Part A - Android Programming

1. Hello World Program (Write a program to Toast Hello World)

MainActivity.java

```
package com.example.android_hello;

import android.os.Bundle;

import android.app.Activity;
import android.widget.TextView;
import android.widget.Toast;
public class MainActivity extends Activity
{
       protected void onCreate(Bundle savedInstanceState)
      {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        TextView tv1=(TextView)findViewById(R.id.tv1);
        tv1.setText("Hello World!");
        Toast.makeText(getApplicationContext(), "Hello World!",
                       Toast.LENGTH_LONG).show();
      }

}
```

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"
    tools:context=".MainActivity" >

    <TextView
        android:id="@+id/tv1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content" />

</RelativeLayout>
```

2. Addition of two Numbers (Write a program to add two numbers)

MainActivity.java

```
package com.example.android_sum;

import android.os.Bundle;
import android.app.Activity;
import android.widget.Button;
import android.widget.EditText;
import android.view.View;

public class MainActivity extends Activity {

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

    public void myClickHandler(View v)
```

```
    {
       int a,b,c;
       switch(v.getId())
       {
       case R.id.button1:
              EditText editText1=(EditText)findViewById(R.id.editText1);
              EditText editText2=(EditText)findViewById(R.id.editText2);
              a=Integer.parseInt(editText1.getText().toString());
              b=Integer.parseInt(editText2.getText().toString());
              c=a+b;
              EditText editText3=(EditText)findViewById(R.id.editText3);
              editText3.setText(Integer.toString(c));
       }
    }

}
```

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"
    tools:context=".MainActivity" >

    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_marginLeft="28dp"
        android:layout_marginTop="32dp"
        android:text="First Number" />

    <EditText
        android:id="@+id/editText1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignTop="@+id/textView1"
        android:layout_toRightOf="@+id/textView1"
        android:ems="10" />

    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/textView1"
        android:layout_below="@+id/editText1"
        android:layout_marginTop="48dp"
        android:text="Second Number" />

    <EditText
        android:id="@+id/editText2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignBaseline="@+id/textView2"
        android:layout_alignBottom="@+id/textView2"
        android:layout_alignLeft="@+id/editText1"
        android:layout_marginLeft="42dp"
        android:ems="10" >
```

```
        <requestFocus />
    </EditText>

    <TextView
        android:id="@+id/textView3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/textView2"
        android:layout_centerVertical="true"
        android:text="Sum" />

    <EditText
        android:id="@+id/editText3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/editText2"
        android:layout_alignTop="@+id/textView3"
        android:layout_marginLeft="32dp"
        android:ems="10" />

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/editText3"
        android:layout_marginTop="58dp"
        android:layout_toRightOf="@+id/textView1"
        android:text="Run"
        android:onClick="myClickHandler" />

</RelativeLayout>
```

3. Date and Time Dialog box(Write a program to display date and time using dialog box)

MainActivity.java

```
package com.example.android_datetime;

import android.os.Bundle;

import android.app.Activity;
import android.view.Menu;
import java.util.*;
import android.widget.TextView;
import android.widget.DatePicker;
import android.app.DatePickerDialog;
import android.app.TimePickerDialog;
import android.widget.TimePicker;

public class MainActivity extends Activity {
    TextView tv1,tv2;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        final Calendar c = Calendar.getInstance();
        int mYear = c.get(Calendar.YEAR);
        int mMonth = c.get(Calendar.MONTH);
        int mDay = c.get(Calendar.DAY_OF_MONTH);
        tv1=(TextView)findViewById(R.id.tv1);
        tv2=(TextView)findViewById(R.id.tv2);
```

```
        int mHour = c.get(Calendar.HOUR_OF_DAY);
        int mMinute = c.get(Calendar.MINUTE);

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

                    @Override
                    public void onDateSet(DatePicker view, int year,
                            int monthOfYear, int dayOfMonth) {
                        tv1.setText(dayOfMonth + "-"
                                + (monthOfYear + 1) + "-" + year);

                    }
                }, mYear, mMonth, mDay);
        dpd.show();

        TimePickerDialog tpd = new TimePickerDialog(this,
                new TimePickerDialog.OnTimeSetListener() {

                    @Override
                    public void onTimeSet(TimePicker view, int hourOfDay,
                            int minute) {
                        tv2.setText(hourOfDay + ":" + minute);
                    }
                }, mHour, mMinute, false);
        tpd.show();
    }

}
```

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"
    tools:context=".MainActivity" >

    <TextView
        android:id="@+id/tv1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="76dp" />

    <TextView
        android:id="@+id/tv2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/tv1"
        android:layout_centerVertical="true" />

</RelativeLayout>
```

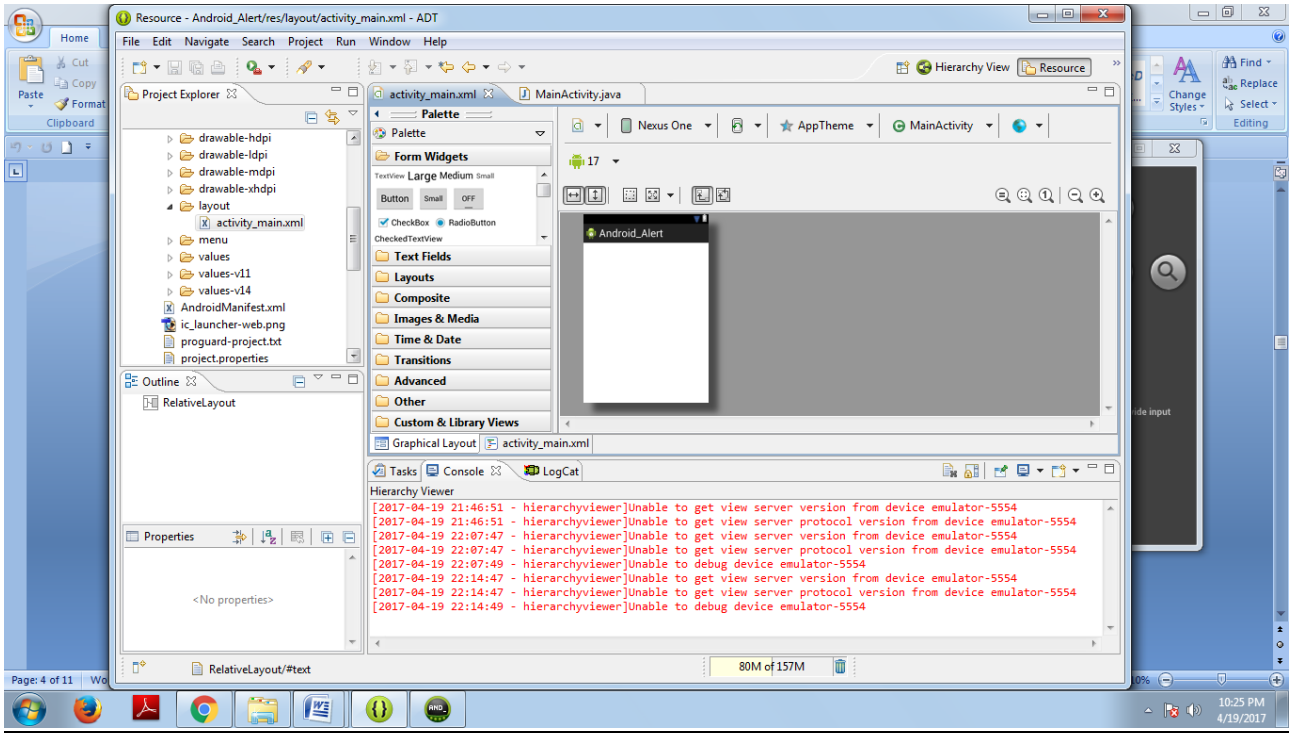
4. Alert Box (Write a program to Display an alert box with OK and Cancel)

MainActivity.java

```
package com.example.android_alert;

import android.app.Activity;
import android.app.AlertDialog;
```

```
import android.content.DialogInterface;
import android.os.Bundle;
import android.widget.Toast;

public class MainActivity extends Activity {
   @Override
   protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);

      AlertDialog.Builder builder = new AlertDialog.Builder(this);
      builder.setMessage("Are you sure, You want to close this application?");
      builder.setPositiveButton("Ok", new DialogInterface.OnClickListener() {
         @Override
         public void onClick(DialogInterface arg0, int arg1) {
            Toast.makeText(MainActivity.this,"You choose Ok",Toast.LENGTH_LONG).show();
            finish();
         }
      });

      builder.setNegativeButton("Cancel",new DialogInterface.OnClickListener() {
         @Override
         public void onClick(DialogInterface dialog, int which) {
              Toast.makeText(MainActivity.this,"You choose
Cancel",Toast.LENGTH_LONG).show();
            dialog.cancel();
         }
      });

      AlertDialog altdlg = builder.create();
      altdlg.show();
}
}
```

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"
    tools:context=".MainActivity" >
</RelativeLayout>
```

5. Menu Program (Write a Program to create menu with three menu items)

MainActivity.java

```
package com.example.android_menu;

import android.app.Activity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuInflater;
import android.view.MenuItem;
import android.widget.Toast;

public class MainActivity extends Activity {

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

    // Initiating Menu XML file (menu.xml)
    @Override
    public boolean onCreateOptionsMenu(Menu menu)
    {
        MenuInflater menuInflater = getMenuInflater();
        menuInflater.inflate(R.layout.menu, menu);
        return true;
    }

    /**
     * Event Handling for Individual menu item selected
     * Identify single menu item by it's id
     * */
    @Override
    public boolean onOptionsItemSelected(MenuItem item)
    {

        switch (item.getItemId())
        {
        case R.id.menu_bookmark:
            // Single menu item is selected do something
            // Ex: launching new activity/screen or show alert message
            Toast.makeText(MainActivity.this, "Bookmark is Selected",
Toast.LENGTH_SHORT).show();
            return true;

        case R.id.menu_save:
            Toast.makeText(MainActivity.this, "Save is Selected",
Toast.LENGTH_SHORT).show();
            return true;

        case R.id.menu_search:
            Toast.makeText(MainActivity.this, "Search is Selected",
Toast.LENGTH_SHORT).show();
```

```
            return true;

        case R.id.menu_share:
            Toast.makeText(MainActivity.this, "Share is Selected",
Toast.LENGTH_SHORT).show();
            return true;

        case R.id.menu_delete:
            Toast.makeText(MainActivity.this, "Delete is Selected",
Toast.LENGTH_SHORT).show();
            return true;

        case R.id.menu_preferences:
            Toast.makeText(MainActivity.this, "Preferences is Selected",
Toast.LENGTH_SHORT).show();
            return true;

        default:
            return super.onOptionsItemSelected(item);
        }
    }

}
```

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"
    tools:context=".MainActivity" >

</RelativeLayout>
```

6. Radio Button (Write a Program to select gender using radio button)

MainActivity.java

```
package com.example.android_radio;

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.Toast;

public class MainActivity extends Activity {

       private RadioGroup radioSexGroup;
         private RadioButton radioSexButton;
         private Button btnDisplay;

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

              addListenerOnButton();
```

```
        }

        public void addListenerOnButton() {

              radioSexGroup = (RadioGroup) findViewById(R.id.radioSex);
              btnDisplay = (Button) findViewById(R.id.btnDisplay);

              btnDisplay.setOnClickListener(new OnClickListener() {

                    @Override
                    public void onClick(View v) {

                          // get selected radio button from radioGroup
                          int selectedId = radioSexGroup.getCheckedRadioButtonId();

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

                          Toast.makeText(MainActivity.this,
                                radioSexButton.getText(), Toast.LENGTH_SHORT).show();

                    }

              });

        }

}
```

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" >

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

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

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

    </RadioGroup>

    <Button
        android:id="@+id/btnDisplay"
        android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
        android:text="Press" />

</LinearLayout>
```

7. Spinner (Write a Program to spin the four items)

MainActivity.java

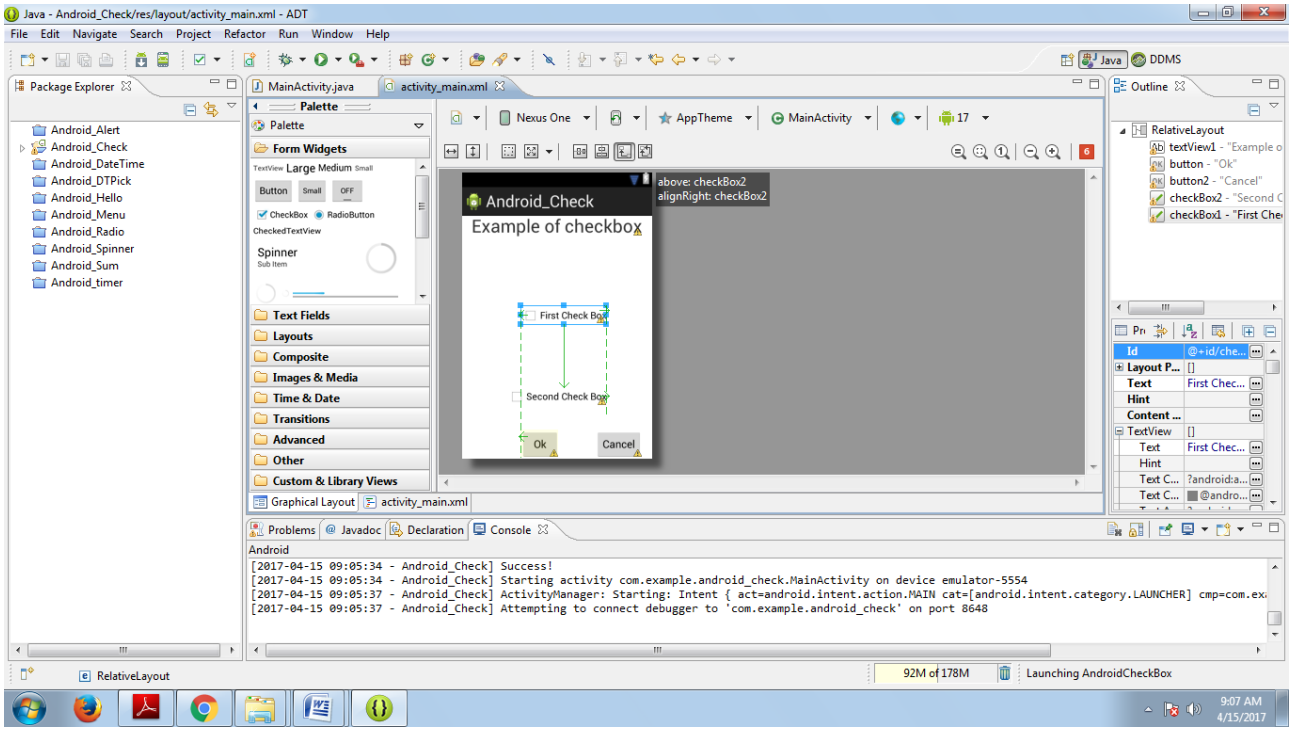
```
package com.example.android_spinner;

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.Spinner;
import android.widget.TextView;

public class MainActivity extends Activity implements
AdapterView.OnItemSelectedListener {
TextView selection;
String[] items = { "Maths", "Physics", "Chemistry", "Computer"};

@Override
public void onCreate(Bundle icicle) {
super.onCreate(icicle);
setContentView(R.layout.activity_main);
selection = (TextView) findViewById(R.id.selection);

Spinner spin = (Spinner) findViewById(R.id.spinner);
spin.setOnItemSelectedListener(this);

ArrayAdapter aa = new ArrayAdapter(this,android.R.layout.simple_spinner_item,items);

aa.setDropDownViewResource(
   android.R.layout.simple_spinner_dropdown_item);
spin.setAdapter(aa);
}

public void onItemSelected(AdapterView<?> parent, View v, int position,
      long id) {
selection.setText(items[position]);
}

public void onNothingSelected(AdapterView<?> parent) {
selection.setText("");
}
}
```

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:id="@+id/myLinearLayout"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:orientation="vertical" >

    <TextView
        android:id="@+id/selection"
        android:layout_width="fill_parent"
```

```
        android:layout_height="wrap_content"
        android:background="#ff0033cc"
        android:textSize="14sp"
        android:textStyle="bold" >
    </TextView>

    <Spinner
        android:id="@+id/spinner"
        android:layout_width="fill_parent"
        android:layout_height="35dp" />

</LinearLayout>
```

8. Check Box (Write a Program to check the items listed)

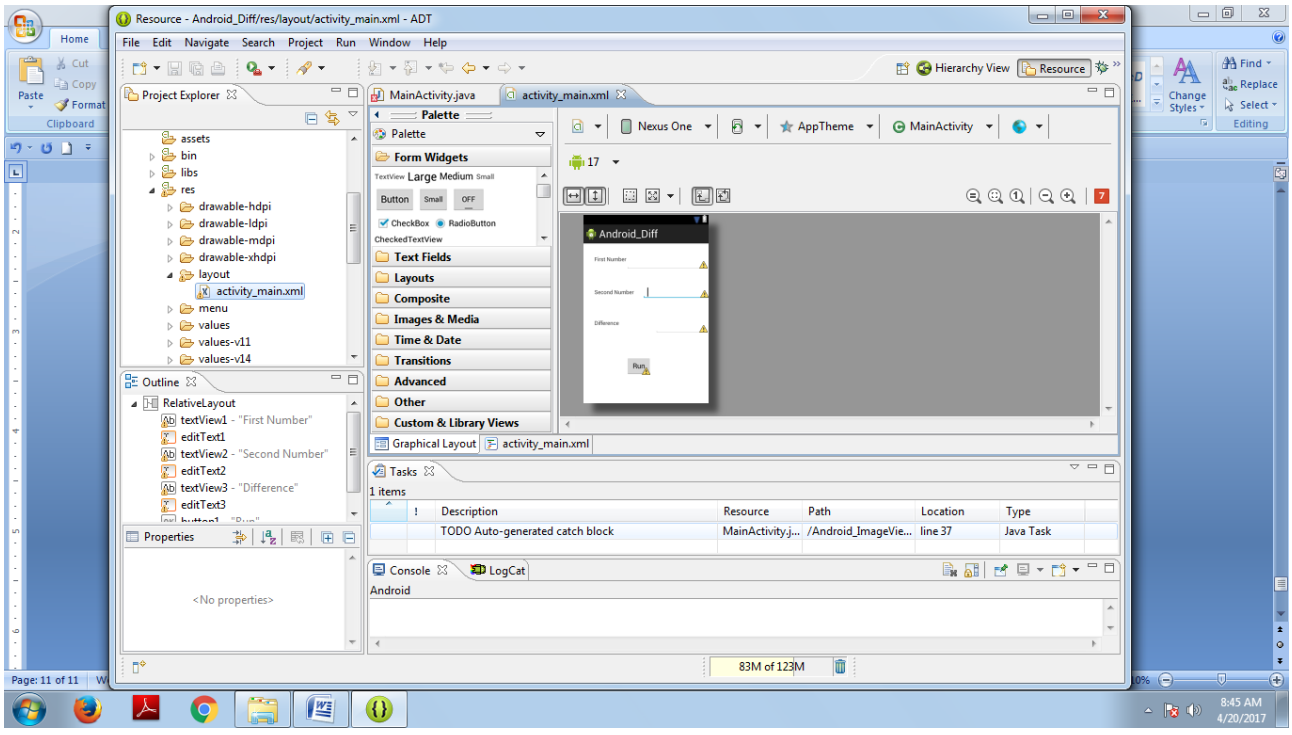



```
package com.example.android_check;

import android.os.Bundle;
import android.app.Activity;
import android.widget.Button;
import android.view.View;
import android.widget.CheckBox;
import android.widget.Toast;

public class MainActivity extends Activity {
   CheckBox ch1,ch2;
   Button b1,b2;

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

      ch1=(CheckBox)findViewById(R.id.checkBox1);
      ch2=(CheckBox)findViewById(R.id.checkBox2);
```

```
        b1=(Button)findViewById(R.id.button);
        b2=(Button)findViewById(R.id.button2);
        b2.setOnClickListener(new View.OnClickListener() {

            @Override
            public void onClick(View v) {
                finish();
            }
        });
        b1.setOnClickListener(new View.OnClickListener() {

            @Override
            public void onClick(View v) {
                StringBuffer result = new StringBuffer();
                result.append("First CheckBox: ").append(ch1.isChecked());
                result.append("\nSecond CheckBox: ").append(ch2.isChecked());
                Toast.makeText(MainActivity.this, result.toString(),
                    Toast.LENGTH_LONG).show();
            }
        });
    }
}
```

9. Difference of two numbers

Activity_main.xml



MainActivity.java

```
package com.example.android_diff;

import android.os.Bundle;
import android.app.Activity;
import android.widget.Button;
import android.widget.EditText;
import android.view.View;
```

```
       public class MainActivity extends Activity {

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

           public void myClickHandler(View v)
           {
              int a,b,c;
              switch(v.getId())
              {
              case R.id.button1:
                     EditText editText1=(EditText)findViewById(R.id.editText1);
                     EditText editText2=(EditText)findViewById(R.id.editText2);
                     a=Integer.parseInt(editText1.getText().toString());
                     b=Integer.parseInt(editText2.getText().toString());
                     c=a-b;
                     EditText editText3=(EditText)findViewById(R.id.editText3);
                     editText3.setText(Integer.toString(c));
              }
           }

}
```

10. DTPick

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"
    tools:context=".MainActivity" >

    <TextView
        android:id="@+id/tv1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="76dp" />

    <TextView
        android:id="@+id/tv2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/textView1"
        android:layout_centerVertical="true" />

</RelativeLayout>
```

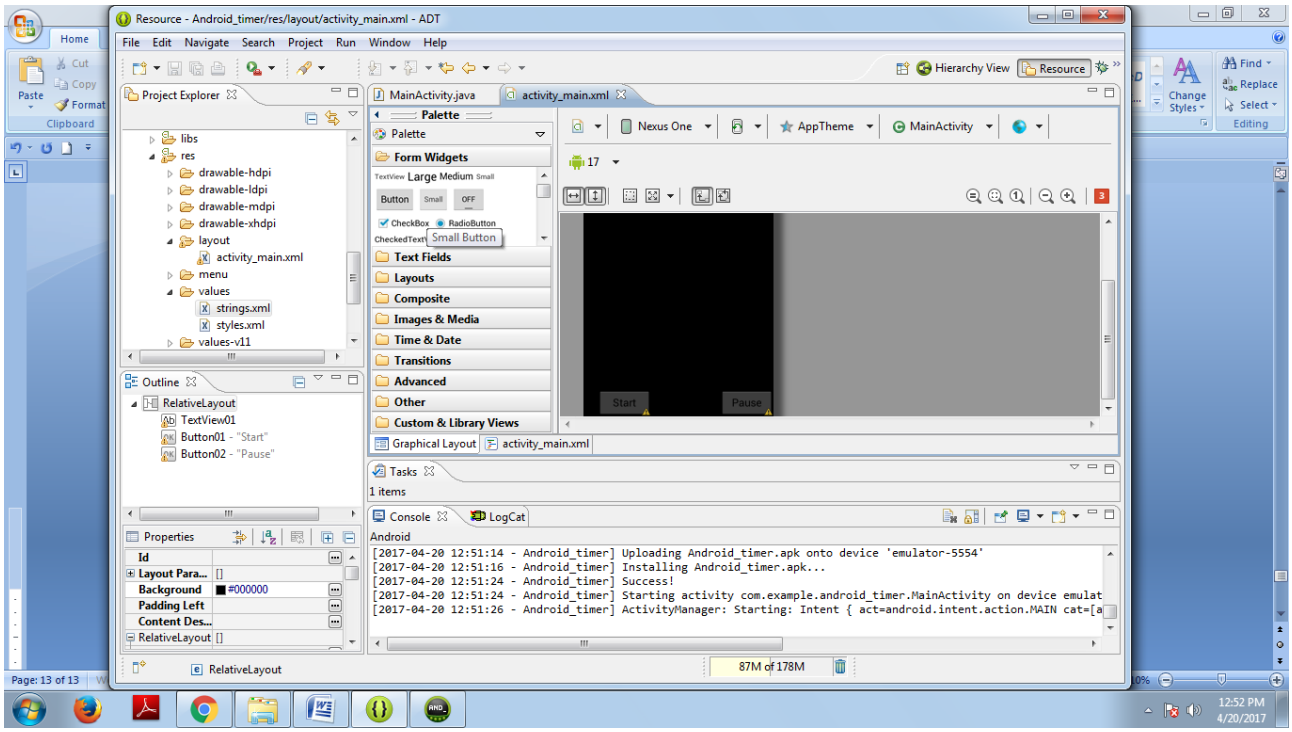
MainActivity.java

```
       package com.example.android_dtpick;
```

```
import android.os.Bundle;

import android.app.Activity;
import android.view.Menu;
import java.util.*;
import android.widget.TextView;
import android.widget.DatePicker;
import android.app.DatePickerDialog;
import android.app.TimePickerDialog;
import android.widget.TimePicker;

public class MainActivity extends Activity {
    TextView tv1,tv2;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        final Calendar c = Calendar.getInstance();
        int mYear = c.get(Calendar.YEAR);
        int mMonth = c.get(Calendar.MONTH);
        int mDay = c.get(Calendar.DAY_OF_MONTH);
        tv1=(TextView)findViewById(R.id.tv1);
        tv2=(TextView)findViewById(R.id.tv2);
        int mHour = c.get(Calendar.HOUR_OF_DAY);
        int mMinute = c.get(Calendar.MINUTE);

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

                    @Override
                    public void onDateSet(DatePicker view, int year,
                            int monthOfYear, int dayOfMonth) {
                        tv1.setText(dayOfMonth + "-"
                                + (monthOfYear + 1) + "-" + year);

                    }
                }, mYear, mMonth, mDay);
        dpd.show();

        TimePickerDialog tpd = new TimePickerDialog(this,
                new TimePickerDialog.OnTimeSetListener() {

                    @Override
                    public void onTimeSet(TimePicker view, int hourOfDay,
                            int minute) {
                        tv2.setText(hourOfDay + ":" + minute);
                    }
                }, mHour, mMinute, false);
        tpd.show();
    }

}
```

11. Timer Program (Write a Program to display Stop watch)

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:background="#000000"
    android:layout_height="match_parent" >
   <TextView
        android:id="@+id/TextView01"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_above="@+id/pauseButton"
        android:layout_centerHorizontal="true"
        android:layout_marginBottom="37dp"
        android:textSize="40sp"
        android:textColor="#ffffff"
        android:text="" />

    <Button
        android:id="@+id/Button01"
        android:layout_width="90dp"
        android:layout_height="45dp"
        android:layout_alignParentBottom="true"
        android:layout_alignParentLeft="true"
        android:layout_marginLeft="24dp"
        android:text="Start" />

    <Button
        android:id="@+id/Button02"
        android:layout_width="90dp"
        android:layout_height="45dp"
        android:layout_alignParentBottom="true"
```

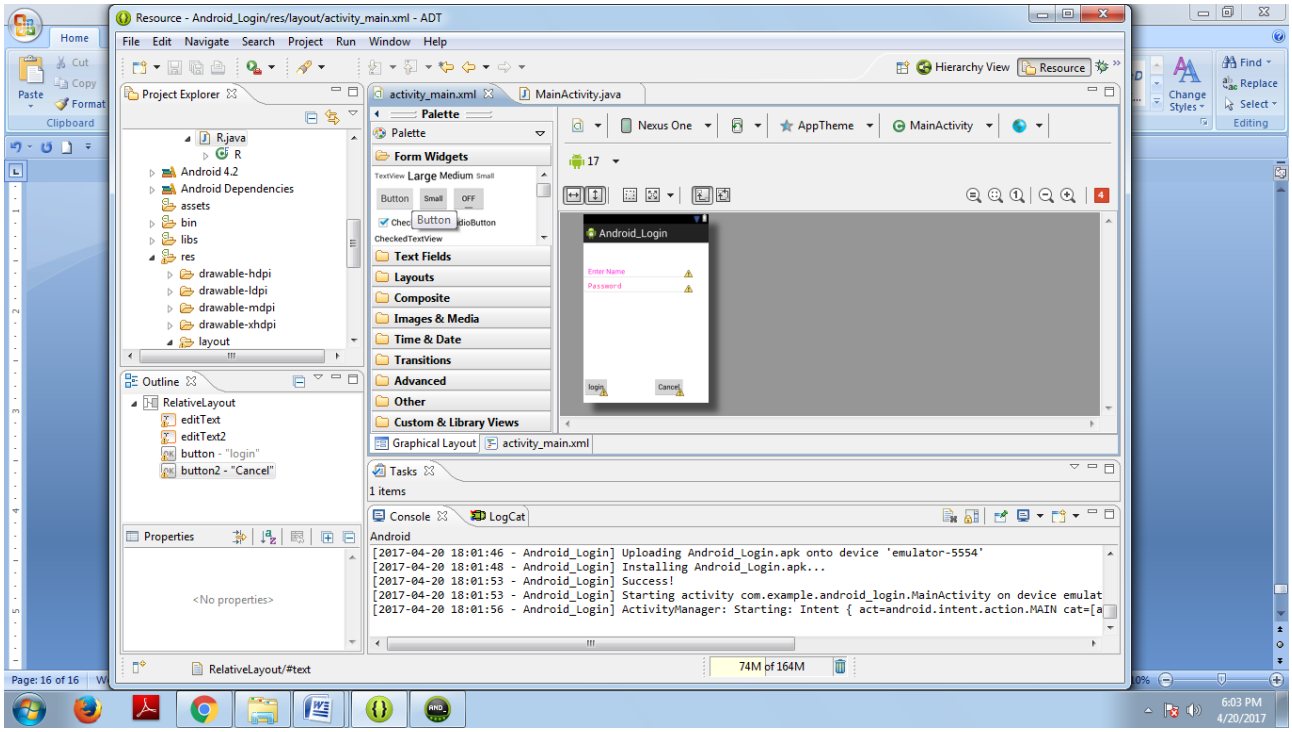
```
        android:layout_alignParentRight="true"
        android:text="Pause" />

</RelativeLayout>
```

MainActivity.java

```
package com.example.android_timer;

import android.app.Activity;
import android.os.Bundle;
import android.os.Handler;
import android.os.SystemClock;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;

public class MainActivity extends Activity {

	private Button startButton;
	private Button pauseButton;

	private TextView timerValue;

	private long startTime = 0L;

	private Handler customHandler = new Handler();

	long timeInMilliseconds = 0L;
	long timeSwapBuff = 0L;
	long updatedTime = 0L;

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

		timerValue = (TextView) findViewById(R.id.TextView01);

		startButton = (Button) findViewById(R.id.Button01);

		startButton.setOnClickListener(new View.OnClickListener() {

			public void onClick(View view) {
				startTime = SystemClock.uptimeMillis();
				customHandler.postDelayed(updateTimerThread, 0);

			}
		});

		pauseButton = (Button) findViewById(R.id.Button02);

		pauseButton.setOnClickListener(new View.OnClickListener() {

			public void onClick(View view) {

				timeSwapBuff += timeInMilliseconds;
				customHandler.removeCallbacks(updateTimerThread);

			}
```

```
            });

        }

        private Runnable updateTimerThread = new Runnable() {

            public void run() {

                timeInMilliseconds = SystemClock.uptimeMillis() - startTime;

                updatedTime = timeSwapBuff + timeInMilliseconds;

                int secs = (int) (updatedTime / 1000);
                int mins = secs / 60;
                secs = secs % 60;
                int milliseconds = (int) (updatedTime % 1000);
                timerValue.setText("" + mins + ":"
                            + String.format("%02d", secs) + ":"
                            + String.format("%03d", milliseconds));
                customHandler.postDelayed(this, 0);
            }

        };

}
```

12. Log In(optional- Write a program for Log in Using username and password)
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">
```

```
    <EditText
        android:id="@+id/editText"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_marginRight="40dp"
        android:layout_marginTop="56dp"
        android:ems="10"
        android:focusable="true"
        android:hint="Enter Name"
        android:textColorHighlight="#ff7eff15"
        android:textColorHint="#ffff25e6" />

    <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" />

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentBottom="true"
        android:layout_marginBottom="16dp"
        android:text="login" />

    <Button
        android:id="@+id/button2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignBaseline="@+id/button"
        android:layout_alignBottom="@+id/button"
        android:layout_alignRight="@+id/editText2"
        android:layout_marginRight="22dp"
        android:text="Cancel" />

</RelativeLayout>
```

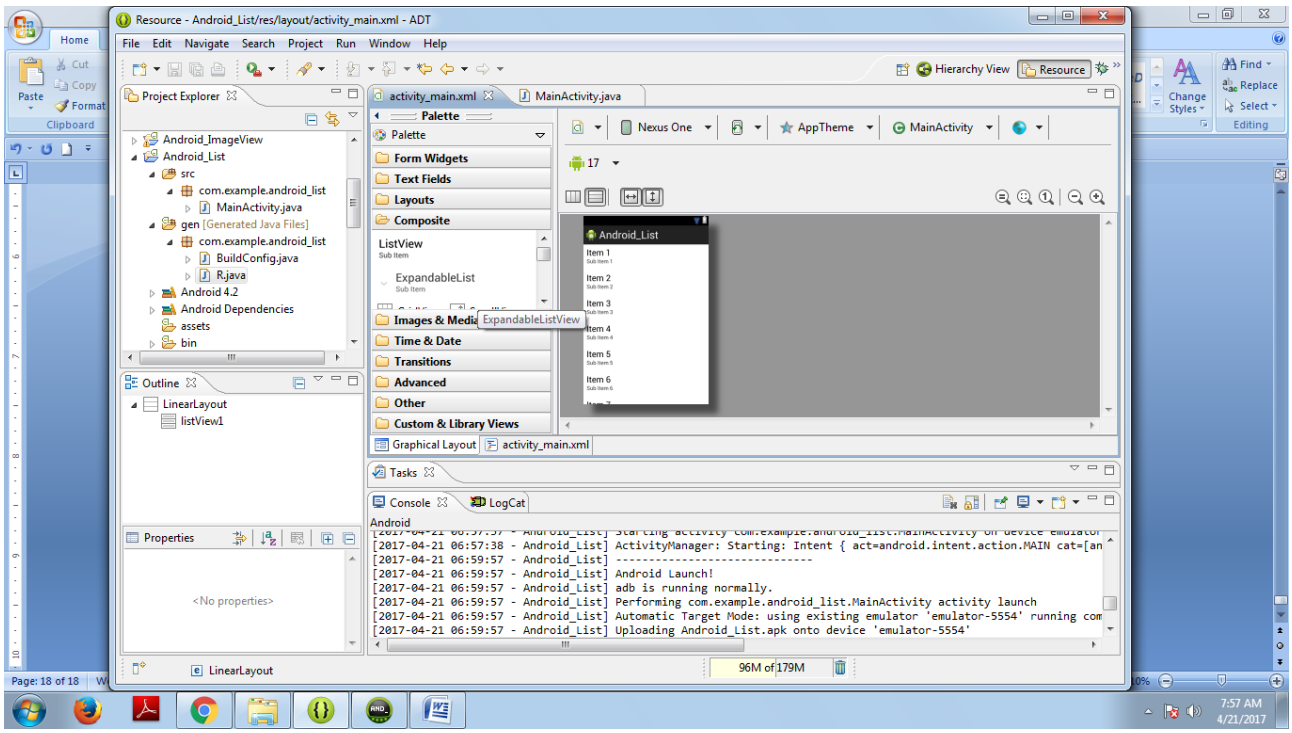
MainActivity.java

```
package com.example.android_login;

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
```

```
import android.widget.Toast;


public class MainActivity extends Activity  {
   Button b1,b2;
   EditText ed1,ed2;

   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);

      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_LONG).show();
               }else{
                  Toast.makeText(getApplicationContext(), "Wrong
Credentials",Toast.LENGTH_SHORT).show();

                  counter--;
                  Toast.makeText(getApplicationContext(), Integer.toString(counter)+"
more chance",Toast.LENGTH_SHORT).show();
                  if (counter == 0) {
                     b1.setEnabled(false);
                  }
               }
         }
      });

      b2.setOnClickListener(new View.OnClickListener() {
         @Override
         public void onClick(View v) {
            finish();
         }
      });
   }
}
```

13. List View(Write a Program to Display the items in a list)

activity_main.xml




```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical" >

    <ListView
        android:id="@+id/listView1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content" >
    </ListView>

</LinearLayout>
```

MainActivity.java

```
package com.example.android_list;

import android.os.Bundle;
import android.app.Activity;
import android.widget.ArrayAdapter;
import android.widget.ListView;

public class MainActivity extends Activity {
    ListView listView ;

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

        listView = (ListView) findViewById(R.id.listView1);

        String[] values = new String[] { "Mathematics", "Physics", "Chemistry",
                                         "Computer Science", "Zoology", "Botany",
                                         "Ind Chemistry"
```

```
                                        };

        ArrayAdapter<String> adapter = new ArrayAdapter<String>(this,
          android.R.layout.simple_list_item_1, android.R.id.text1, values);

        listView.setAdapter(adapter);

    }
}
```