ANDROID LAB

1. Create an Android application that shows “Welcome to Android” and run it on the emulator.

activity.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 World!"

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.labcycle1;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class MainActivity extends AppCompatActivity {

@Override

protected void onCreate(Bundle savedInstanceState) {

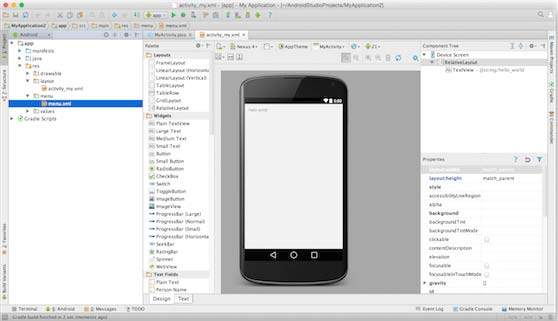
super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

}

}

output :



2. Create an application that displays a dialog window using an activity.

activity\_main.xml;;;;

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

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

android:id="@+id/RelativeLayout1"

android:layout\_width="fill\_parent"

android:layout\_height="fill\_parent"

android:background="#d8dff2"

android:orientation="vertical" >

<Button

android:id="@+id/button1"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_centerHorizontal="true"

android:layout\_centerVertical="true"

android:layout\_marginTop="183dp"

android:background="#3790e8"

android:text="Start a floating Activity" />

</RelativeLayout>

mainactivity.java;;;

package com.example.dlab;

import android.app.Activity;

import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.view.View.OnClickListener;

import android.widget.Button;

public class MainActivity extends Activity {

Button btnsecond\_activity;

/\*\* Called when the activity is first created. \*/

@Override

public void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

btnsecond\_activity=(Button)findViewById(R.id.button1);

btnsecond\_activity.setOnClickListener(new OnClickListener() {

@Override

public void onClick(View v) {

// TODO Auto-generated method stub

Intent intent=new Intent(getApplicationContext(), Main2Activity.class);

startActivity(intent);

}

});

}

}

2nd activity

activity\_main2.xml;;;;;

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

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

android:layout\_width="150dip"

android:layout\_height="100dip"

android:orientation="vertical" >

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginLeft="7dip"

android:layout\_marginTop="40dip"

android:text="I am a floating Activity" />

</LinearLayout>

Main2activity.java;;;;;

package com.example.dlab;

import android.app.Activity;

import android.os.Bundle;

import android.view.Window;

public class Main2Activity extends Activity{

@Override

protected void onCreate(Bundle savedInstanceState) {

// TODO Auto-generated method stub

super.onCreate(savedInstanceState);

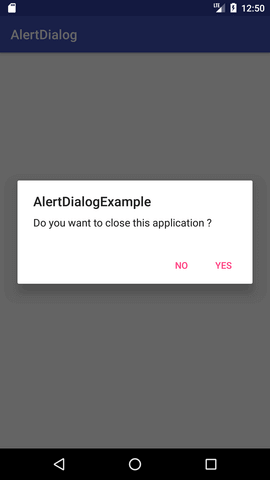
requestWindowFeature(Window.FEATURE\_NO\_TITLE);

setContentView(R.layout.activity\_main2);

}

}

Output :



3. Create an application that displays the progress of an operation.

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">

<Button

android:id="@+id/button1"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignParentTop="true"

android:layout\_centerHorizontal="true"

android:layout\_marginTop="116dp"

android:text="download file" />

mainactivity.java:::

package com.example.lab33;

import android.app.ProgressDialog;

import android.os.Handler;

import android.support.v4.app.INotificationSideChannel;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

Button btnStartProgress;

ProgressDialog progressBar;

private int progressBarStatus = 0;

private Handler progressBarHandler = new Handler();

private long fileSize = 0;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

addListenerOnButtonClick();

}

public void addListenerOnButtonClick() {

btnStartProgress = findViewById(R.id.button1);

btnStartProgress.setOnClickListener(new View.OnClickListener(){

@Override

public void onClick(View v) {

// creating progress bar dialog

progressBar = new ProgressDialog(v.getContext());

progressBar.setCancelable(true);

progressBar.setMessage("File downloading ...");

progressBar.setProgressStyle(ProgressDialog.STYLE\_HORIZONTAL);

progressBar.setProgress(0);

progressBar.setMax(100);

progressBar.show();

//reset progress bar and filesize status

progressBarStatus = 0;

fileSize = 0;

new Thread(new Runnable() {

public void run() {

while (progressBarStatus < 100) {

// performing operation

progressBarStatus = doOperation();

try {

Thread.sleep(1000);

} catch (InterruptedException e) {

e.printStackTrace();

}

// Updating the progress bar

progressBarHandler.post(new Runnable() {

public void run() {

progressBar.setProgress(progressBarStatus);

}

});

}

// performing operation if file is downloaded,

if (progressBarStatus >= 100) {

// sleeping for 1 second after operation completed

try {

Thread.sleep(1000);

} catch (InterruptedException e) {

e.printStackTrace();

}

// close the progress bar dialog

progressBar.dismiss();

}

}

}).start();

}//end of onClick method

});

}

// checking how much file is downloaded and updating the filesize

public int doOperation() {

//The range of ProgressDialog starts from 0 to 10000

while (fileSize <= 10000) {

fileSize++;

if (fileSize == 1000) {

return 10;

} else if (fileSize == 2000) {

return 20;

} else if (fileSize == 3000) {

return 30;

} else if (fileSize == 4000) {

return 40; // you can add more else if

}

/\* else {

return 100;

}\*/

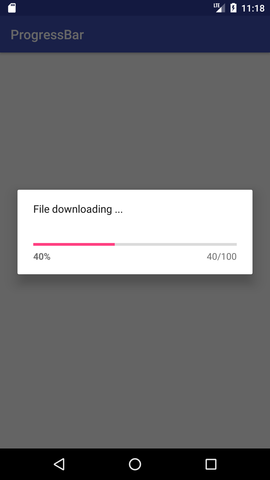
}//end of while

return 100;

}//end of doOperation

}

Output :



4. Create an application that obtains result from an activity.

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">

<EditText

android:id="@+id/editText1"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignParentTop="true"

android:layout\_centerHorizontal="true"

android:layout\_marginTop="24dp"

android:ems="10" />

<EditText

android:id="@+id/editText2"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

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

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

android:layout\_marginTop="34dp"

android:ems="10" >

<requestFocus />

</EditText>

<Button

android:id="@+id/button1"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_centerHorizontal="true"

android:layout\_centerVertical="true"

android:text="sum" />

</RelativeLayout>

mainactivity.java::::

package com.example.lab4;

import android.content.Intent;

import android.support.v4.app.INotificationSideChannel;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

private EditText et1,et2;

private Button buttonSum;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

addListenerOnButton();

}

public void addListenerOnButton() {

et1 = (EditText) findViewById(R.id.editText1);

et2 = (EditText) findViewById(R.id.editText2);

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

buttonSum.setOnClickListener(new View.OnClickListener() {

public void onClick(View view) {

String value1 = et1.getText().toString();

String value2 = et2.getText().toString();

int a = Integer.parseInt(value1);

int b = Integer.parseInt(value2);

int sum = a + b;

Intent i=new Intent(getApplicationContext(),Main2Activity.class);

i.putExtra("mamboo",sum);

startActivity(i);

//Toast.makeText(getApplicationContext(), String.valueOf(sum), Toast.LENGTH\_LONG).show();

}

});

}

}

activity\_main2.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=".Main2Activity">

<TextView

android:id="@+id/textView"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="TextView" />

</RelativeLayout>

main2activity.java::::

package com.example.lab4;

import android.content.Intent;

import android.support.v4.app.INotificationSideChannel;

import android.os.Bundle;

import android.widget.Button;

import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;

public class Main2Activity extends AppCompatActivity {

TextView t;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main2);

t=(TextView) findViewById(R.id.textView);

Intent i=getIntent();

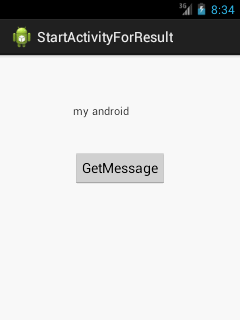
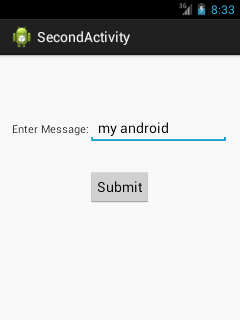
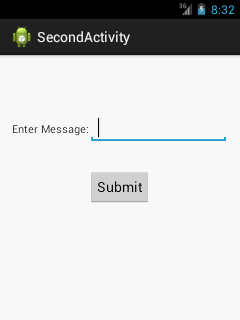
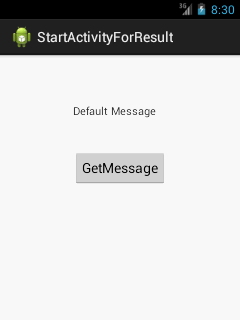
int t1=i.getIntExtra("mamboo",0);

t.setText(String.valueOf(t1));

}

}

Output:



5. Create an application that dynamically adds a fragment.

activity\_main.xml::;

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

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

xmlns:app="http://schemas.android.com/apk/res-auto"

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

android:layout\_width="fill\_parent"

android:layout\_height="fill\_parent"

tools:context="com.example.lab555.MainActivity">

<fragment

android:id="@+id/fragment1"

android:name="com.example.lab555.Fragment1"

android:layout\_width="0px"

android:layout\_height="match\_parent"

android:layout\_weight="1"

/>

<fragment

android:id="@+id/fragment2"

android:name="com.example.lab555.Fragment2"

android:layout\_width="0px"

android:layout\_height="match\_parent"

android:layout\_weight="1"

/>

</LinearLayout>

mainactivity.java::::

package com.example.lab555;

import android.support.v4.app.INotificationSideChannel;

import android.os.Bundle;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

}

}

fragment\_fragment1.xml:::

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

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

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:background="#F5F5DC"

tools:context="com.example.lab555.MainActivity">

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

<TextView

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

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

</FrameLayout>

fragment1.java:::;

package com.example.lab555;

import android.os.Bundle;

import android.support.v4.app.INotificationSideChannel;

import android.view.LayoutInflater;

import android.view.View;

import android.view.ViewGroup;

import androidx.fragment.app.Fragment;

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);

}

}

fragment\_fragment2.xml::;

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

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

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:background="#F0FFFF"

tools:context="com.example.lab555.MainActivity">

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

<TextView

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

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

</FrameLayout>

fragment2.java:::

package com.example.lab555;

import android.os.Bundle;

import android.support.v4.app.INotificationSideChannel;

import android.view.LayoutInflater;

import android.view.View;

import android.view.ViewGroup;

import androidx.fragment.app.Fragment;

class Fragment2 extends Fragment {

@Override

public void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

}

@Override

public View onCreateView(LayoutInflater inflater, ViewGroup container,

Bundle savedInstanceState) {

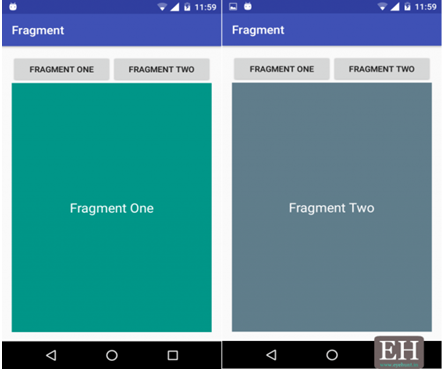
// Inflate the layout for this fragment

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

}

}

Output:



6. Create a screen that has input boxes for Name, 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.

xml file:::

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

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

android:layout\_width="match\_parent"

android:layout\_height="match\_parent">

<LinearLayout

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:orientation="vertical"

android:padding="20dp">

<TextView

android:layout\_width="match\_parent"

android:layout\_height="150dp"

android:gravity="center"

android:textColor="#FFFFFF"

android:background="#3F51B5"

android:text="string/register\_form\_text"/>

<EditText

android:id="@+id/firstname\_edittext"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_marginTop="20dp"

android:hint="string/firstname"/>

<EditText

android:id="@+id/lastname\_edittext"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_marginTop="20dp"

android:hint="string/lastname"/>

<EditText

android:id="@+id/email\_edittext"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_marginTop="20dp"

android:inputType="textEmailAddress"

android:hint="string/email"/>

<EditText

android:id="@+id/password\_edittext"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_marginTop="20dp"

android:inputType="textPassword"

android:hint="string/password"/>

<EditText

android:id="@+id/password\_again\_edittext"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_marginTop="20dp"

android:inputType="textPassword"

android:hint="string/password\_again"/>

<EditText

android:id="@+id/birthday\_edittext"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:focusable="false"

android:layout\_marginTop="20dp"

android:hint="string/birthday"/>

<LinearLayout

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:orientation="horizontal"

android:layout\_marginTop="20dp"

android:gravity="center\_vertical">

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="string/gender"/>

<RadioGroup

android:id="@+id/gender\_radiogroup"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:orientation="horizontal">

<RadioButton

android:id="@+id/male"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="string/male"/>

<RadioButton

android:id="@+id/female"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="string/female"/>

</RadioGroup>

</LinearLayout>

<Button

android:id="@+id/register\_button"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:paddingTop="10dp"

android:paddingBottom="10dp"

android:layout\_marginTop="20dp"

android:gravity="center"

android:text="string/register"/>

</LinearLayout>

</ScrollView>

java file::::

package com.example.lab6;

import android.app.Activity;

import android.app.DatePickerDialog;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.DatePicker;

import android.widget.EditText;

import android.widget.RadioButton;

import android.widget.RadioGroup;

import android.widget.Toast;

import java.util.Calendar;

public class MainActivity extends Activity implements View.OnClickListener{

private EditText firstnameEdittext,lastnameEdittext,emailEdittext,passEdittext,passAgainEdittext,birthdayEdittext;

private RadioGroup genderRadioGroup;

private Button registerButton;

private DatePickerDialog datePickerDialog;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

//Bind views with their ids

bindViews();

//Set listeners of views

setViewActions();

//Create DatePickerDialog to show a calendar to user to select birthdate

prepareDatePickerDialog();

}

private void bindViews() {

firstnameEdittext=(EditText)findViewById(R.id.firstname\_edittext);

lastnameEdittext=(EditText)findViewById(R.id.lastname\_edittext);

emailEdittext=(EditText)findViewById(R.id.email\_edittext);

passEdittext=(EditText)findViewById(R.id.password\_edittext);

passAgainEdittext=(EditText)findViewById(R.id.password\_again\_edittext);

birthdayEdittext=(EditText)findViewById(R.id.birthday\_edittext);

genderRadioGroup=(RadioGroup)findViewById(R.id.gender\_radiogroup);

registerButton=(Button)findViewById(R.id.register\_button);

}

private void setViewActions() {

birthdayEdittext.setOnClickListener(this);

registerButton.setOnClickListener(this);

}

private void prepareDatePickerDialog() {

//Get current date

Calendar calendar=Calendar.getInstance();

//Create datePickerDialog with initial date which is current and decide what happens when a date is selected.

datePickerDialog = new DatePickerDialog(this, new DatePickerDialog.OnDateSetListener() {

@Override

public void onDateSet(DatePicker view, int year, int monthOfYear, int dayOfMonth) {

//When a date is selected, it comes here.

//Change birthdayEdittext's text and dismiss dialog.

birthdayEdittext.setText(dayOfMonth+"/"+monthOfYear+"/"+year);

datePickerDialog.dismiss();

}

},calendar.get(Calendar.YEAR),calendar.get(Calendar.MONTH),calendar.get(Calendar.DAY\_OF\_MONTH));

}

private void showToastWithFormValues() {

//Get edittexts values

String firstname=firstnameEdittext.getText().toString();

String lastname=lastnameEdittext.getText().toString();

String email=emailEdittext.getText().toString();

String pass=passEdittext.getText().toString();

String passAgain=passAgainEdittext.getText().toString();

String birthday=birthdayEdittext.getText().toString();

//Get gender

RadioButton selectedRadioButton=(RadioButton)findViewById(genderRadioGroup.getCheckedRadioButtonId());

String gender=selectedRadioButton==null ? "":selectedRadioButton.getText().toString();

//Check all fields

if(!firstname.equals("")&&!lastname.equals("")&&!email.equals("")&&!pass.equals("")&&!passAgain.equals("")&&!birthday.equals("")&&!gender.equals("")){

//Check if pass and passAgain are the same

if(pass.equals(passAgain)){

//Everything allright

Toast.makeText(this,getResources().getString(R.string.here\_is\_values,("\nFirstname:"+firstname+"\nLastname:"+lastname+"\nEmail:"+email+"\nBirthday:"+birthday+"\nGender:"+gender)),Toast.LENGTH\_SHORT).show();

}

else{

Toast.makeText(this,getResources().getString(R.string.passwords\_must\_be\_the\_same),Toast.LENGTH\_SHORT).show();

}

}

else{

Toast.makeText(this,getResources().getString(R.string.no\_field\_can\_be\_empty),Toast.LENGTH\_SHORT).show();

}

}

@Override

public void onClick(View v) {

switch (v.getId()){

case R.id.birthday\_edittext:

datePickerDialog.show();

break;

case R.id.register\_button:

showToastWithFormValues();

break;

}

}

}

res-values-string.xml:::

<resources>

<string name="app\_name">lab6</string>

<string name="firstname">Firstname</string>

<string name="lastname">Lastname</string>

<string name="password">Password</string>

<string name="password\_again">Password Again</string>

<string name="email">Email</string>

<string name="birthday">Birthday</string>

<string name="gender">Gender : </string>

<string name="male">Male</string>

<string name="female">Female</string>

<string name="register">Register</string>

<string name="register\_form\_text">You need to fill up below register form.</string>

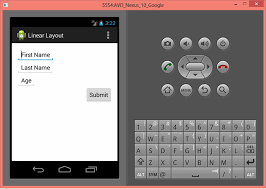
<string name="no\_field\_can\_be\_empty">No field can be empty</string>

<string name="passwords\_must\_be\_the\_same">Password and password again field must be the same</string>

<string name="here\_is\_values">Here is values: %1$s</string>

</resources>

Output:



7. Use (a) Linear Layout (b) Relative Layout and (c) Grid Layout or Table Layout

a)

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:paddingLeft="16dp"

android:paddingRight="16dp"

android:orientation="vertical" >

<EditText

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

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

<EditText

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

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

<EditText

android:layout\_width="match\_parent"

android:layout\_height="0dp"

android:layout\_weight="1"

android:gravity="top"

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

<Button

android:layout\_width="100dp"

android:layout\_height="wrap\_content"

android:layout\_gravity="right"

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

</LinearLayout>

b)

activity\_main.xml:::

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

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

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:paddingLeft="16dp"

android:paddingRight="16dp" >

<EditText

android:id="@+id/name"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

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

<Spinner

android:id="@+id/dates"

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

android:layout\_below="@id/name"

android:layout\_alignParentLeft="true"

android:layout\_toLeftOf="@+id/times" />

<Spinner

android:id="@id/times"

android:layout\_width="96dp"

android:layout\_height="wrap\_content"

android:layout\_below="@id/name"

android:layout\_alignParentRight="true" />

<Button

android:layout\_width="96dp"

android:layout\_height="wrap\_content"

android:layout\_below="@id/times"

android:layout\_alignParentRight="true"

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

</RelativeLayout>

c)

activity\_main.xml:::

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

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

android:id="@+id/GridLayout1"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:columnCount="3"

android:rowCount="3"

android:orientation="horizontal"

tools:context="com.example.lab7c.MainActivity" >

<Space />

<Button

android:id="@+id/button1"

android:layout\_gravity="left|top"

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

<Button

android:id="@+id/button3"

android:layout\_gravity="left|top"

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

<Button

android:id="@+id/button2"

android:layout\_column="0"

android:layout\_gravity="left|top"

android:layout\_row="0"

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

<Button

android:id="@+id/button4"

android:layout\_column="0"

android:layout\_gravity="left|top"

android:layout\_row="2"

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

<Button

android:id="@+id/button5"

android:layout\_column="1"

android:layout\_row="2"

android:layout\_columnSpan="2"

android:layout\_gravity="fill"

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

</GridLayout>

d)

activity\_main.xml:::

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

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

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:stretchColumns="1">

<TableRow>

<TextView

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

android:padding="3dip" />

<TextView

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

android:gravity="right"

android:padding="3dip" />

</TableRow>

<TableRow>

<TextView

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

android:padding="3dip" />

<TextView

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

android:gravity="right"

android:padding="3dip" />

</TableRow>

</TableLayout>

Output:

8. Create an application that uses the basic views of Android.

activity\_main.xml::

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

android:layout\_width="fill\_parent"

android:layout\_height="fill\_parent"

android:orientation="vertical" >

<TextView

android:id="@+id/textView"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:text="Hello Readers!!" />

<Button

android:id="@+id/buttonExample"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:text="Example Button" />

<CheckBox

android:id="@+id/checkBoxExample"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:text="CheckBox Example" />

<ToggleButton

android:id="@+id/toggleButtonExample"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="ToggleButton Example" />

<RadioGroup

android:id="@+id/radioGroupExample"

android:layout\_width="wrap\_content"

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

<RadioButton

android:id="@+id/radioBtton1"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:checked="true"

android:text="RadioButton 1" />

<RadioButton

android:id="@+id/radioButton2"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="RadioButton 2" />

<RadioButton

android:id="@+id/radioButton3"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="RadioButton 3" />

</RadioGroup>

<ImageButton

android:id="@+id/imageButtonExample"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:src="@drawable/image" />

<LinearLayout>

MainActivity.java::

package com.example.lab8;

import android.app.Activity;

import android.os.Bundle;

import android.view.Menu;

import android.view.View;

import android.widget.Button;

import android.widget.CheckBox;

import android.widget.ImageButton;

import android.widget.RadioButton;

import android.widget.RadioGroup;

import android.widget.RadioGroup.OnCheckedChangeListener;

import android.widget.Toast;

import android.widget.ToggleButton;

public class MainActivity extends Activity {

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

Button example = (Button) findViewById(R.id.buttonExample);

CheckBox exampleCheckBox = (CheckBox) findViewById(R.id.checkBoxExample);

RadioGroup exampleRadioGroup = (RadioGroup) findViewById(R.id.radioGroupExample);

ToggleButton exampletoggleButton = (ToggleButton) findViewById(R.id.toggleButtonExample);

ImageButton exampleImageButton = (ImageButton) findViewById(R.id.imageButtonExample);

example.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View arg0) {

// TODO Auto-generated method stub

// Toast.makeText(this, "Hey Button is pressed !!",

// Toast.LENGTH\_SHORT).show();

ToastToDisplay("Hey Button is pressed!!");

}

});

exampleCheckBox.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

// TODO Auto-generated method stub

if (((CheckBox) v).isChecked()) {

ToastToDisplay("Check Box is checked");

} else {

ToastToDisplay("Check box is unchecked");

}

}

});

exampleRadioGroup

.setOnCheckedChangeListener(new OnCheckedChangeListener() {

@Override

public void onCheckedChanged(RadioGroup group, int checkedId) {

// TODO Auto-generated method stub

RadioButton rb1 = (RadioButton) findViewById(R.id.radioBtton1);

RadioButton rb2 = (RadioButton) findViewById(R.id.radioButton2);

if (rb1.isChecked()) {

ToastToDisplay("Radio Button 1 is checked");

} else if (rb2.isChecked()) {

ToastToDisplay("Radio Button 2 is checked");

} else {

ToastToDisplay("Radio Button 3 is checked");

}

}

});

exampletoggleButton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

// TODO Auto-generated method stub

if (((ToggleButton) v).isChecked()) {

ToastToDisplay("Toggle button is ON");

} else {

ToastToDisplay("Toggle Button is OFF");

}

}

});

exampleImageButton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

// TODO Auto-generated method stub

ToastToDisplay("Image Button is pressed");

}

});

}

private void ToastToDisplay(String args) {

Toast.makeText(getBaseContext(), args, Toast.LENGTH\_SHORT).show();

}

@Override

public boolean onCreateOptionsMenu(Menu menu) {

// Inflate the menu; this adds items to the action bar if it is present.

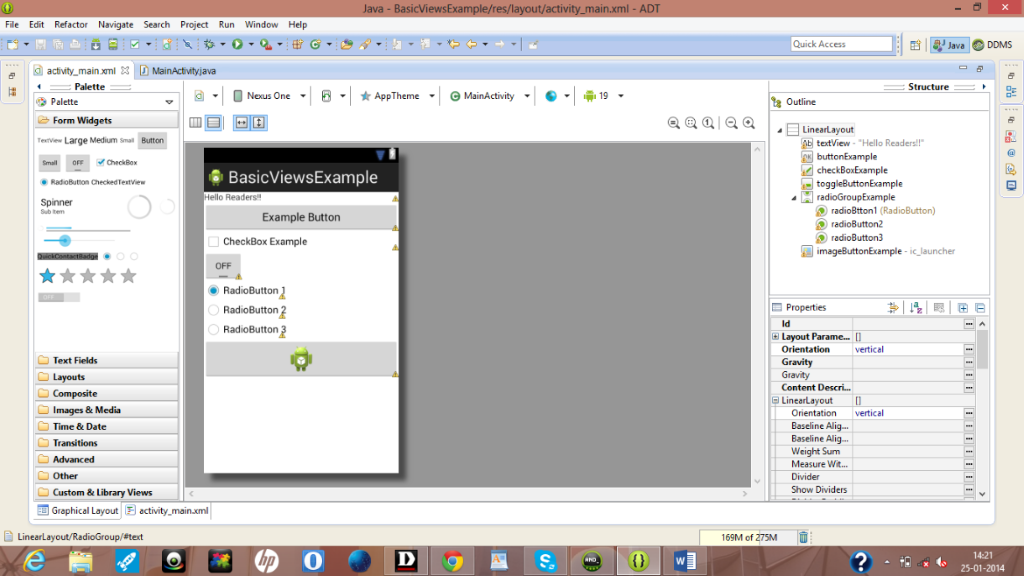
//getMenuInflater().inflate(R.menu.main, menu);

return true;

}

}

Output:



9. 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.

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:id="@+id/activity\_main"

android:orientation="vertical"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:gravity="center\_horizontal|center\_vertical"

tools:context=".MainActivity">

<EditText

android:id="@+id/et\_phone\_no"

android:hint="Enter Phone number"

android:inputType="phone"

android:layout\_width="match\_parent"

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

<EditText

android:id="@+id/et\_message"

android:hint="Enter message"

android:inputType="textCapSentences|textMultiLine"

android:maxLength="2000"

android:maxLines="12"

android:layout\_width="match\_parent"

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

<Button

android:id="@+id/btn\_send\_message"

android:layout\_gravity="center\_horizontal"

android:text="Send Messange"

android:layout\_width="wrap\_content"

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

<Button

android:id="@+id/btn\_dial"

android:layout\_gravity="center\_horizontal"

android:text="Dial"

android:layout\_width="wrap\_content"

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

</LinearLayout>

mainactivity.java::

package com.example.lab9;

import android.content.Intent;

import android.net.Uri;

import android.os.Bundle;

import android.text.TextUtils;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

Button mDialButton = (Button) findViewById(R.id.btn\_dial);

final EditText mPhoneNoEt = (EditText) findViewById(R.id.et\_phone\_no);

mDialButton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

String phoneNo = mPhoneNoEt.getText().toString();

if(!TextUtils.isEmpty(phoneNo)) {

String dial = "tel:" + phoneNo;

startActivity(new Intent(Intent.ACTION\_DIAL, Uri.parse(dial)));

}else {

Toast.makeText(MainActivity.this, "Enter a phone number", Toast.LENGTH\_SHORT).show();

}

}

});

Button sendMessageBtn = (Button) findViewById(R.id.btn\_send\_message);

final EditText messagetEt = (EditText) findViewById(R.id.et\_message);

sendMessageBtn.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

String message = messagetEt.getText().toString();

String phoneNo = mPhoneNoEt.getText().toString();

if(!TextUtils.isEmpty(message) && !TextUtils.isEmpty(phoneNo)) {

Intent smsIntent = new Intent(Intent.ACTION\_SENDTO, Uri.parse("smsto:" + phoneNo));

smsIntent.putExtra("sms\_body", message);

startActivity(smsIntent);

}

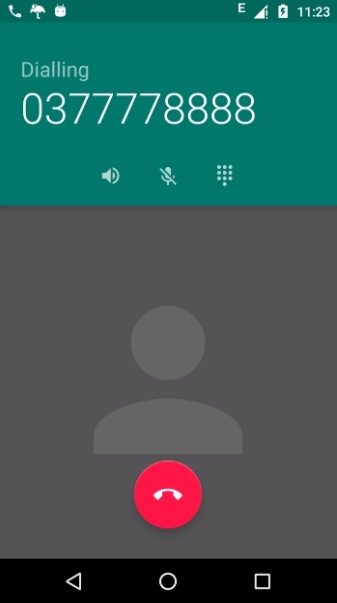
}

});

}

}

Output:



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

activity\_main.xml::::

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

xmlns:tools="http://schemas.android.com/tools" android:layout\_width="match\_parent"

android:layout\_height="match\_parent" android:paddingLeft="20dp"

android:paddingRight="20dp"

android:paddingTop="20dp"

android:paddingBottom="20dp" tools:context=".MainActivity">

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textAppearance="?android:attr/textAppearanceLarge"

android:text="Name"

android:id="@+id/textView"

android:layout\_alignParentTop="true"

android:layout\_alignParentLeft="true"

android:layout\_alignParentStart="true" />

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textAppearance="?android:attr/textAppearanceLarge"

android:text="Email"

android:id="@+id/textView2"

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

android:layout\_alignParentLeft="true"

android:layout\_alignParentStart="true" />

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textAppearance="?android:attr/textAppearanceLarge"

android:text="Mobile"

android:id="@+id/textView3"

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

android:layout\_alignParentLeft="true"

android:layout\_alignParentStart="true" />

<EditText

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/editText\_name"

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

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

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

<EditText

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/editText\_surname"

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

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

android:layout\_toEndOf="@+id/textView2" />

<EditText

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/editText\_Marks"

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

android:layout\_toRightOf="@+id/textView3"

android:layout\_toEndOf="@+id/textView3" />

<Button

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Add Data"

android:id="@+id/button\_add"

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

android:layout\_alignParentLeft="true"

android:layout\_alignParentStart="true"

android:layout\_marginTop="76dp" />

<Button

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="View All"

android:id="@+id/button\_viewAll"

android:layout\_above="@+id/button\_update"

android:layout\_centerHorizontal="true" />

<Button

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Update"

android:id="@+id/button\_update"

android:layout\_below="@+id/button\_add"

android:layout\_alignParentLeft="true"

android:layout\_alignParentStart="true" />

<Button

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Delete"

android:id="@+id/button\_delete"

android:layout\_centerVertical="true"

android:layout\_below="@+id/button\_viewAll"

android:layout\_alignLeft="@+id/button\_viewAll"

android:layout\_alignStart="@+id/button\_viewAll" />

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textAppearance="?android:attr/textAppearanceLarge"

android:text="id"

android:id="@+id/textView\_id"

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

android:layout\_alignParentLeft="true"

android:layout\_alignParentStart="true" />

<EditText

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/editText\_id"

android:layout\_alignTop="@+id/textView\_id"

android:layout\_toRightOf="@+id/textView3"

android:layout\_toEndOf="@+id/textView3" />

</RelativeLayout>

mainactivity.java::::

package com.example.lab100;

import android.app.AlertDialog;

import android.database.Cursor;

import android.support.v4.app.INotificationSideChannel;

import android.os.Bundle;

import android.view.Menu;

import android.view.MenuItem;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

DatabaseHelper myDb;

EditText editName,editSurname,editMarks ,editTextId;

Button btnAddData;

Button btnviewAll;

Button btnDelete;

Button btnviewUpdate;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

myDb = new DatabaseHelper(this);

editName = (EditText)findViewById(R.id.editText\_name);

editSurname = (EditText)findViewById(R.id.editText\_surname);

editMarks = (EditText)findViewById(R.id.editText\_Marks);

editTextId = (EditText)findViewById(R.id.editText\_id);

btnAddData = (Button)findViewById(R.id.button\_add);

btnviewAll = (Button)findViewById(R.id.button\_viewAll);

btnviewUpdate= (Button)findViewById(R.id.button\_update);

btnDelete= (Button)findViewById(R.id.button\_delete);

AddData();

viewAll();

UpdateData();

DeleteData();

}

public void DeleteData() {

btnDelete.setOnClickListener(

new View.OnClickListener() {

@Override

public void onClick(View v) {

Integer deletedRows = myDb.deleteData(editTextId.getText().toString());

if(deletedRows > 0)

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

else

Toast.makeText(MainActivity.this,"Data not Deleted",Toast.LENGTH\_LONG).show();

}

}

);

}

public void UpdateData() {

btnviewUpdate.setOnClickListener(

new View.OnClickListener() {

@Override

public void onClick(View v) {

boolean isUpdate = myDb.updateData(editTextId.getText().toString(),

editName.getText().toString(),

editSurname.getText().toString(),editMarks.getText().toString());

if(isUpdate == true)

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

else

Toast.makeText(MainActivity.this,"Data not Updated",Toast.LENGTH\_LONG).show();

}

}

);

}

public void AddData() {

btnAddData.setOnClickListener(

new View.OnClickListener() {

@Override

public void onClick(View v) {

boolean isInserted = myDb.insertData(editName.getText().toString(),

editSurname.getText().toString(),

editMarks.getText().toString() );

if(isInserted == true)

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

else

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

}

}

);

}

public void viewAll() {

btnviewAll.setOnClickListener(

new View.OnClickListener() {

@Override

public void onClick(View v) {

Cursor res = myDb.getAllData();

if(res.getCount() == 0) {

// show message

showMessage("Error","Nothing found");

return;

}

StringBuffer buffer = new StringBuffer();

while (res.moveToNext()) {

buffer.append("Id :"+ res.getString(0)+"\n");

buffer.append("Name :"+ res.getString(1)+"\n");

buffer.append("Email :"+ res.getString(2)+"\n");

buffer.append("Mobile:"+ res.getString(3)+"\n\n");

}

// Show all data

showMessage("Data",buffer.toString());

}

}

);

}

public void showMessage(String title,String Message){

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

builder.setCancelable(true);

builder.setTitle(title);

builder.setMessage(Message);

builder.show();

}

@Override

public boolean onCreateOptionsMenu(Menu menu) {

// Inflate the menu; this adds items to the action bar if it is present.

// getMenuInflater().inflate(R.menu.menu\_main, menu);

return true;

}

@Override

public boolean onOptionsItemSelected(MenuItem item) {

// Handle action bar item clicks here. The action bar will

// automatically handle clicks on the Home/Up button, so long

// as you specify a parent activity in AndroidManifest.xml.

int id = item.getItemId();

//noinspection SimplifiableIfStatement

if (id == R.id.packed) {

return true;

}

return super.onOptionsItemSelected(item);

}

}

databasehelper.java:::

package com.example.lab100;

import android.content.ContentValues;

import android.content.Context;

import android.database.Cursor;

import android.database.sqlite.SQLiteDatabase;

import android.database.sqlite.SQLiteOpenHelper;

/\*\*

\* Created by ProgrammingKnowledge on 4/3/2015.

\*/

public class DatabaseHelper extends SQLiteOpenHelper {

public static final String DATABASE\_NAME = "Student.db";

public static final String TABLE\_NAME = "student\_table";

public static final String COL\_1 = "ID";

public static final String COL\_2 = "NAME";

public static final String COL\_3 = "SURNAME";

public static final String COL\_4 = "MARKS";

public DatabaseHelper(Context context) {

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

}

@Override

public void onCreate(SQLiteDatabase db) {

db.execSQL("create table " + TABLE\_NAME +" (ID INTEGER PRIMARY KEY AUTOINCREMENT,NAME TEXT,SURNAME TEXT,MARKS INTEGER)");

}

@Override

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

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

onCreate(db);

}

public boolean insertData(String name,String surname,String marks) {

SQLiteDatabase db = this.getWritableDatabase();

ContentValues contentValues = new ContentValues();

contentValues.put(COL\_2,name);

contentValues.put(COL\_3,surname);

contentValues.put(COL\_4,marks);

long result = db.insert(TABLE\_NAME,null ,contentValues);

if(result == -1)

return false;

else

return true;

}

public Cursor getAllData() {

SQLiteDatabase db = this.getWritableDatabase();

Cursor res = db.rawQuery("select \* from "+TABLE\_NAME,null);

return res;

}

public boolean updateData(String id,String name,String surname,String marks) {

SQLiteDatabase db = this.getWritableDatabase();

ContentValues contentValues = new ContentValues();

contentValues.put(COL\_1,id);

contentValues.put(COL\_2,name);

contentValues.put(COL\_3,surname);

contentValues.put(COL\_4,marks);

db.update(TABLE\_NAME, contentValues, "ID = ?",new String[] { id });

return true;

}

public Integer deleteData (String id) {

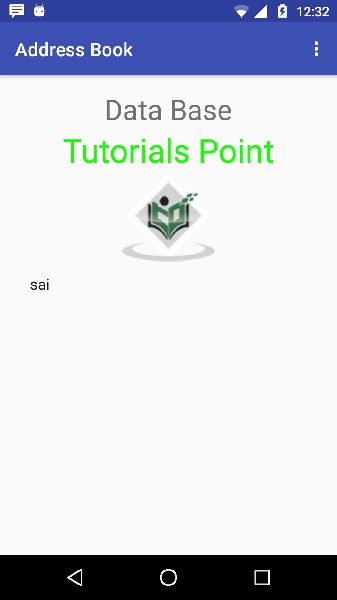
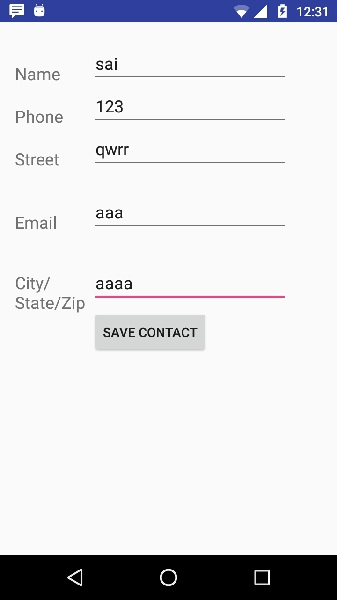
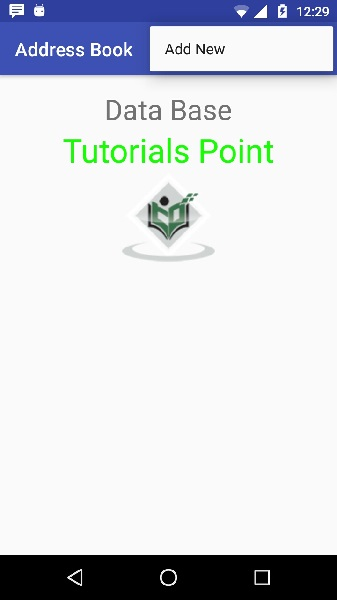
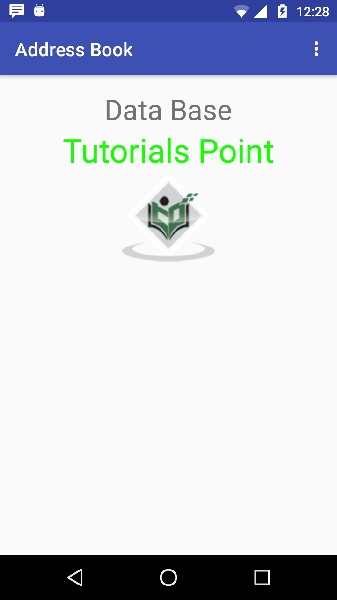
SQLiteDatabase db = this.getWritableDatabase();

return db.delete(TABLE\_NAME, "ID = ?",new String[] {id});

}

}

Output:



11. 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.

MainActivity.java file;;;

package com.example.lab11;

import android.content.Intent;

import android.database.Cursor;

import android.database.sqlite.SQLiteDatabase;

import android.support.v4.app.INotificationSideChannel;

import android.os.Bundle;

import android.text.TextUtils;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

Button LogInButton, RegisterButton ;

EditText Email, Password ;

String EmailHolder, PasswordHolder;

Boolean EditTextEmptyHolder;

SQLiteDatabase sqLiteDatabaseObj;

SQLiteHelper sqLiteHelper;

Cursor cursor;

String TempPassword = "NOT\_FOUND" ;

public static final String UserEmail = "";

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

LogInButton = (Button)findViewById(R.id.buttonLogin);

RegisterButton = (Button)findViewById(R.id.buttonRegister);

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

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

sqLiteHelper = new SQLiteHelper(this);

//Adding click listener to log in button.

LogInButton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

// Calling EditText is empty or no method.

CheckEditTextStatus();

// Calling login method.

LoginFunction();

}

});

// Adding click listener to register button.

RegisterButton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

// Opening new user registration activity using intent on button click.

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

startActivity(intent);

}

});

}

// Login function starts from here.

public void LoginFunction(){

if(EditTextEmptyHolder) {

// Opening SQLite database write permission.

sqLiteDatabaseObj = sqLiteHelper.getWritableDatabase();

// Adding search email query to cursor.

cursor = sqLiteDatabaseObj.query(SQLiteHelper.TABLE\_NAME, null, " " + SQLiteHelper.Table\_Column\_2\_Email + "=?", new String[]{EmailHolder}, null, null, null);

while (cursor.moveToNext()) {

if (cursor.isFirst()) {

cursor.moveToFirst();

// Storing Password associated with entered email.

TempPassword = cursor.getString(cursor.getColumnIndex(SQLiteHelper.Table\_Column\_3\_Password));

// Closing cursor.

cursor.close();

}

}

// Calling method to check final result ..

CheckFinalResult();

}

else {

//If any of login EditText empty then this block will be executed.

Toast.makeText(MainActivity.this,"Please Enter UserName or Password.",Toast.LENGTH\_LONG).show();

}

}

// Checking EditText is empty or not.

public void CheckEditTextStatus(){

// Getting value from All EditText and storing into String Variables.

EmailHolder = Email.getText().toString();

PasswordHolder = Password.getText().toString();

// Checking EditText is empty or no using TextUtils.

if( TextUtils.isEmpty(EmailHolder) || TextUtils.isEmpty(PasswordHolder)){

EditTextEmptyHolder = false ;

}

else {

EditTextEmptyHolder = true ;

}

}

// Checking entered password from SQLite database email associated password.

public void CheckFinalResult(){

if(TempPassword.equalsIgnoreCase(PasswordHolder))

{

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

// Going to Dashboard activity after login success message.

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

// Sending Email to Dashboard Activity using intent.

intent.putExtra(UserEmail, EmailHolder);

startActivity(intent);

}

else {

Toast.makeText(MainActivity.this,"UserName or Password is Wrong, Please Try Again.",Toast.LENGTH\_LONG).show();

}

TempPassword = "NOT\_FOUND" ;

}

}

activity\_main.xml layout file::::::

<?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:id="@+id/activity\_main"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:paddingBottom="20dp"

android:paddingLeft="20dp"

android:paddingRight="20dp"

android:paddingTop="20dp"

tools:context="com.example.lab11.MainActivity">

<TextView

android:text="SQLite User Login Screen"

android:gravity="center"

android:textSize="20dp"

android:textColor="#000"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignParentTop="true"

android:layout\_centerHorizontal="true"

android:id="@+id/textView" />

<EditText

android:layout\_width="fill\_parent"

android:layout\_height="wrap\_content"

android:inputType="textEmailAddress"

android:hint="Enter Email"

android:textColor="#000"

android:ems="10"

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

android:layout\_centerHorizontal="true"

android:layout\_marginTop="20dp"

android:id="@+id/editEmail"

android:gravity="center"/>

<EditText

android:layout\_width="fill\_parent"

android:layout\_height="wrap\_content"

android:inputType="textPassword"

android:hint="Enter Password"

android:textColor="#000"

android:ems="10"

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

android:layout\_centerHorizontal="true"

android:layout\_marginTop="20dp"

android:id="@+id/editPassword"

android:gravity="center"/>

<Button

android:layout\_width="fill\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/buttonLogin"

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

android:layout\_marginTop="20dp"

android:text="Log IN "/>

<Button

android:layout\_width="fill\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/buttonRegister"

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

android:layout\_marginTop="20dp"

android:text="Not Log IN | Register From here "/>

</RelativeLayout>

RegisterActivity.java file::::

package com.example.lab11;

import android.content.Context;

import android.content.Intent;

import android.database.Cursor;

import android.database.sqlite.SQLiteDatabase;

import android.support.v4.app.INotificationSideChannel;

import android.os.Bundle;

import android.text.TextUtils;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

public class RegisterActivity extends AppCompatActivity {

EditText Email, Password, Name ;

Button Register;

String NameHolder, EmailHolder, PasswordHolder;

Boolean EditTextEmptyHolder;

SQLiteDatabase sqLiteDatabaseObj;

String SQLiteDataBaseQueryHolder ;

SQLiteHelper sqLiteHelper;

Cursor cursor;

String F\_Result = "Not\_Found";

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_register);

Register = (Button)findViewById(R.id.buttonRegister);

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

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

Name = (EditText)findViewById(R.id.editName);

sqLiteHelper = new SQLiteHelper(this);

// Adding click listener to register button.

Register.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

// Creating SQLite database if dose n't exists

SQLiteDataBaseBuild();

// Creating SQLite table if dose n't exists.

SQLiteTableBuild();

// Checking EditText is empty or Not.

CheckEditTextStatus();

// Method to check Email is already exists or not.

CheckingEmailAlreadyExistsOrNot();

// Empty EditText After done inserting process.

EmptyEditTextAfterDataInsert();

}

});

}

// SQLite database build method.

public void SQLiteDataBaseBuild(){

sqLiteDatabaseObj = openOrCreateDatabase(SQLiteHelper.DATABASE\_NAME, Context.MODE\_PRIVATE, null);

}

// SQLite table build method.

public void SQLiteTableBuild() {

sqLiteDatabaseObj.execSQL("CREATE TABLE IF NOT EXISTS " + SQLiteHelper.TABLE\_NAME + "(" + SQLiteHelper.Table\_Column\_ID + " PRIMARY KEY AUTOINCREMENT NOT NULL, " + SQLiteHelper.Table\_Column\_1\_Name + " VARCHAR, " + SQLiteHelper.Table\_Column\_2\_Email + " VARCHAR, " + SQLiteHelper.Table\_Column\_3\_Password + " VARCHAR);");

}

// Insert data into SQLite database method.

public void InsertDataIntoSQLiteDatabase(){

// If editText is not empty then this block will executed.

if(EditTextEmptyHolder == true)

{

// SQLite query to insert data into table.

SQLiteDataBaseQueryHolder = "INSERT INTO "+SQLiteHelper.TABLE\_NAME+" (name,email,password) VALUES('"+NameHolder+"', '"+EmailHolder+"', '"+PasswordHolder+"');";

// Executing query.

sqLiteDatabaseObj.execSQL(SQLiteDataBaseQueryHolder);

// Closing SQLite database object.

sqLiteDatabaseObj.close();

// Printing toast message after done inserting.

Toast.makeText(RegisterActivity.this,"User Registered Successfully", Toast.LENGTH\_LONG).show();

}

// This block will execute if any of the registration EditText is empty.

else {

// Printing toast message if any of EditText is empty.

Toast.makeText(RegisterActivity.this,"Please Fill All The Required Fields.", Toast.LENGTH\_LONG).show();

}

}

// Empty edittext after done inserting process method.

public void EmptyEditTextAfterDataInsert(){

Name.getText().clear();

Email.getText().clear();

Password.getText().clear();

}

// Method to check EditText is empty or Not.

public void CheckEditTextStatus(){

// Getting value from All EditText and storing into String Variables.

NameHolder = Name.getText().toString() ;

EmailHolder = Email.getText().toString();

PasswordHolder = Password.getText().toString();

if(TextUtils.isEmpty(NameHolder) || TextUtils.isEmpty(EmailHolder) || TextUtils.isEmpty(PasswordHolder)){

EditTextEmptyHolder = false ;

}

else {

EditTextEmptyHolder = true ;

}

}

// Checking Email is already exists or not.

public void CheckingEmailAlreadyExistsOrNot(){

// Opening SQLite database write permission.

sqLiteDatabaseObj = sqLiteHelper.getWritableDatabase();

// Adding search email query to cursor.

cursor = sqLiteDatabaseObj.query(SQLiteHelper.TABLE\_NAME, null, " " + SQLiteHelper.Table\_Column\_2\_Email + "=?", new String[]{EmailHolder}, null, null, null);

while (cursor.moveToNext()) {

if (cursor.isFirst()) {

cursor.moveToFirst();

// If Email is already exists then Result variable value set as Email Found.

F\_Result = "Email Found";

// Closing cursor.

cursor.close();

}

}

// Calling method to check final result and insert data into SQLite database.

CheckFinalResult();

}

// Checking result

public void CheckFinalResult(){

// Checking whether email is already exists or not.

if(F\_Result.equalsIgnoreCase("Email Found"))

{

// If email is exists then toast msg will display.

Toast.makeText(RegisterActivity.this,"Email Already Exists",Toast.LENGTH\_LONG).show();

}

else {

// If email already dose n't exists then user registration details will entered to SQLite database.

InsertDataIntoSQLiteDatabase();

}

F\_Result = "Not\_Found" ;

}

}

activity\_register.xml layout file:::

<?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:id="@+id/activity\_register"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context="com.example.lab11.RegisterActivity">

<TextView

android:text="SQLite User Registration"

android:gravity="center"

android:textSize="20dp"

android:textColor="#000"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignParentTop="true"

android:layout\_centerHorizontal="true"

android:id="@+id/textView" />

<EditText

android:layout\_width="fill\_parent"

android:layout\_height="wrap\_content"

android:inputType="textEmailAddress"

android:hint="Enter Name"

android:textColor="#000"

android:ems="10"

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

android:layout\_centerHorizontal="true"

android:layout\_marginTop="20dp"

android:id="@+id/editName"

android:gravity="center"/>

<EditText

android:layout\_width="fill\_parent"

android:layout\_height="wrap\_content"

android:inputType="textEmailAddress"

android:hint="Enter Email"

android:textColor="#000"

android:ems="10"

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

android:layout\_centerHorizontal="true"

android:layout\_marginTop="20dp"

android:id="@+id/editEmail"

android:gravity="center"/>

<EditText

android:layout\_width="fill\_parent"

android:layout\_height="wrap\_content"

android:inputType="textPassword"

android:hint="Enter Password"

android:textColor="#000"

android:ems="10"

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

android:layout\_centerHorizontal="true"

android:layout\_marginTop="20dp"

android:id="@+id/editPassword"

android:gravity="center"/>

<Button

android:layout\_width="fill\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/buttonRegister"

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

android:layout\_marginTop="20dp"

android:text="Register From here "/>

</RelativeLayout>

DashboardActivity.java file:::

package com.example.lab11;

import android.content.Intent;

import android.support.v4.app.INotificationSideChannel;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.TextView;

import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

public class DashboardActivity extends AppCompatActivity {

String EmailHolder;

TextView Email;

Button LogOUT ;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_dashboard);

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

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

Intent intent = getIntent();

// Receiving User Email Send By MainActivity.

EmailHolder = intent.getStringExtra(MainActivity.UserEmail);

// Setting up received email to TextView.

Email.setText(Email.getText().toString()+ EmailHolder);

// Adding click listener to Log Out button.

LogOUT.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

//Finishing current DashBoard activity on button click.

finish();

Toast.makeText(DashboardActivity.this,"Log Out Successfull", Toast.LENGTH\_LONG).show();

}

});

}

}

activity\_dashboard.xml layout file:::

<?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:id="@+id/activity\_dashboard"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context="com.example.lab11.DashboardActivity">

<TextView

android:text="Login SuccessFully, Email ="

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:gravity="center"

android:textSize="20dp"

android:textColor="#000"

android:id="@+id/textView1"

android:layout\_alignParentTop="true"

android:layout\_centerHorizontal="true"

android:layout\_marginTop="176dp" />

<Button

android:text="LOGOUT"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

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

android:layout\_centerHorizontal="true"

android:layout\_marginTop="36dp"

android:id="@+id/button1" />

</RelativeLayout>

SQLiteHelper.java file::::

package com.example.lab11;

import android.content.Context;

import android.database.sqlite.SQLiteOpenHelper;

import android.database.sqlite.SQLiteDatabase;

public class SQLiteHelper extends SQLiteOpenHelper {

static String DATABASE\_NAME="UserDataBase";

public static final String TABLE\_NAME="UserTable";

public static final String Table\_Column\_ID="id";

public static final String Table\_Column\_1\_Name="name";

public static final String Table\_Column\_2\_Email="email";

public static final String Table\_Column\_3\_Password="password";

public SQLiteHelper(Context context) {

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

}

@Override

public void onCreate(SQLiteDatabase database) {

String CREATE\_TABLE="CREATE TABLE IF NOT EXISTS "+TABLE\_NAME+" ("+Table\_Column\_ID+" INTEGER PRIMARY KEY, "+Table\_Column\_1\_Name+" VARCHAR, "+Table\_Column\_2\_Email+" VARCHAR, "+Table\_Column\_3\_Password+" VARCHAR)";

database.execSQL(CREATE\_TABLE);

}

@Override

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

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

onCreate(db);

}

}

Output:

