center" />

<!--Added Toggle Button to set the alarm on or off-->

<!--ByDefault toggleButton is set to false-->

<ToggleButton

android:id="@+id/toggleButton"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_gravity="center"

android:layout\_margin="20dp"

android:checked="false"

android:onClick="OnToggleClicked" />

<!--"OnToggleClicked" method will be implemented in MainActivity.java -->

</LinearLayout>

**MainActivity.java**

import android.app.AlarmManager;

import android.app.PendingIntent;

import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.TimePicker;

import android.widget.Toast;

import android.widget.ToggleButton;

import androidx.appcompat.app.AppCompatActivity;

import java.util.Calendar;

public class MainActivity extends AppCompatActivity {

TimePicker alarmTimePicker;

PendingIntent pendingIntent;

AlarmManager alarmManager;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

alarmTimePicker = (TimePicker) findViewById(R.id.timePicker);

alarmManager = (AlarmManager) getSystemService(ALARM\_SERVICE);

}

// OnToggleClicked() method is implemented the time functionality

public void OnToggleClicked(View view) {

long time;

if (((ToggleButton) view).isChecked()) {

Toast.makeText(MainActivity.this, "ALARM ON", Toast.LENGTH\_SHORT).show();

Calendar calendar = Calendar.getInstance();

// calender is called to get current time in hour and minute

calendar.set(Calendar.HOUR\_OF\_DAY, alarmTimePicker.getCurrentHour());

calendar.set(Calendar.MINUTE, alarmTimePicker.getCurrentMinute());

// using intent i have class AlarmReceiver class which inherits

// BroadcastReceiver

Intent intent = new Intent(this, AlarmReceiver.class);

// we call broadcast using pendingIntent

pendingIntent = PendingIntent.getBroadcast(this, 0, intent, 0);

time = (calendar.getTimeInMillis() - (calendar.getTimeInMillis() % 60000));

if (System.currentTimeMillis() > time) {

// setting time as AM and PM

if (calendar.AM\_PM == 0)

time = time + (1000 \* 60 \* 60 \* 12);

else

time = time + (1000 \* 60 \* 60 \* 24);

}

// Alarm rings continuously until toggle button is turned off

alarmManager.setRepeating(AlarmManager.RTC\_WAKEUP, time, 10000, pendingIntent);

// alarmManager.set(AlarmManager.RTC\_WAKEUP, System.currentTimeMillis() + (time \* 1000), pendingIntent);

} else {

alarmManager.cancel(pendingIntent);

Toast.makeText(MainActivity.this, "ALARM OFF", Toast.LENGTH\_SHORT).show();

}

}

}

**AlarmReceiver.java**

import android.content.BroadcastReceiver;

import android.content.Context;

import android.content.Intent;

import android.media.Ringtone;

import android.media.RingtoneManager;

import android.net.Uri;

import android.os.Build;

import android.os.Vibrator;

import android.widget.Toast;

import androidx.annotation.RequiresApi;

public class AlarmReceiver extends BroadcastReceiver {

@RequiresApi(api = Build.VERSION\_CODES.Q)

@Override

// implement onReceive() method

public void onReceive(Context context, Intent intent) {

// we will use vibrator first

Vibrator vibrator = (Vibrator) context.getSystemService(context.VIBRATOR\_SERVICE);

vibrator.vibrate(4000);

Toast.makeText(context, "Alarm! Wake up! Wake up!", Toast.LENGTH\_LONG).show();

Uri alarmUri = RingtoneManager.getDefaultUri(RingtoneManager.TYPE\_ALARM);

if (alarmUri == null) {

alarmUri = RingtoneManager.getDefaultUri(RingtoneManager.TYPE\_NOTIFICATION);

}

// setting default ringtone

Ringtone ringtone = RingtoneManager.getRingtone(context, alarmUri);

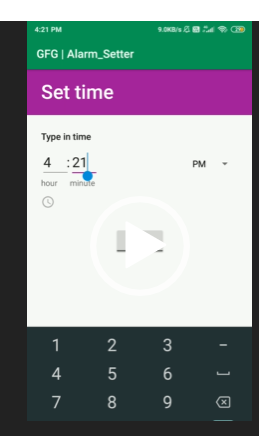
// play ringtone

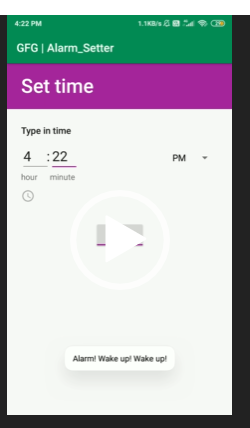
ringtone.play();

}

}

Output:





13. Create an application that shows the given URL (from a text field) in a browser.

**Activity\_main.xml**

<?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"

tools:context=".MainActivity">

<!-- add an edittext to input text -->

<EditText

android:id="@+id/editText1"

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

android:layout\_alignParentTop="true"

android:layout\_centerHorizontal="true"

android:layout\_marginTop="136dp"

android:ems="10"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent" />

<!-- add a button for click -->

<Button

android:id="@+id/button1"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_below="@+id/editText1"

android:layout\_centerHorizontal="true"

android:layout\_marginTop="49dp"

android:layout\_marginEnd="132dp"

android:text="Click"

app:layout\_constraintEnd\_toEndOf="@+id/editText1"

app:layout\_constraintTop\_toBottomOf="@+id/editText1" />

</android.support.constraint.ConstraintLayout>

**MainActivity.java**

package org.geeksforgeeks.implicitIntent\_example;

import android.app.Activity;

import android.content.Intent;

import android.net.Uri;

import android.os.Bundle;

import android.view.View;

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);

// Bind the components to their respective objects

// by assigning their IDs

// with the help of findViewById() method

final EditText editText1 = (EditText)findViewById(R.id.editText1);

Button button = (Button)findViewById(R.id.button1);

// implementation of onClick event for Implicit Intent

button.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v)

{

// performing webpage open action

String url = editText1.getText().toString();

Intent intent = new Intent(Intent.ACTION\_VIEW, Uri.parse(url));

startActivity(intent);

}

});

}

}

Output:



