1.Design a registration activity and store registration details in local memory of phone

using Intents and SharedPreferences

<**RelativeLayout android:layout\_width="match\_parent"**

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

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

<**EditText**

**android:id="@+id/et1"**

**android:layout\_width="match\_parent"**

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

**android:layout\_marginTop="22dp"**

**android:hint="username"**/>

<**EditText**

**android:id="@+id/et2"**

**android:layout\_width="match\_parent"**

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

**android:layout\_alignEnd="@+id/et1"**

**android:layout\_alignRight="@+id/et1"**

**android:layout\_alignParentTop="true"**

**android:layout\_marginTop="105dp"**

**android:layout\_marginEnd="-31dp"**

**android:layout\_marginRight="-31dp"**

**android:hint="password"**/>

</**RelativeLayout**>

Mainactivity.java

**package** com.example.sjcet.sharedprefernce;

**import** android.content.SharedPreferences;

**import** android.support.v7.app.AppCompatActivity;

**import** android.os.Bundle;

**import** android.widget.EditText;

**public class** MainActivity **extends** AppCompatActivity {

EditText **et1**,**et2**;

@Override

**protected void** onCreate(Bundle savedInstanceState) {

**super**.onCreate(savedInstanceState);

setContentView(R.layout.***activity\_main***);

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

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

}

**protected void** onStop() {

**super**.onStop();

SharedPreferences mypref=getSharedPreferences(**"myprefsfile"**,0);

SharedPreferences.Editor editor=mypref.edit();

editor.putString(**"user"**,**et1**.getText().toString());

editor.putString(**"pass"**,**et2**.getText().toString());

editor.commit();

}

**protected void** onResume() {

**super**.onResume();

SharedPreferences mypref=getSharedPreferences(**"myprefsfile"**,0);

String username=mypref.getString(**"user"**,**null**);

String password=mypref.getString(**"pass"**,**null**);

**et1**.setText(username);

**et2**.setText(password);

}

}

2. Design a simple Calculator using GridLayout and Cascaded LinearLayout

*<?***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"**>

<**HorizontalScrollView**

**android:layout\_width="match\_parent"**

**android:layout\_height="0dp"**

**android:layout\_weight="1"**>

<**LinearLayout**

**android:layout\_width="match\_parent"**

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

**android:orientation="vertical"**>

<**TextView**

**android:id="@+id/showValues"**

**android:layout\_width="wrap\_content"**

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

**android:textSize="50dp"** />

<**TextView**

**android:id="@+id/showResults"**

**android:layout\_width="wrap\_content"**

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

**android:textSize="100dp"** />

</**LinearLayout**>

</**HorizontalScrollView**>

<**GridLayout**

**android:layout\_width="match\_parent"**

**android:layout\_height="0dp"**

**android:layout\_weight="2"**

**android:columnCount="4"**

**android:orientation="horizontal"**

**android:rowCount="5"**

**android:useDefaultMargins="true"**>

<**Button**

**android:id="@+id/delete"**

**android:layout\_columnSpan="4"**

**android:text="C"** />

<**Button**

**android:id="@+id/b1"**

**android:text="1"** />

<**Button**

**android:id="@+id/b2"**

**android:text="2"** />

<**Button**

**android:id="@+id/b3"**

**android:text="3"** />

<**Button**

**android:id="@+id/divide"**

**android:text="/"** />

<**Button**

**android:id="@+id/b4"**

**android:text="4"** />

<**Button**

**android:id="@+id/b5"**

**android:text="5"** />

<**Button**

**android:id="@+id/b6"**

**android:text="6"** />

<**Button**

**android:id="@+id/multiply"**

**android:text="\*"** />

<**Button**

**android:id="@+id/b7"**

**android:text="7"** />

<**Button**

**android:id="@+id/b8"**

**android:text="8"** />

<**Button**

**android:id="@+id/b9"**

**android:text="9"** />

<**Button**

**android:id="@+id/subtract"**

**android:text="-"** />

<**Button**

**android:id="@+id/bpoint"**

**android:text="."** />

<**Button**

**android:id="@+id/b0"**

**android:text="0"** />

<**Button**

**android:id="@+id/equal"**

**android:text="="** />

<**Button**

**android:id="@+id/add"**

**android:text="+"** />

</**GridLayout**>

</**LinearLayout**>

Mainactivity.java

**package** com.example.sjcet.gridcalculator;

**import** android.support.v7.app.AppCompatActivity;

**import** android.os.Bundle;

**import** android.view.View;

**import** android.widget.Button;

**import** android.widget.TextView;

**public class** MainActivity **extends** AppCompatActivity {

TextView **number**, **values**;

**double num1**=0, **num2**=0, **ans** = 0;

**boolean add**, **minus**, **product**, **divide**, **decimal**;

Button **b1**, **b2**, **b3**, **b4**, **b5**, **b6**, **b7**, **b8**, **b9**, **b0**, **sum**, **sub**, **mul**, **div**, **deci**, **equal**, **clear**;

@Override

**protected void** onCreate(Bundle savedInstanceState) {

**super**.onCreate(savedInstanceState);

setContentView(R.layout.***activity\_main***);

**number** = findViewById(R.id.***showResults***);

**values** = findViewById(R.id.***showValues***);

**b0** = findViewById(R.id.***b0***);

**b1** = findViewById(R.id.***b1***);

**b2** = findViewById(R.id.***b2***);

**b3** = findViewById(R.id.***b3***);

**b4** = findViewById(R.id.***b4***);

**b5** = findViewById(R.id.***b5***);

**b6** = findViewById(R.id.***b6***);

**b7** = findViewById(R.id.***b7***);

**b8** = findViewById(R.id.***b8***);

**b9** = findViewById(R.id.***b9***);

**sum** = findViewById(R.id.***add***);

**sub** = findViewById(R.id.***subtract***);

**mul** = findViewById(R.id.***multiply***);

**div** = findViewById(R.id.***divide***);

**deci** = findViewById(R.id.***bpoint***);

**equal** = findViewById(R.id.***equal***);

**clear** = findViewById(R.id.***delete***);

**b0**.setOnClickListener(**new** View.OnClickListener() {

@Override

**public void** onClick(View view) {

**number**.setText(**number**.getText() + **"0"**);

}

});

**b1**.setOnClickListener(**new** View.OnClickListener() {

@Override

**public void** onClick(View view) {

**number**.setText(**number**.getText() + **"1"**);

}

});

**b2**.setOnClickListener(**new** View.OnClickListener() {

@Override

**public void** onClick(View view) {

**number**.setText(**number**.getText() + **"2"**);

}

});

**b3**.setOnClickListener(**new** View.OnClickListener() {

@Override

**public void** onClick(View view) {

**number**.setText(**number**.getText() + **"3"**);

}

});

**b4**.setOnClickListener(**new** View.OnClickListener() {

@Override

**public void** onClick(View view) {

**number**.setText(**number**.getText() + **"4"**);

}

});

**b5**.setOnClickListener(**new** View.OnClickListener() {

@Override

**public void** onClick(View view) {

**number**.setText(**number**.getText() + **"5"**);

}

});

**b6**.setOnClickListener(**new** View.OnClickListener() {

@Override

**public void** onClick(View view) {

**number**.setText(**number**.getText() + **"6"**);

}

});

**b7**.setOnClickListener(**new** View.OnClickListener() {

@Override

**public void** onClick(View view) {

**number**.setText(**number**.getText() + **"7"**);

}

});

**b8**.setOnClickListener(**new** View.OnClickListener() {

@Override

**public void** onClick(View view) {

**number**.setText(**number**.getText() + **"8"**);

}

});

**b9**.setOnClickListener(**new** View.OnClickListener() {

@Override

**public void** onClick(View view) {

**number**.setText(**number**.getText() + **"9"**);

}

});

**deci**.setOnClickListener(**new** View.OnClickListener() {

@Override

**public void** onClick(View view) {

**number**.setText(**number**.getText() + **"."**);

}

});

**clear**.setOnClickListener(**new** View.OnClickListener() {

@Override

**public void** onClick(View view) {

**number**.setText(**""**);

**values**.setText(**""**);

}

});

**sum**.setOnClickListener(**new** View.OnClickListener() {

@Override

**public void** onClick(View view) {

**if** (**number**.getText() != **null**) {

**num1** = Float.*parseFloat*(**number**.getText() + **""**);

**add** = **true**;

}

**values**.setText(**number**.getText() + **" +"**);

**number**.setText(**null**);

}

});

**sub**.setOnClickListener(**new** View.OnClickListener() {

@Override

**public void** onClick(View view) {

**if** (**number**.getText() != **null**) {

**num1** = Float.*parseFloat*(**number**.getText() + **""**);

**minus** = **true**;

}

**values**.setText(**number**.getText() + **" -"**);

**number**.setText(**null**);

}

});

**mul**.setOnClickListener(**new** View.OnClickListener() {

@Override

**public void** onClick(View view) {

**if** (**number**.getText() != **null**) {

**num1** = Float.*parseFloat*(**number**.getText() + **""**);

**product** = **true**;

}

**values**.setText(**number**.getText() + **" \*"**);

**number**.setText(**null**);

}

});

**div**.setOnClickListener(**new** View.OnClickListener() {

@Override

**public void** onClick(View view) {

**if** (**number**.getText() != **null**) {

**num1** = Float.*parseFloat*(**number**.getText() + **""**);

**divide** = **true**;

}

**values**.setText(**number**.getText() + **" /"**);

**number**.setText(**null**);

}

});

**equal**.setOnClickListener(**new** View.OnClickListener() {

@Override

**public void** onClick(View view) {

**if** (**add** == **true** || **minus** == **true** || **product** == **true** || **divide** == **true**) {

**if** (**number**.getText() != **null** ) {

**num2** = Float.*parseFloat*(**number**.getText() + **""**);

**values**.setText(**values**.getText() + **" "** + **number**.getText());

**if** (**add** == **true**)

**ans** = **num1** + **num2**;

**add** = **false**;

**if** (**minus** == **true**)

**ans** = **num1** - **num2**;

**minus** = **false**;

**if** (**product** == **true**)

**ans** = **num1** \* **num2**;

**product** = **false**;

**if** (**divide** == **true**)

**ans** = **num1** / **num2**;

**divide** = **false**;

**number**.setText(**ans** + **""**);

**num2** = **ans**;

**num1** = 0;

}

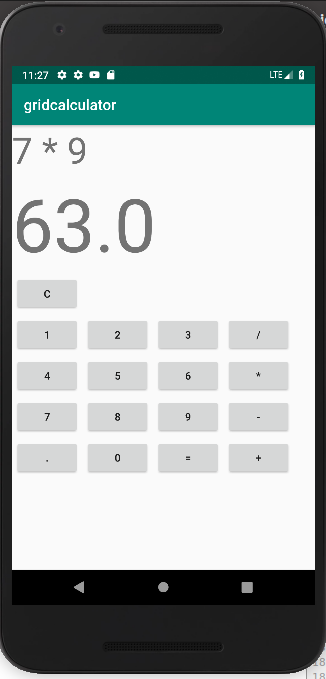
}

}

});

}

}



3. Create a Facebook page using RelativeLayout; set properties using .xml file

Mainactivity.xml

<**RelativeLayout android:layout\_width="match\_parent"**

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

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

**android:background="#3b5998"**

**android:orientation="vertical"**>

<**ImageView**

**android:layout\_width="300dp"**

**android:layout\_height="80dp"**

**android:layout\_gravity="center"**

**android:src="@drawable/logo"**

**android:id="@+id/im1"**

**android:layout\_marginLeft="60dp"**

**android:layout\_marginTop="60dp"**

**android:layout\_marginRight="20dp"**

/>

*<!--EditText for user name or email address-->*

<**EditText**

**android:layout\_width="match\_parent"**

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

**android:layout\_marginLeft="20dp"**

**android:layout\_marginTop="80dp"**

**android:layout\_marginRight="20dp"**

**android:backgroundTint="#d3d3d3"**

**android:hint="Username or Email"**

**android:inputType="textEmailAddress"**

**android:maxLines="1"**

**android:padding="10dp"**

**android:textColor="#ffffff"**

**android:textColorHint="#d3d3d3"**

**android:id="@+id/ed1"**

**android:layout\_below="@+id/im1"**/>

*<!--EditText for user password-->*

<**EditText**

**android:layout\_width="match\_parent"**

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

**android:layout\_marginLeft="20dp"**

**android:layout\_marginTop="10dp"**

**android:layout\_marginRight="20dp"**

**android:backgroundTint="#d3d3d3"**

**android:hint="Password"**

**android:inputType="textPassword"**

**android:maxLines="1"**

**android:padding="10dp"**

**android:textColor="#ffffff"**

**android:textColorHint="#d3d3d3"**

**android:id="@+id/ed2"**

**android:layout\_below="@+id/ed1"**/>

*<!-- Login Button for Facebook Log In-->*

<**Button**

**android:id="@+id/btnLogin"**

**android:layout\_width="match\_parent"**

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

**android:layout\_marginLeft="20dp"**

**android:layout\_marginTop="35dp"**

**android:layout\_marginRight="20dp"**

**android:backgroundTint="#5c6bc0"**

**android:padding="10dp"**

**android:text="Log In"**

**android:textColor="#ffffff"**

**android:textSize="16sp"**

**android:textStyle="bold"**

**android:layout\_below="@+id/ed2"**/>

</**RelativeLayout**>

Mainactivity.java

**package** com.example.sjcet.facebook;

**import** android.support.v7.app.AppCompatActivity;

**import** android.os.Bundle;

**public class** MainActivity **extends** AppCompatActivity {

@Override

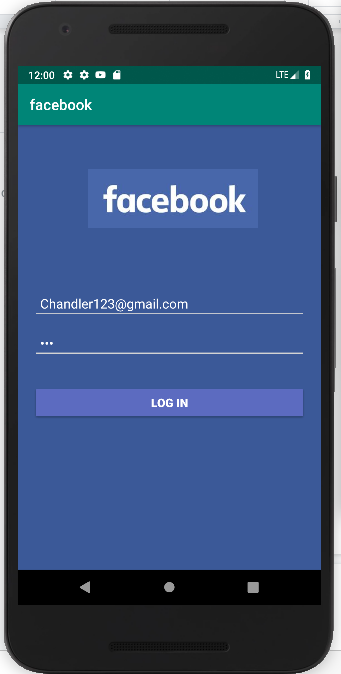
**protected void** onCreate(Bundle savedInstanceState) {

**super**.onCreate(savedInstanceState);

setContentView(R.layout.***activity\_main***);

}

}



4. Develop an application that toggles image using FrameLayout

Mainactivity.xml

<**FrameLayout android:layout\_width="match\_parent"**

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

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

**android:id="@+id/framelayout"**>

<**ImageView**

**android:id="@+id/imageview"**

**android:layout\_width="match\_parent"**

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

**android:scaleType="fitCenter"**

**android:src="@drawable/ones"** />

<**Button**

**android:id="@+id/b1"**

**android:layout\_width="wrap\_content"**

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

**android:onClick="click"**

**android:text="toggle image"**/>

</**FrameLayout**>

Mainactivity.java

**package** com.example.sjcet.toggleimage;

**import** android.support.v7.app.AppCompatActivity;

**import** android.os.Bundle;

**import** android.view.View;

**import** android.widget.ImageView;

**public class** MainActivity **extends** AppCompatActivity {

ImageView **img**;

**boolean onclick**=**false**;

@Override

**protected void** onCreate(Bundle savedInstanceState) {

**super**.onCreate(savedInstanceState);

setContentView(R.layout.***activity\_main***);

}

**public void** click(View view) {

ImageView img = (ImageView) findViewById(R.id.***imageview***);

**if**(!**onclick**){

img.setImageResource(R.drawable.***ones***);

**onclick**=**true**;

}

**else if**(**onclick**){

img.setImageResource(R.drawable.***two***);

**onclick**=**false**;

}

}

}

Output

