BHARTIYA INSTITUTE OF ENGINEERING & TECHONOLOGY-SIKAR

MOBILE APPLICATION DEVELOPMENT LAB MANUAL (6CS4-24)
SEM-VI CSE

PREPARED BY: DILEEP KUMAR AGARWAL

LIST OF EXPERIMENT:

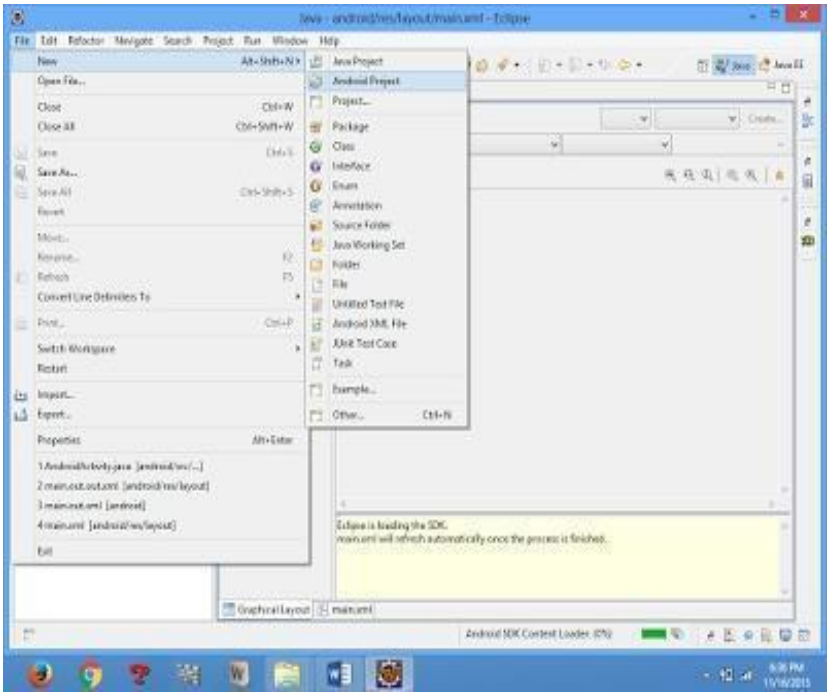
1. To study android studio and its installation. Create “Hello World” application.
2. To understand activity, Intent, Create sample application with login module.
3. Design simple GUI application with activity and Intents e. g. calculator.
4. Write an application that draws basic graphical primitives on the screen.
5. Create an android app for database creation using SQLite database.
6. Develop an application that makes use of RSS Feed.
7. Develop a native application that uses GPS location information.
8. Implement an application that writes data to the SD card.
9. Design a gaming application.
10. Write a mobile application that creates alarm clock.

Ex. No : 1

To study android studio and its installation. Create “Hello World” application.

Simple application to change font size and color of text view

1) Open eclipse or android studio and select new android project



2)Give project name and select next

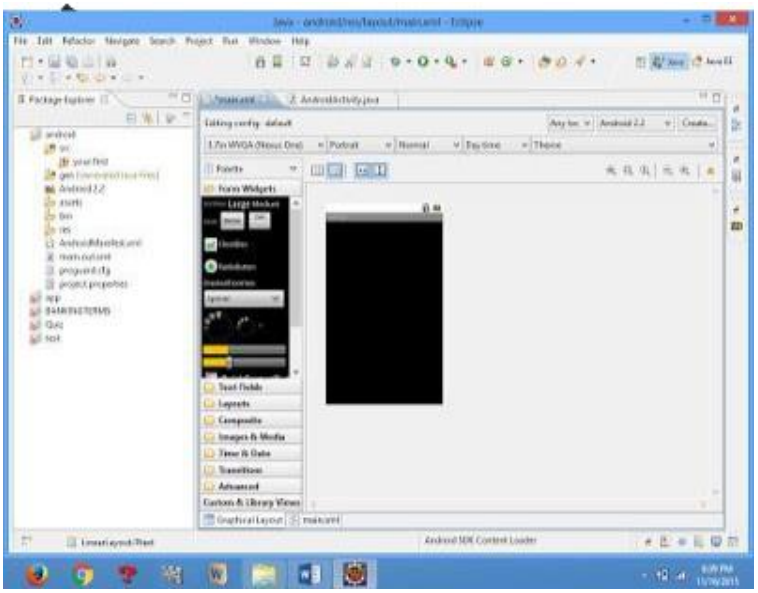
3) Choose the android version. Choose the lowest android version (Android 2.2) and select next

4) Enter the package name. Package name must be two word separated by comma and click finish

5) Go to package explorer in the left hand side. Select our project.

6) Go to res folder and select layout. Double click the main.xml file

7) Now you can see the Graphics layout window.



8) Click the main.xml file and type the code below

Code:

```
<?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" >
<TextView
android:id="@+id/textView1"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_margin="20sp"
android:gravity="center"
android:text="HELLO WORLD"
android:textSize="20sp"
android:textStyle="bold" />
<Button
      android:id="@+id/button1"
android:layout_width="match_parent"
android:layout_height="wrap_content"
```

android:gravity="center"

android:text="Change font size"

android:textSize="20sp" />

<Button

android:id="@+id/button2"

android:layout_width="match_parent"

android:layout_height="wrap_content"

android:gravity="center"

android:text="Change color"

android:textSize="20sp" />

<Button

android:id="@+id/button3"

android:layout_width="match_parent"

android:layout_height="wrap_content"

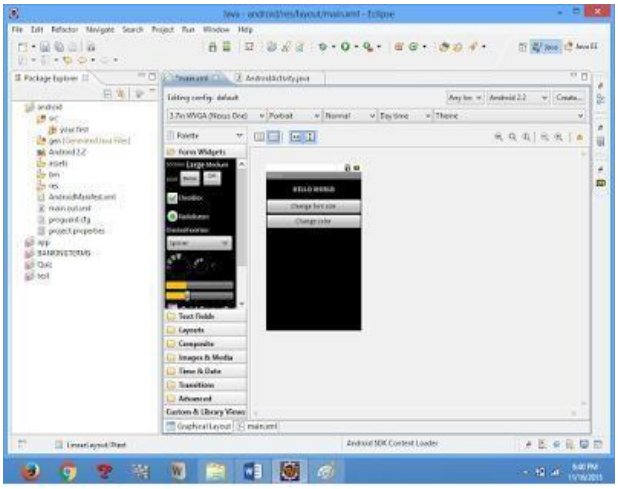
android:gravity="center"

android:text="Change font"

android:textSize="20sp" />

</LinearLayout>

9) Again click the graphics layout tab and screen layout is look like below



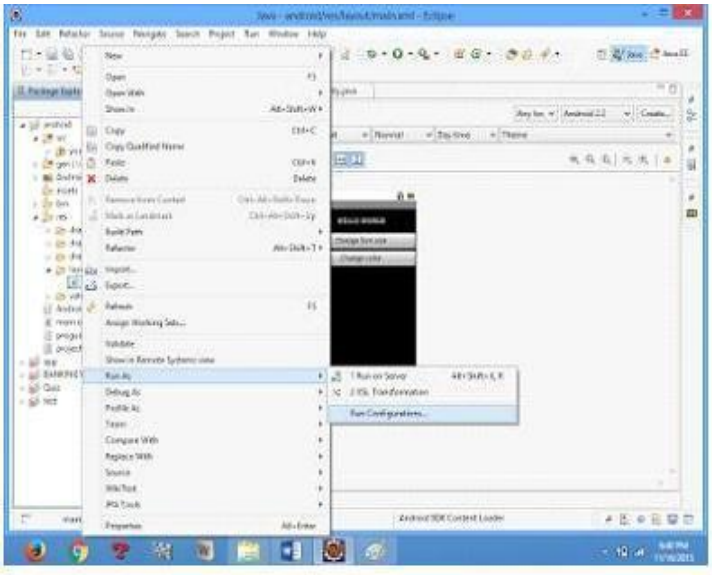
10) Go to project explorer and select ***src*** folder.Now select mainactivity.java file and type the following code.

PROGRAM

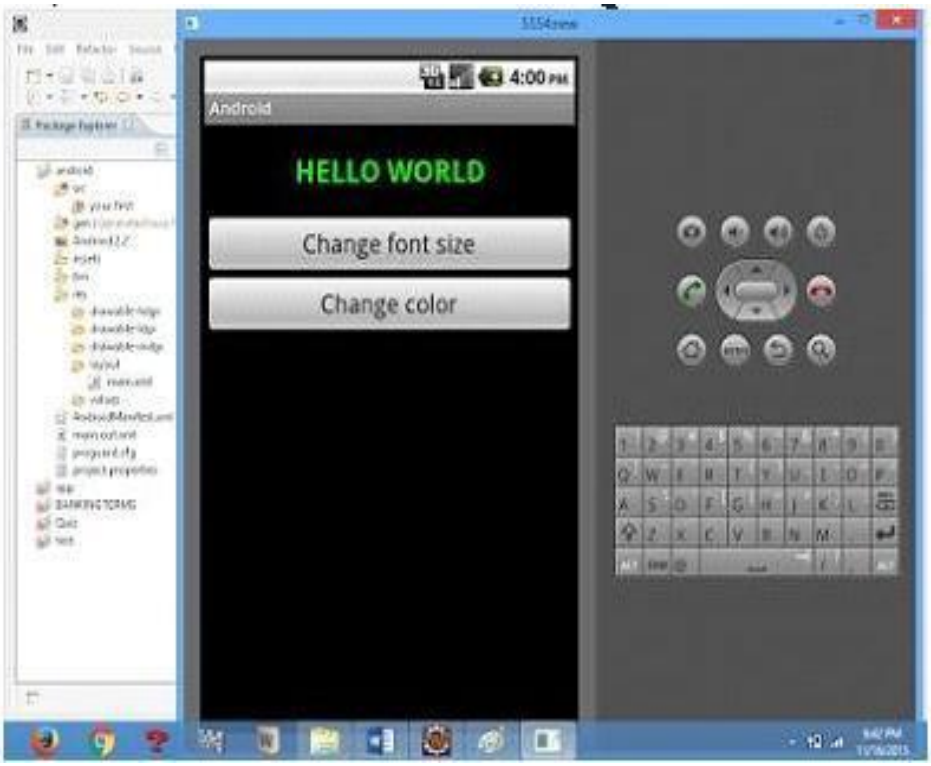
```
import android.R; import
android.app.Activity; import
android.graphics.Color; import
android.graphics.Typeface; import
android.os.Bundle; import
android.view.View; import
android.widget.Button; import
android.widget.TextView;
public class AndroidActivity extends Activity
{     float font =24;      int i=1;
   @Override     public void
onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.main);
       final TextView t1=(TextView)
findViewById(R.id.textView1);      Button
b1 = (Button) findViewById(R.id.button1);
       b1.setOnClickListener(new
View.OnClickListener() {
          public void onClick(View view) {
             t1.setTextSize(font);
font=font+4;               if(font==40)
font=20;
          }
       });
Button b2 = (Button)
findViewById(R.id.button2);
b2.setOnClickListener(new
View.OnClickListener() {
```

```
public void onClick(View view) {
        switch(i)
        {               case 1:

        t1.setTextColor(Color.parseColor("#0000FF
        "));                    break;              case 2:

        t1.setTextColor(Color.parseColor("#00FF00
        "));                    break;              case 3:

            t1.setTextColor(Color.parseColor("#FF0000"));
            break;                  case 4:
            t1.setTextColor(Color.parseColor("#800000"));
            break;
            }               i++;
            if(i==5)
            i=1;
                    }
                });

            } }
```

11) Now go to main.xml and right click .select run as option and select run configuration



12) Android output is present in the android emulator as shown in below.



Ex. No : 2

To understand activity, Intent, Create sample application with login module.

1) Open eclipse or android studio and select new android project

2) Give project name and select next

3) Choose the android version. Choose the lowest android version (Android 2.2) and select next

4) Enter the package name. Package name must be two word separated by comma and click finish

5) Go to package explorer in the left hand side. select our project.

6) Go to res folder and select layout. Double click the main.xml file. Add the code below

```
<RelativeLayout
xmlns:android="http://schemas.android.com/apk/res/android"
android:id="@+id/relativeLayout1"        android:layout_width="fill_parent"
android:layout_height="fill_parent" >

<LinearLayout
        android:id="@+id/linearLayout1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignParentLeft="true"
android:layout_alignParentRight="true"
android:layout_alignParentTop="true" >

<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_gravity="center"
android:text="ADDITION"
android:textSize="20dp"
```

```
/TextView>
</LinearLayout><LinearLayout
android:id="@+id/linearLayout2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignParentLeft="true"
android:layout_alignParentRight="true"
android:layout_below="@+id/linearLayout1" >
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="ENTER NO 1" >
</TextView><EditText
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_weight="0.20"
android:id="@+id/edittext1"
android:inputType="number">
</EditText>
</LinearLayout><LinearLayout
android:id="@+id/linearLayout3"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignParentLeft="true"
android:layout_alignParentRight="true"
android:layout_below="@+id/linearLayout2" >
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="ENTER NO 2" >
</TextView><EditText
android:layout_width="wrap_content"
```

```
android:layout_height="wrap_content"
android:layout_weight="0.20"
android:id="@+id/edittext2"
android:inputType="number">
</EditText>
</LinearLayout><LinearLayout
android:id="@+id/linearLayout4"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignParentLeft="true"
android:layout_alignParentRight="true"
   android:layout_below="@+id/linearLayout3" >

<Button
android:layout_width="wrap_content"
android:id="@+id/button1"
android:layout_height="wrap_content"
android:text="Addition"
android:layout_weight="0.50" />
<Button
android:layout_width="wrap_content"
android:id="@+id/button3"
android:layout_height="wrap_content"
android:text="subtraction"
android:layout_weight="0.50" />
<Button
 android:layout_width="wrap_content"
 android:id="@+id/button2"
 android:layout_height="wrap_content"
 android:text="CLEAR"
 android:layout_weight="0.50" />
</LinearLayout>
```

```
<View
android:layout_height="2px"
android:layout_width="fill_parent"
android:layout_below="@+id/linearLayout4"
android:background="#DDFFDD"/>
</RelativeLayout>
```

7) Now select mainactivity.java file and type the following code.

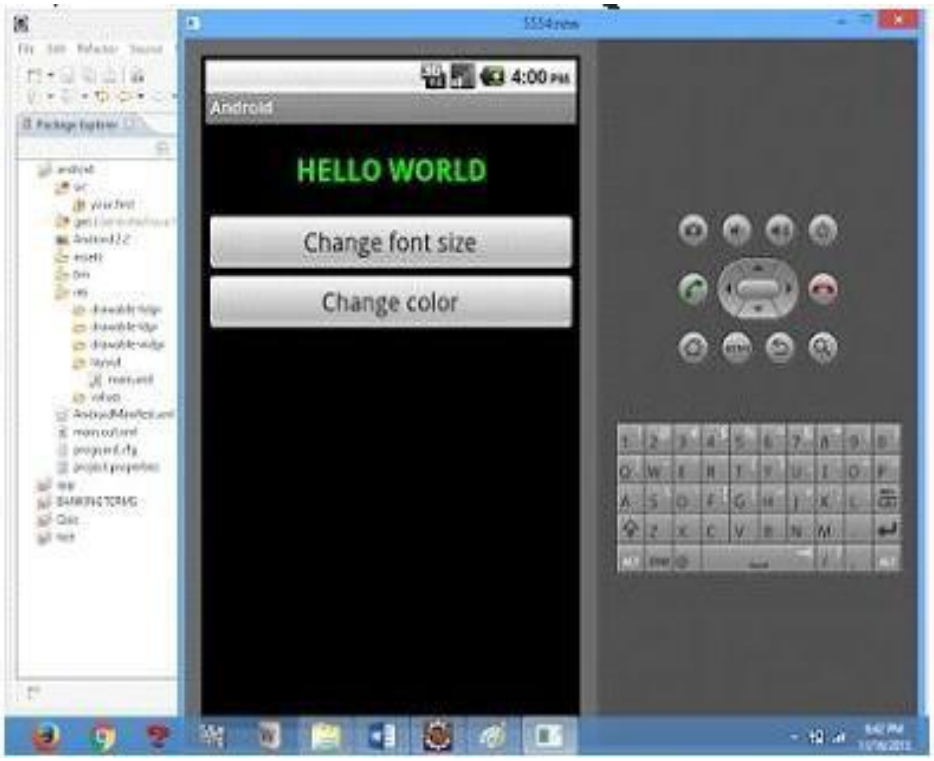
```
package layout.ne;
import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import
android.view.View.OnClickListener;
import android.widget.Button; import
android.widget.EditText; import
android.widget.Toast;

public class LAYOUTActivity
extends Activity {
   /** Called when the activity is first created. */ EditText
txtData1,txtData2; float num1,num2,result1,result2;
   @Override
   public void onCreate(Bundle
savedInstanceState) {
super.onCreate(savedInstanceSt
ate);

setContentView(R.layout.main);

      Button add = (Button)
findViewById(R.id.button1);
add.setOnClickListener(new

OnClickListener() {       public
void onClick(View v) {
try
```

```
            {
                txtData1 = (EditText)
    findViewById(R.id.edittext1);
    txtData2 = (EditText)
    findViewById(R.id.edittext2);
    num1 =
    Float.parseFloat(txtData1.getTe
    xt().toString());              num2
    =
    Float.parseFloat(txtData2.getTe
    xt().toString());
    result1=num1+num2;

Toast.makeText(getBaseContext(),"ANSWER:"+result1,Toast.LENGTH_SHORT).show();
}
  catch(Exception e)
          {
              Toast.makeText(getBaseContext(), e.getMessage(),
                    Toast.LENGTH_SHORT).show();
          }
       }
       });
        Button sub = (Button) findViewById(R.id.button3);
  sub.setOnClickListener(new OnClickListener() {

       public void onClick(View v) {
  try
          {
```

```
txtData1 = (EditText) findViewById(R.id.edittext1);
txtData2 = (EditText) findViewById(R.id.edittext2);          num1 =
Float.parseFloat(txtData1.getText().toString());          num2 =
Float.parseFloat(txtData2.getText().toString());
result2=num1-num2;

Toast.makeText(getBaseContext(),"ANSWER:"+result2,Toast.LENGTH_SHORT).show();
          }
catch(Exception e)
          {
             Toast.makeText(getBaseContext(), e.getMessage(),
                   Toast.LENGTH_SHORT).show();
          }
       }
       });
       Button clear = (Button) findViewById(R.id.button2);
clear.setOnClickListener(new OnClickListener() {

       public void onClick(View v) {
try
          {
          txtData1.setText("");
txtData2.setText("");
          }
catch(Exception e)
   {
             Toast.makeText(getBaseContext(), e.getMessage(),
                   Toast.LENGTH_SHORT).show();
          }
       }
       });
  } }
```

8) ow go to main.xml and right click .select run as option and select run configuration

9) Android output is present in the android emulator as shown in below.



Ex.No : 3

Design simple GUI application with activity and Intents e. g. calculator.

1) Open eclipse or android studio and select new android project
2) Give project name and select next
3) Choose the android version. Choose the lowest android version(Android 2.2) and select next
4) Enter the package name. package name must be two word separated by comma and click finish
5) Go to package explorer in the left hand side. select our project.
6) Go to res folder and select layout. Double click the main.xml file. Add the code below

Main.xml coding

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
xmlns:android="http://schemas.android.com/apk/res/android"
android:orientation="vertical"
android:layout_width="fill_parent"
android:layout_height="fill_parent">
<LinearLayout android:layout_width="match_parent"
android:layout_height="wrap_content"
android:id="@+id/linearLayout1"
android:layout_marginLeft="10pt"
android:layout_marginRight="10pt"
android:layout_marginTop="3pt">
<EditText android:layout_weight="1"
android:layout_height="wrap_content"
android:layout_marginRight="5pt"
android:id="@+id/etNum1"
android:layout_width="match_parent"
android:inputType="numberDecimal">
```

```
 </EditText><EditText
android:layout_height="wrap_content"
android:layout_weight="1"
android:layout_marginLeft="5pt"
android:id="@+id/etNum2"
android:layout_width="match_parent"
android:inputType="numberDecimal">
 </EditText>
 </LinearLayout><LinearLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:id="@+id/linearLayout2"
android:layout_marginTop="3pt"
android:layout_marginLeft="5pt"
android:layout_marginRight="5pt">
 <Button android:layout_height="wrap_content" android:layout_width="match_parent"
 android:layout_weight="1" android:text="+"
android:textSize="15pt"
android:id="@+id/btnAdd">
 </Button><Button
android:layout_height="wrap_content"
android:layout_width="match_parent"
android:layout_weight="1" android:text="-"
android:textSize="15pt" android:id="@+id/btnSub">
 </Button><Button
android:layout_height="wrap_content"
android:layout_width="match_parent"
android:layout_weight="1" android:text="*"
android:textSize="15pt" android:id="@+id/btnMult">
 </Button><Button
android:layout_height="wrap_content"
android:layout_width="match_parent"
```

android:layout_weight="1" android:text="/"

android:textSize="15pt"

android:id="@+id/btnDiv"></Button>

</LinearLayout><TextView

android:layout_height="wrap_content"

android:layout_width="match_parent"

android:layout_marginLeft="5pt"

android:layout_marginRight="5pt"

android:textSize="12pt"

android:layout_marginTop="3pt"

android:id="@+id/tvResult"

android:gravity="center_horizontal">

</TextView>

</LinearLayout>

7) Now select mainactivity.java file and type the following code. package

MainActivity.java coding package CALCU.CALU;

import android.app.Activity;

import android.os.Bundle;

import android.text.TextUtils;

import android.view.View;

import

android.view.View.OnClickListener;

import android.widget.Button; import

android.widget.EditText; import

android.widget.TextView;

public class CALCULATORActivity extends Activity implements OnClickListener

{ EditText input1;

EditText input2;

Button addition;

Button subtraction;

Button multiplication;

Button division;

```
TextView tvResult;

String oper = "";

@Override
public void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.main);        input1 =
(EditText) findViewById(R.id.etNum1);        input2
= (EditText) findViewById(R.id.etNum2);

addition = (Button) findViewById(R.id.btnAdd);
subtraction = (Button) findViewById(R.id.btnSub);
multiplication = (Button) findViewById(R.id.btnMult);
division = (Button) findViewById(R.id.btnDiv);
tvResult = (TextView) findViewById(R.id.tvResult);

// set a listener
addition.setOnClickListener(this);
subtraction.setOnClickListener(this);
multiplication.setOnClickListener(this);
division.setOnClickListener(this);

        }

         @Override
       public void onClick(View v) {            // TODO Auto-generated method stub


    float num1 = 0;        float num2 = 0;
    float result = 0;
```

```
// check if the fields are empty        if
(TextUtils.isEmpty(input1.getText().toString())
|| TextUtils.isEmpty(input2.getText().toString())) {
return;        }

// read EditText and fill variables with numbers
num1 =
Float.parseFloat(input1.getText().toString());
num2 =
Float.parseFloat(input2.getText().toString());

// defines the button that has been clicked and performs the corresponding operation
// write operation into oper, we will use it later for
output        switch (v.getId()) {        case R.id.btnAdd:
oper = "+";         result
= num1 + num2;
break; case
R.id.btnSub:
oper = "-";         result
= num1 - num2;
break;case
R.id.btnMult:
oper = "*";         result
= num1 * num2;
break;case
R.id.btnDiv:
oper = "/";         result
= num1 / num2;
break; default:
break;

}
```

/ form the output line

tvResult.setText(num1 + " " + oper + " " + num2 + " = " + result);

}

}

8) Android output is present in the android emulator as Shown in below

Ex. No : 4

WRITE AN APPLICATION THAT DRAWS BASIC GRAPHICAL PRIMITIVES ON THE SCREEN IN ANDROID

1) Open eclipse or android studio and select new android project
2) Give project name and select next
3) Choose the android version. Choose the lowest android version(Android 2.2) and select next
4) Enter the package name. package name must be two word separated by comma and click finish
5) Go to package explorer in the left hand side. select our project.
6) Go to res folder and select layout. Double click the main.xml file. Don't change anything in layout. Leave as default.
7) Now select mainactivity.java file and type the following code.

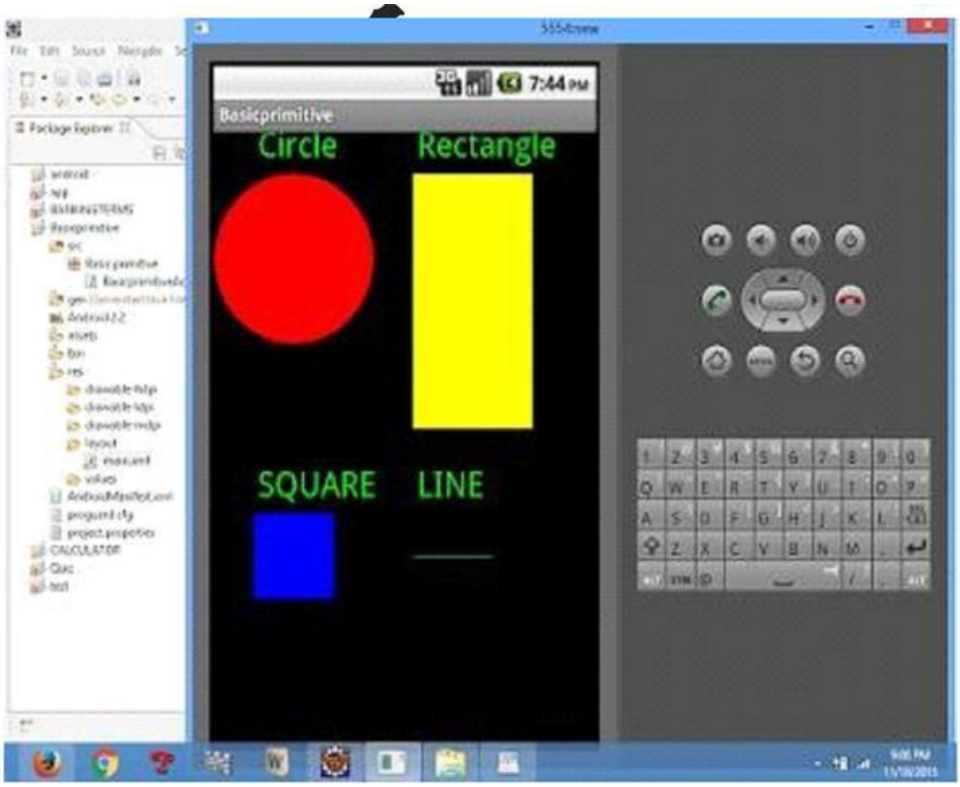
```
package Basic.primitive;
import
android.app.Activity;
import
android.content.Context;
import
android.graphics.Canvas
; import
android.graphics.Color;
import
android.graphics.Paint;
import
android.os.Bundle;
import
android.view.View;
```

```
public class BasicprimitiveActivity extends Activity {
/** Called when the activity is first created. */
@Override
public void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(new myview(this));
}
private class myview extends View
{
public myview(Context context)
{
super(context);
}
@Override

protected void onDraw(Canvas canvas)
{
super.onDraw(canvas);           Paint
paint=new Paint();
paint.setTextSize(40);
paint.setColor(Color.GREEN);
canvas.drawText("Circle", 55, 30,
paint);
paint.setColor(Color.RED);
canvas.drawCircle(100, 150,100, paint);
paint.setColor(Color.GREEN);
canvas.drawText("Rectangle", 255, 30, paint);
paint.setColor(Color.YELLOW);           canvas.drawRect(250,
50,400,350, paint);           paint.setColor(Color.GREEN);
canvas.drawText("SQUARE", 55, 430, paint);
paint.setColor(Color.BLUE);           canvas.drawRect(50,
450,150,550, paint);           paint.setColor(Color.GREEN);

canvas.drawText("LINE", 255, 430, paint);
paint.setColor(Color.CYAN);
      canvas.drawLine(250, 500, 350, 500, paint);
```

```
}
}
}
```

8) Now go to main.xml and right click .select run as option and select run configuration

9) Android output is present in the android emulator as shown in below.



Ex.No : 5

Create an android app for database creation using SQLite database.

1) Open eclipse or android studio and select new android project

2) Give project name and select next

3) Choose the android version. Choose the lowest android version (Android 2.2) and select next

4) Enter the package name. package name must be two word separated by comma and click finish

5) Go to package explorer in the left hand side. select our project.

6) Go to res folder and select layout. Double click the main.xml file. Add the code below

```
<?xml version="1.0" encoding="utf-8"?>
<AbsoluteLayout
xmlns:android="http://schemas.android.com/apk/res/android"
android:id="@+id/myLayout" android:stretchColumns="0"
android:layout_width="fill_parent"
android:layout_height="fill_parent"><TextView
android:text="@string/title"            android:layout_x="110dp"
android:layout_y="10dp"
android:layout_width="wrap_content"
android:layout_height="wrap_content"/><TextView
android:text="@string/empid"
android:layout_x="30dp"
android:layout_y="50dp"
android:layout_width="wrap_content"
android:layout_height="wrap_content"/><EditTe
xt android:id="@+id/editEmpid"
android:inputType="number"
android:layout_x="150dp"
android:layout_y="50dp"
```

android:layout_width="150dp"

android:layout_height="40dp"/><TextView

android:text="@string/name"

android:layout_x="30dp"

android:layout_y="100dp"

android:layout_width="wrap_content"

android:layout_height="wrap_content"/><EditTe

xt android:id="@+id/editName"

android:inputType="text"

android:layout_x="150dp"

android:layout_y="100dp"

android:layout_width="150dp"

android:layout_height="40dp"/><TextView

android:text="@string/salary"

android:layout_x="30dp"

android:layout_y="150dp"

android:layout_width="wrap_content"

android:layout_height="wrap_content"/><EditText

android:id="@+id/editsalary"

android:inputType="number"

android:layout_x="150dp"

android:layout_y="150dp"

android:layout_width="150dp"

android:layout_height="40dp"/><Button

android:id="@+id/btnAdd"

android:text="@string/add"

android:layout_x="30dp"

android:layout_y="200dp"

android:layout_width="130dp"

android:layout_height="40dp"/><Button

android:id="@+id/btnDelete"

android:text="@string/delete"

android:layout_x="160dp"

android:layout_y="200dp"

android:layout_width="130dp"

android:layout_height="40dp"/>n <Button

android:id="@+id/btnModify"

android:text="@string/modify"

android:layout_x="30dp"

android:layout_y="250dp"

android:layout_width="130dp"

android:layout_height="40dp"/><Button

android:id="@+id/btnView"

android:text="@string/view"

android:layout_x="160dp"

android:layout_y="250dp"

android:layout_width="130dp"

android:layout_height="40dp"/><Button

android:id="@+id/btnViewAll"

android:text="@string/view_all"

android:layout_x="85dp"

android:layout_y="300dp"

android:layout_width="150dp"

android:layout_height="40dp"/>

</AbsoluteLayout>

7)Go to values folder and select string.xml file. Replace the code below

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

<resources>

<string name="app_name">Employee detail1</string>

<string name="hello">Hello World, Employee detail

Activity!</string><string name="title">Employee Details</string>

<string name="empid">Enter Employee ID: </string>

<string name="name">Enter Name: </string>

<string name="salary">Enter salary: </string>

<string name="add">Add Employee</string>

<string name="delete">Delete Employee</string>

<string name="modify">Modify Employee</string>

<string name="view">View Employee</string>

<string name="view_all">View All Employee</string>

</resources>

8) Now select mainactivity.java file and type the following code.In my coding maniactivity name is EmployeedetailActivity.

```
package employee.detail;
//import android.R; import android.app.Activity; import
android.app.AlertDialog.Builder; import android.content.Context; import
android.database.Cursor; import
android.database.sqlite.SQLiteDatabase;
import android.os.Bundle; import
android.view.View;
import
android.view.View.OnClickListener;
import android.widget.Button; import
android.widget.EditText;

public class EmployeedetailActivity extends Activity implements OnClickListener
{ EditText editEmpid,editName,editsalary;
Button btnAdd,btnDelete,btnModify,btnView,btnViewAll;
SQLiteDatabase db;
/** Called when the activity is first created. */
@Override
public void onCreate(Bundle savedInstanceState)
{
```

```
super.onCreate(savedInstanceState);
setContentView(R.layout.main);
editEmpid=(EditText)findViewById(R.id.editEmpid);
editName=(EditText)findViewById(R.id.editName);
editsalary=(EditText)findViewById(R.id.editsalary);
btnAdd=(Button)findViewById(R.id.btnAdd);
btnDelete=(Button)findViewById(R.id.btnDelete);
btnModify=(Button)findViewById(R.id.btnModify);
btnView=(Button)findViewById(R.id.btnView);
btnViewAll=(Button)findViewById(R.id.btnViewAll);
btnAdd.setOnClickListener(this);
btnDelete.setOnClickListener(this);
btnModify.setOnClickListener(this);
btnView.setOnClickListener(this);
btnViewAll.setOnClickListener(this);
db=openOrCreateDatabase("EmployeeDB", Context.MODE_PRIVATE, null);
db.execSQL("CREATE TABLE IF NOT EXISTS employee(empid VARCHAR,name
VARCHAR,salary VARCHAR);");
}
public void onClick(View view)
{
if(view==btnAdd)
{
if(editEmpid.getText().toString().trim().length()==0||
editName.getText().toString().trim().length()==0||
editsalary.getText().toString().trim().length()==0)
{
showMessage("Error", "Please enter all values");
return;
}
db.execSQL("INSERT INTO employee
VALUES('"+editEmpid.getText()+"','"+editName.getText()+

"','"+editsalary.getText()+"');");
showMessage("Success", "Record added");
clearText();
```

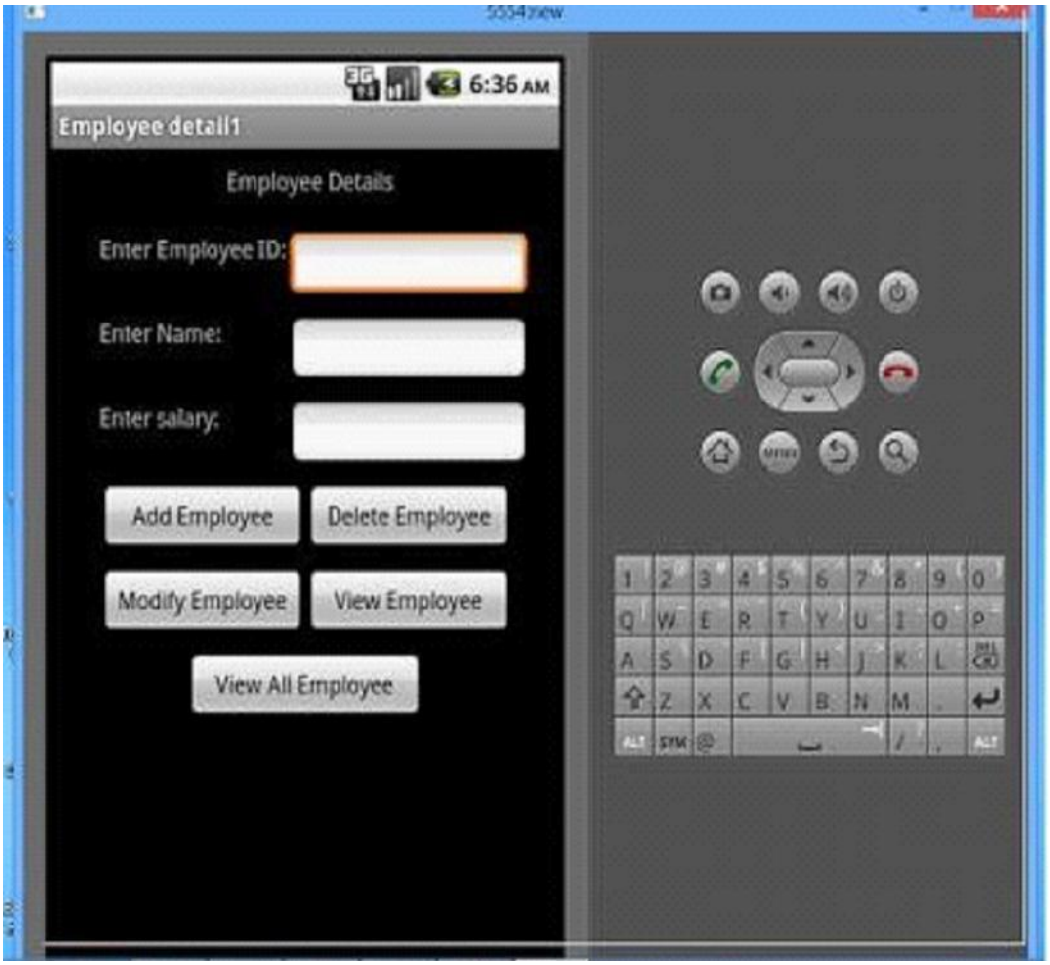
```
}
if(view==btnDelete)
{
if(editEmpid.getText().toString().trim().length()==0)
{
showMessage("Error", "Please enter Employee id");
return;          }
Cursor c=db.rawQuery("SELECT * FROM employee WHERE
empid='"+editEmpid.getText()+"'", null);
if(c.moveToFirst())
{
db.execSQL("DELETE FROM employee WHERE
empid='"+editEmpid.getText()+"'");
showMessage("Success", "Record Deleted");
}else
{
showMessage("Error", "Invalid Employee id");
}
clearText();
}
if(view==btnModify)
{

if(editEmpid.getText().toString().trim().length()==0)
{
showMessage("Error", "Please enter Employee id");
return;
}
Cursor c=db.rawQuery("SELECT * FROM employee WHERE

empid='"+editEmpid.getText()+"'", null);
if(c.moveToFirst())
{
db.execSQL("UPDATE employee SET
name='"+editName.getText()+"',salary='"+editsalary.getTe
xt()+                    "' WHERE
empid='"+editEmpid.getText()+"'");
```

```
showMessage("Success", "Record Modified");
}
else
{
showMessage("Error", "Invalid Rollno");
}
clearText();
}
if(view==btnView)
{
if(editEmpid.getText().toString().trim().length()==0)
{
showMessage("Error", "Please enter Employee id");
return;
}
Cursor c=db.rawQuery("SELECT * FROM employee WHERE
empid='"+editEmpid.getText()+"'", null);
if(c.moveToFirst())
{
editName.setText(c.getString(1));
editsalary.setText(c.getString(2));
}
else
{
```

```
showMessage("Error", "Invalid Employee id");
clearText();
}
}
if(view==btnViewAll)
{
Cursor c=db.rawQuery("SELECT * FROM employee",
null); if(c.getCount()==0)
{
 showMessage("Error", "No records found");              return;
 }
 StringBuffer buffer=new StringBuffer();           while(c.moveToNext())
 {
 buffer.append("Employee id: "+c.getString(0)+"\n");
 buffer.append("Name: "+c.getString(1)+"\n");
 buffer.append("salary: "+c.getString(2)+"\n\n");
 }
 showMessage("Employee details Details", buffer.toString());
 }
 }
 public void showMessage(String title,String message)
 {
 Builder builder=new Builder(this);
 builder.setCancelable(true);       builder.setTitle(title);
 builder.setMessage(message);
 builder.show();
 }
 public void clearText()
 {
 editEmpid.setText("");       editName.setText("");
 editsalary.setText("");
 editEmpid.requestFocus();

 }
 }
```

7) Now go to main.xml and right click .select run as option and select run configuration

8) Android output is present in the android emulator as shown in below.



Ex. No : 6

DEVELOP AN APPLICATION THAT MAKES USE OF RSS FEED

1) Open eclipse or android studio and select new android project

2) Give project name and select next

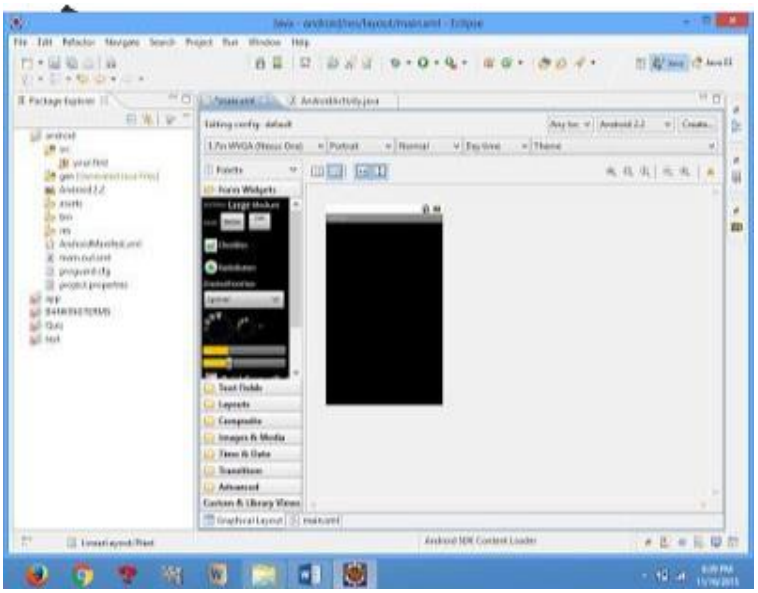
3) Choose the android version. Choose the lowest android version (Android 2.2) and select next

4) Enter the package name. Package name must be two word separated by comma and click finish

5) Go to package explorer in the left hand side. Select our project.

6) Go to res folder and select layout. Double click the main.xml file

7) Now you can see the Graphics layout window.



8) Click the main.xml file and type the code below

Code:

```
<?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" >
<TextView
android:id="@+id/textView1"
android:layout_width="match_parent"
android:layout_height="wrap_content"
```

android:layout_margin="20sp"

android:gravity="center"

android:text="HELLO WORLD"

android:textSize="20sp"

android:textStyle="bold" />

<Button

android:id="@+id/button1"

android:layout_width="match_parent"

android:layout_height="wrap_content"

android:gravity="center"

android:text="Change font size"

android:textSize="20sp" />

<Button

android:id="@+id/button2"

android:layout_width="match_parent"

android:layout_height="wrap_content"

android:gravity="center"

android:text="Change color"

android:textSize="20sp" />

<Button

android:id="@+id/button3"

android:layout_width="match_parent"

android:layout_height="wrap_content"

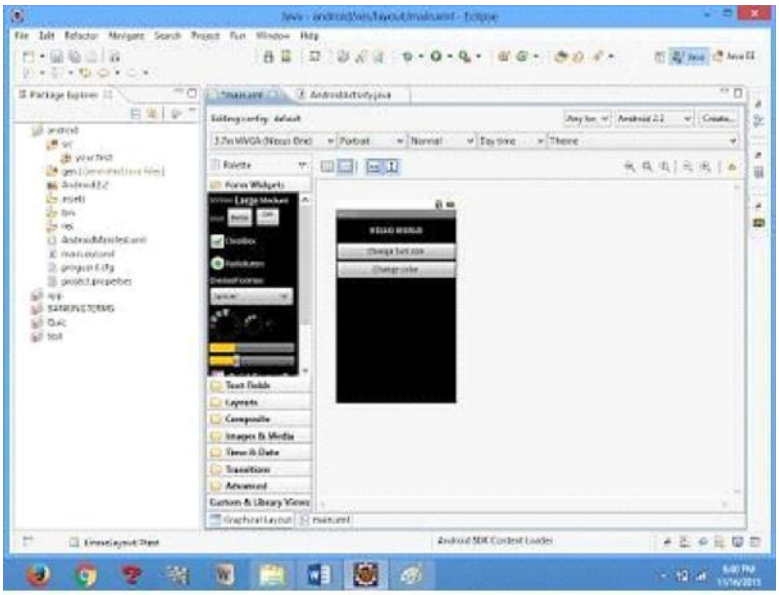
android:gravity="center"

android:text="Change font"

android:textSize="20sp" />

</LinearLayout>

9) Again click the graphics layout tab and screen layout is look like below



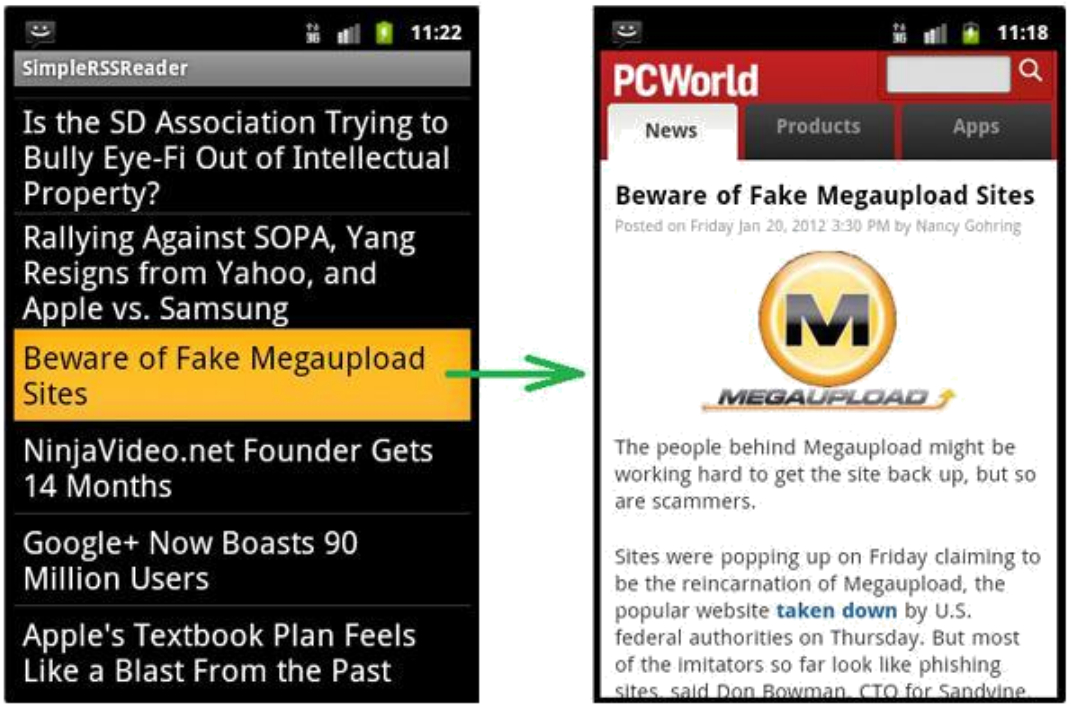
10) Go to project explorer and select *src* folder.Now select mainactivity.java file and type the following code.

PROGRAM

```
import android.R; import
android.app.Activity; import
android.graphics.Color; import
android.graphics.Typeface; import
android.os.Bundle; import
android.view.View; import
android.widget.Button; import
android.widget.TextView;
public class AndroidActivity extends Activity {      Float
font =24;      int i=1;

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

```
      final TextView t1=(TextView) findViewById(R.id.textView1);      Button b1
= (Button) findViewById(R.id.button1);
      b1.setOnClickListener(new View.OnClickListener() {
         public void onClick(View view) {
            t1.setTextSize(font);
font=font+4;              if(font==40)
font=20;
         }
      });
Button b2 = (Button) findViewById(R.id.button2);
b2.setOnClickListener(new View.OnClickListener() {
         public void onClick(View view) {
switch(i)
{             case 1:
               t1.setTextColor(Color.parseColor("#0000FF"));
break;             case 2:
               t1.setTextColor(Color.parseColor("#00FF00"));
break;             case 3:
               t1.setTextColor(Color.parseColor("#FF0000"));
break;             case 4:
t1.setTextColor(Color.parseColor("#800000"));
break;
}             i++;
if(i==5)
i=1;
         }
      });

} }
```

8) Now go to main.xml and right click .select run as option and select run configuration



Ex.No : 7

DEVELOP A NATIVE APPLICATION THAT USES GPS LOCATION INFORMATION

1) Open eclipse or android studio and select new android project

2) Give project name and select next

3) Choose the android version. Choose the lowest android version (Android 2.2) and select next

4) Enter the package name. package name must be two word separated by comma and click finish

5) Go to package explorer in the left hand side. select our project.

6) Go to res folder and select layout. Double click the main.xml file. Add the code below

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
xmlns:android="http://schemas.android.com/apk/res/android"
android:id="@+id/relativeLayout1"
android:layout_width="match_parent"
android:layout_height="match_parent" >
<Button
android:id="@+id/show_Location
"
android:layout_width="wrap_cont
ent"
android:layout_height="wrap_cont
ent
android:text="Show_Location"
android:layout_centerVertical="tr
ue"
```

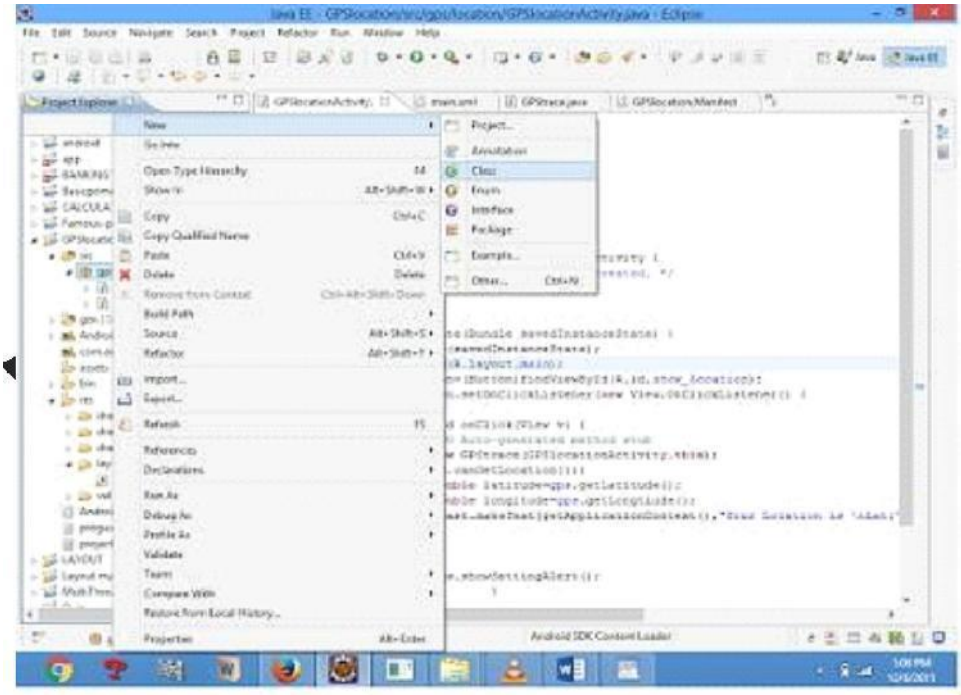
```
android:layout_centerHorizontal="true"
   />
</RelativeLayout>
```

7) Now select mainactivity.java file and type the following code. In my coding man activity name is GPSlocation Activity. Package gps.location;

```
//import android.R;
import
android.app.Activity;
import
android.os.Bundle;
import
android.view.View;
import
android.widget.Butto
n; import
android.widget.Toast
;

public class GPSlocationActivity extends Activity {
/** Called when the activity is first created. */
Button btnShowLocation;
GPStrace gps;
@Override
public void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.main);
btnShowLocation=(Button)findViewById(R.id.show_Location);
btnShowLocation.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
```

```
// TODO Auto-generated method stub
gps=new GPStrace(GPSlocationActivity.this);
if(gps.canGetLocation()){
double latitude=gps.getLatitude(); double longitude=gps.getLongtiude();
Toast.makeText(getApplicationContext(),"Your Location is
\nLat:"+latitude+"\nLong:"+longitude,
Toast.LENGTH_LONG).show();
}
else
{
gps.showSettingAlert();
}
}
});
}
}
```

8) Go to src folder and Right Click on your package folder and choose new class and give the class names as GPS trace



9) Select the GPStrace.java file and paste the following code.

```
Package gps.location;
import android.app.AlertDialog;
import android.app.Service;
import android.content.Context;
import
android.content.DialogInterface;
import android.content.Intent;
import android.location.Location;
import
android.location.LocationListener
; import
android.location.LocationManage
r; import android.os.Bundle;
import android.os.IBinder; import
android.provider.Settings;

   public class GPStrace extends Service implements
   LocationListener{ private final Context context; boolean
   isGPSEnabled=false; boolean canGetLocation=false; boolean
   isNetworkEnabled=false;
   Location
   location; double
   latitude; double
   longtitude;
   private static final long
   MIN_DISTANCE_CHANGE_FOR_UPDATES=10; private static final
   long MIN_TIME_BW_UPDATES=1000*60*1; protected LocationManager
   locationManager; public GPStrace(Context context)
   {
   this.context=conte
   xt;
   getLocation();


 }
 public Location getLocation()
 {
```

```
try{
locationManager=(LocationManager)       context.getSystemService(LOCATION_SERVICE);
isGPSEnabled=locationManager.isProviderEnabled(LocationManager.GPS_PROVIDER) ;

 isNetworkEnabled=locationManager.isProviderEnabled(LocationManager.NETWORK_PR
OVI DER);
if(!isGPSEnabled && !isNetworkEnabled){

}else{
this.canGetLocation=true;
if(isNetworkEnabled){

locationManager.requestLocationUpdates(
LocationManager.NETWORK_PROVIDER,
MIN_TIME_BW_UPDATES,
MIN_DISTANCE_CHANGE_FOR_UPDATES,this);

}
if(locationManager!=null){

location=locationManager.getLastKnownLocation(LocationManager.NETWORK_PROVI
DER)
;
if(location !=null){
latitude=location.getLatitude();
longtitude=location.getLongitude();

}
}


}
if(isGPSEnabled){
if(location==null){

locationManager.requestLocationUpdates(LocationManager.GPS_PROVIDER,MIN_TIM
E_B
```

```
W_UPDATES, MIN_DISTANCE_CHANGE_FOR_UPDATES, this);
if(locationManager!=null){

location=locationManager.getLastKnownLocation(LocationManager.GPS_PROV
IDER);                  if(location!=null){
latitude=location.getLatitude();
longtitude=location.getLongitude();
}
}
}
}
}

catch(Exception e)
{
e.printStackTrace();
}
return location;
}
public void stopUsingGPS(){
if(locationManager!=null){
locationManager.removeUpdates(GPStrace.this);
} } public double getLatitude(){

if(location!=null){

latitude=location.getLatitude();



}
return latitude;
}
public double getLongtiude(){
if(location!=null){
longtitude=location.getLatitude();
}
return longtitude;
}
public boolean canGetLocation(){
```

```
return this.canGetLocation;
}
public void showSettingAlert(){
AlertDialog.Builder alertDialog=new AlertDialog.Builder(context);
alertDialog.setTitle("GPS is settings"); alertDialog.setMessage("GPS is not
enabled.Do you want to go to setting menu?");
alertDialog.setPositiveButton("settings", new DialogInterface.OnClickListener()
{ @Override
public void onClick(DialogInterface dialog,int which){
Intent intent=new Intent(Settings.ACTION_LOCATION_SOURCE_SETTINGS);
context.startActivity(intent);
}
});
alertDialog.setNegativeButton("cancel", new DialogInterface.OnClickListener() {


@Override
public void onClick(DialogInterface dialog, int which) {
// TODO Auto-generated method
stub dialog.cancel();
}
});

alertDialog.show();
}
@Override
public void onLocationChanged(Location location) {
// TODO Auto-generated method stub

}
@Override
public void onProviderDisabled(String provider) {
// TODO Auto-generated method stub

}
@Override
public void onProviderEnabled(String provider) {
```

// TODO Auto-generated method stub

}

@Override

public void onStatusChanged(String provider, int status, Bundle extras)

{ // TODO Auto-generated method stub

}

@Override

public IBinder onBind(Intent

intent) { // TODO Auto-generated

method stub return null;

}

}

10)Go to manifest.xml file and add the code below

<uses-permission

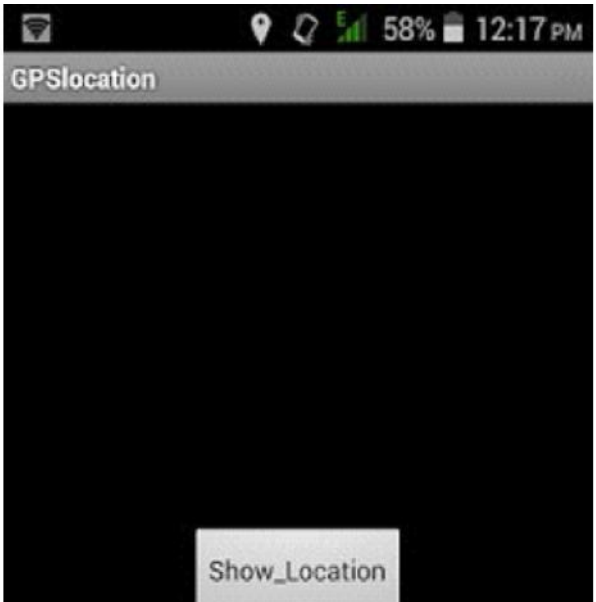
android:name="android.permission.ACCESS_FINE_LOCATION"/>

<uses-permission

android:name="android.permission.INTERNET"/>

11) Now go to main.xml and right click .select run as option and select run configuration

12) Android output is present in the android emulator as shown in below.



Ex.No : 8

IMPLEMENT AN APPLICATION THAT WRITES DATA TO THE SD CARD

1) Open eclipse or android studio and select new android project

2) Give project name and select next

3) Choose the android version. Choose the lowest android version (Android 2.2) and select next

4) Enter the package name. Package name must be two word separated by comma and click finish

5) Go to package explorer in the left hand side. Select our project.

6) Go to res folder and select layout. Double click the main.xml file. Add the code below

```
<?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:background="#ff0000ff" android:orientation="vertical" >
<EditText

android:id="@+id/editText1"
android:layout_width="match_parent"
android:layout_height="wrap_content"
> <requestFocus />
</EditText>
<Button
android:id="@+id/button1"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:text="SAVE DATA" /> <Button
```

android:id="@+id/button2"

android:layout_width="match_parent"

android:layout_height="wrap_content"

android:text="SHOW DATA" />

<TextView

android:id="@+id/textView1"

android:layout_width="wrap_content"

android:layout_height="wrap_content"

/>

</LinearLayout>

7) Now select mainactivity.java file and type the following

code. package save.sd;

import java.io.File; import

java.io.FileInputStream; import

java.io.FileNotFoundException;

import java.io.FileOutputStream;

import java.io.IOException; import

java.io.InputStreamReader; import

java.io.OutputStreamWriter; import

android.app.Activity; import

android.os.Bundle; import

android.os.Environment; import

android.view.View; import

android.widget.Button; import

android.widget.EditText; import

android.widget.TextView; import

android.widget.Toast;

public class SavedatasdcardActivity extends Activity

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

Button save,load;

EditText message;

TextView t1;

```
String Message1;
@Override
public void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.main);       save=(Button)
findViewById(R.id.button1);       load=(Button)
findViewById(R.id.button2);       message=(EditText)
findViewById(R.id.editText1);       t1=(TextView)
findViewById(R.id.textView1);
save.setOnClickListener(new View.OnClickListener(){
public void onClick(View v){
//Get message from user store in message1 variable
Message1 =message.getText().toString();              try{
//Create a new folder called MyDirectory in SDCard
File sdcard=Environment.getExternalStorageDirectory();
File directory=new File(sdcard.getAbsolutePath()+"/MyDirectory");
directory.mkdirs();
//Create a new file name textfile.txt inside MyDirectory
File file=new File(directory,"textfile.txt"); //Create File
Outputstream to read the file FileOutputStream fou=new
FileOutputStream(file); OutputStreamWriter osw=new
OutputStreamWriter(fou); try{

//write a user data to file
osw.append(Message1);
osw.flush();
osw.close();
Toast.makeText(getBaseContext(),"Data
Saved",Toast.LENGTH_LONG).show();

}catch(IOException e){
e.printStackTrace();
```

```
}
}catch (FileNotFoundException e){
e.printStackTrace();
}
}
});
load.setOnClickListener(new View.OnClickListener(){
public void onClick(View v){
try{
File sdcard=Environment.getExternalStorageDirectory();
File directory=new File(sdcard.getAbsolutePath()+"/MyDirectory");
File file=new File(directory,"textfile.txt");
FileInputStream fis=new FileInputStream(file);
InputStreamReader isr=new InputStreamReader(fis);
char[] data=new char[100];
String final_data="";
int size;
try{
while((size=isr.read(data))>0)
{
//read a data from file
String read_data=String.copyValueOf(data,0,size);
final_data+=read_data;
data=new char[100];
}
//display the data in output

Toast.makeText(getBaseContext(),"Message:"+final_data,Toast.LENGTH_LONG).show()
;
}catch(IOException e){
e.printStackTrace();
}
```

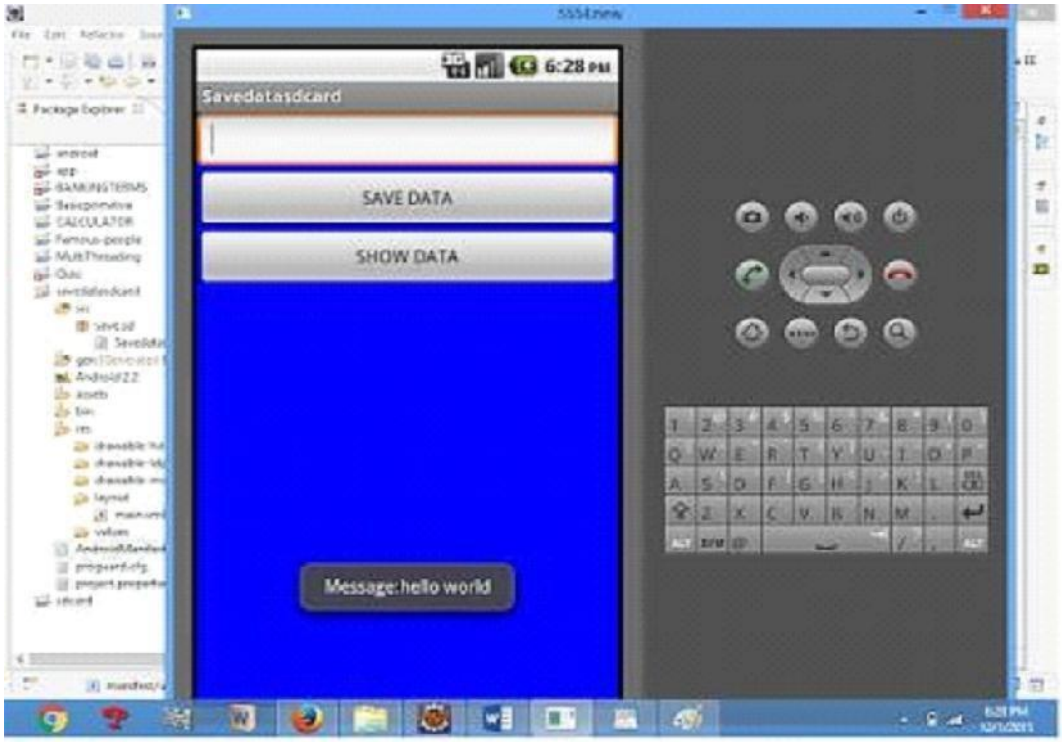
```
}catch (FileNotFoundException e){
e.printStackTrace();
}
}
});
}
}
```

8) Next step is to set permission to write data in sd card. So go to AndroidManifest.xml file. Copy and paste the following coding. The code should come before <application> tab.

```
<uses-permission
android:name="android.permission.WRITE_EXTERNAL_STORAGE"></uses-permission>
```

9) Now go to main.xml and right click .select run as option and select run configuration

10) Android output is present in the android emulator as shown in below.



Ex.No: 9

DESIGN A GAMING APPLICATION

1) Open eclipse or android studio and select new android project

2) Give project name and select next

3) Choose the android version. Choose the lowest android version(Android 2.2) and select next

4) Enter the package name. package name must be two word separated by comma and click finish

5) Go to package explorer in the left hand side. select our project.

6) Go to res folder and select layout. Double click the main.xml file. Add the code below

```
<ScrollView
xmlns:android="http://schemas.android.com/apk/res/android"
android:layout_width="fill_parent"
android:layout_height="wrap_content"
android:scrollbars="vertical" >
<TableLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:shrinkColumns="*"
android:stretchColumns="*"
android:background="#000000">
<TableRow
android:layout_height="wrap_content"
android:layout_width="match_parent"
android:gravity="center_horizontal">
<TextView
    android:id="@+id/Title"
android:layout_width="fill_parent"
android:layout_height="wrap_content"

android:layout_margin="5px"
android:focusable="false"
android:focusableInTouchMode="false"
android:gravity="center_vertical|center_hori
zontal"      android:text="QUIZ"
android:textSize="25sp"
android:textStyle="bold" />
```

<View

android:layout_height="2px"

android:layout_marginTop="5dip"

android:layout_marginBottom="5dip"

android:background="#DDFFDD"/>

</TableRow>

<TableRow

android:layout_height="wrap_content"

android:layout_width="match_parent"

android:gravity="center_horizontal">

<TextView

android:layout_width="match_parent"

android:layout_height="wrap_content"

android:textSize="18sp"

android:text="1.CAPTIAL OF INDIA"

android:layout_span="4"

android:padding="18dip"

android:textColor="#ffffff"/>

</TableRow><TableRow

android:id="@+id/tableRow1"

android:layout_height="wrap_content"

android:layout_width="match_parent">

<RadioGroup

android:id="@+id/answer1"

android:layout_width="match_parent"

android:layout_height="wrap_content"

android:layout_weight="0.4" >

<RadioButton

android:id="@+id/answer1A"

android:layout_width="match_parent"

android:layout_height="wrap_content"

android:textColor="#ffffff"

android:text="CHENNAI" />

<RadioButton

android:id="@+id/answer1B"

android:layout_width="match_parent"

android:layout_height="wrap_content"

android:textColor="#ffffff"

android:text="NEW DELHI" />

<RadioButton

android:id="@+id/answer1C"

android:layout_width="match_parent"

android:layout_height="wrap_content"

android:textColor="#ffffff"

android:text="MUMBAI" />

<RadioButton

android:id="@+id/answer1D"

android:layout_width="match_parent"

android:layout_height="wrap_content"

android:textColor="#ffffff"

android:text="HYDERBAD" />

</RadioGroup>

</TableRow><TableRow

android:layout_height="wrap_content"

android:layout_width="match_parent"

android:gravity="center_horizontal">

<TextView

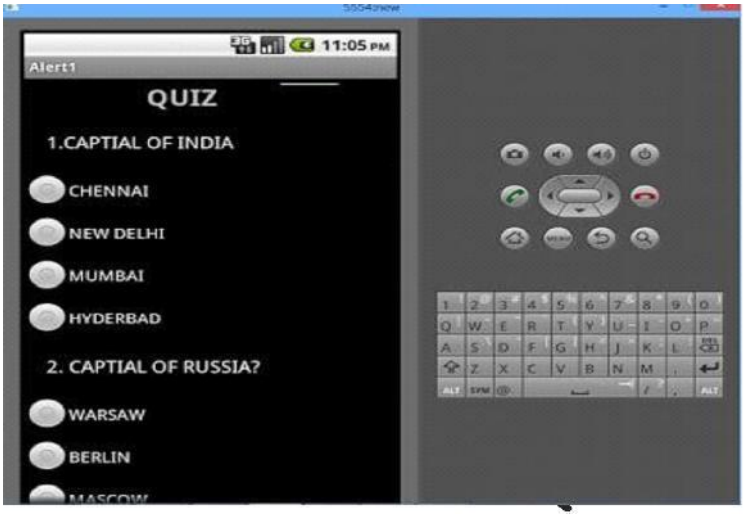
```
android:layout_width="match_parent" android:layout_height="wrap_content"
android:textSize="18sp" android:text="2. CAPTIAL OF RUSSIA?"
android:layout_span="4"
android:padding="18dip"                    android:textColor="#ffffff"/>
</TableRow>
<TableRow
android:id="@+id/tableRow2"
android:layout_height="wrap_content"
android:layout_width="match_parent">
<RadioGroup
        android:id="@+id/answer2"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_weight="0.4" >
<RadioButton
android:id="@+id/answer2A"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:textColor="#ffffff"
android:text="WARSAW    " />
<RadioButton
android:id="@+id/answer2B"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:textColor="#ffffff"
android:text="BERLIN" />
<RadioButton
            android:id="@+id/answer2C"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:textColor="#ffffff"
android:text="MASCOW    " />
```

```
<RadioButton
android:id="@+id/answer2D"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:textColor="#ffffff"
android:text="CANEBRA    " />
</RadioGroup>
</TableRow><TableRow
android:layout_height="wrap_content"
android:layout_width="match_parent"
android:gravity="center_horizontal">
<Button
android:id="@+id/submit"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:gravity="center"
android:text="Submit" />
</TableRow>
</TableLayout></ScrollView>
```

7) Now select mainactivity.java file and type the following code. In my coding man activity name is Alert1Activity.

8) Now go to main.xml and right click .select run as option and select run configuration

9) Android output is present in the android emulator as shown in below.



Ex.No : 10

WRITE A MOBILE APPLICATION THAT CREATES ALARM CLOCK

1. Android Manifest
AndroidManifest.xml

We need to give uses-permission for WAKE_LOCK, other than that the AndroidManifest.xml is pretty standard one. Just need to include the service and receiver.

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
package="com.javapapers.androidalarmclock"> <uses-permission
android:name="android.permission.WAKE_LOCK" /> <application

android:allowBackup="true"       android:icon="@drawable/ic_launcher"
android:label="@string/app_name" android:theme="@style/AppTheme">
<activity
android:name=".AlarmActivity" android:label="@string/app_name">
<intent-filter>
<action android:name="android.intent.action.MAIN" />
<category android:name="android.intent.category.LAUNCHER" />
</intent-filter>
</activity><service
android:name=".AlarmService" android:enabled="true" />
<receiver android:name=".AlarmReceiver" /> </application>

</manifest>
```

2. Android Activity

activity_my.xml

The Android Activity is designed to be simple. We have a Time Picker component followed by a Toggle Button. That's it. Choose the time to set the alarm and toggle the switch to on. The alarm will work.

```
<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="@dimen/activity_horizontal_margin"
android:paddingRight="@dimen/activity_horizontal_margin"
android:paddingTop="@dimen/activity_vertical_margin"
android:paddingBottom="@dimen/activity_vertical_margin"  tools:context=".MyActivity">
<TimePicker
android:layout_width="wrap_content"  android:layout_height="wrap_content"
android:id="@+id/alarmTimePicker"  android:layout_alignParentTop="true"
android:layout_centerHorizontal="true" />
<ToggleButton
android:layout_width="wrap_content"
android:layout_height="wrap_content"  android:text="Alarm
On/Off"  android:id="@+id/alarmToggle"
android:layout_centerHorizontal="true"
android:layout_below="@+id/alarmTimePicker"
android:onClick="onToggleClicked" />
<TextView
android:layout_width="wrap_content"  android:layout_height="wrap_content"
android:textAppearance="?android:attr/textAppearanceLarge"
android:text=""  android:id="@+id/alarmText"
android:layout_alignParentBottom="true"
android:layout_centerHorizontal="true"
android:layout_marginTop="20dp"
android:layout_below="@+id/alarmToggle" />
</RelativeLayout>
```

AlarmActivity.java

Alarm Activity uses the Alarm Manager to set the alarm and send notification on alarm trigger.

```
package com.javapapers.androidalarmclock;
import android.app.Activity; import
android.app.AlarmManager; import
android.app.PendingIntent; import
android.content.Intent; import
android.os.Bundle; import
android.util.Log; import
android.view.View; import
android.widget.TextView; import
android.widget.TimePicker; import
android.widget.ToggleButton;
import java.util.Calendar; public
class AlarmActivity extends Activity
{
AlarmManager alarmManager;    private
PendingIntent pendingIntent;    private
TimePicker alarmTimePicker;    private
static AlarmActivity inst;    private TextView
alarmTextView;
public static AlarmActivity instance() {
return inst;    }
@Override
public void onStart() {
super.onStart();        inst =
this;    }
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);        setContentView(R.layout.activity_my);
```

```
alarmTimePicker = (TimePicker) findViewById(R.id.alarmTimePicker);        alarmTextView
= (TextView) findViewById(R.id.alarmText);
ToggleButton alarmToggle = (ToggleButton) findViewById(R.id.alarmToggle);
alarmManager = (AlarmManager) getSystemService(ALARM_SERVICE);
}
public void onToggleClicked(View view) {        if
(((ToggleButton) view).isChecked()) {
Log.d("MyActivity", "Alarm On");
Calendar calendar = Calendar.getInstance();
calendar.set(Calendar.HOUR_OF_DAY,
alarmTimePicker.getCurrentHour());
calendar.set(Calendar.MINUTE, alarmTimePicker.getCurrentMinute());
Intent myIntent = new Intent(AlarmActivity.this, AlarmReceiver.class);
pendingIntent = PendingIntent.getBroadcast(AlarmActivity.this, 0, myIntent, 0);
alarmManager.set(AlarmManager.RTC, calendar.getTimeInMillis(), pendingIntent);
} else {
alarmManager.cancel(pendingIntent);            setAlarmText("");
Log.d("MyActivity", "Alarm Off");
}    }
public void setAlarmText(String alarmText) {        alarmTextView.setText(alarmText);
}
}
```

3. Alarm Receiver

AlarmReceiver.java

this is the one that receives the alarm trigger on set time. From here we initiate different actions to notify the user as per our choice. I have given three type of notifications, first show a message to user in the activity UI, second play the alarm ringtone and third send an Android notification message. So this is the place to add enhancement for different types of user notifications.

```
package com.javapapers.androidalarmclock;
```

```
import android.app.Activity; import
android.content.ComponentName; import
android.content.Context; import
android.content.Intent; import
android.media.Ringtone; import
android.media.RingtoneManager; import
android.net.Uri;
import android.support.v4.content.WakefulBroadcastReceiver; public class
AlarmReceiver extends WakefulBroadcastReceiver { @Override

public void onReceive(final Context context, Intent intent) {
//this will update the UI with message        AlarmActivity inst =
AlarmActivity.instance();        inst.setAlarmText("Alarm! Wake up!
Wake up!");

//this will sound the alarm tone
//this will sound the alarm once, if you wish to
//raise alarm in loop continuously then use MediaPlayer and setLooping(true)
Uri alarmUri =
RingtoneManager.getDefaultUri(RingtoneManager.TYPE_ALARM
); if (alarmUri == null) { alarmUri =
RingtoneManager.getDefaultUri(RingtoneManager.TYPE_NOTIFICATION); }

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

//this will send a notification message
ComponentName comp = new ComponentName(context.getPackageName(),
AlarmService.class.getName());
startWakefulService(context, (intent.setComponent(comp)));
setResultCode(Activity.RESULT_OK); }
}
```

4. Alarm Notification Message

AlarmService.java

The receiver will start the following Intent Service to send a standard notification to the user.

```
package com.javapapers.androidalarmclock;
import android.app.IntentService; import
android.app.NotificationManager; import
android.app.PendingIntent; import
android.content.Context; import
android.content.Intent;
import android.support.v4.app.NotificationCompat;
import android.util.Log;

public class AlarmService extends IntentService { private
NotificationManager alarmNotificationManager;

public AlarmService() {
super("AlarmService");     }

@Override
public void onHandleIntent(Intent intent) {        sendNotification("Wake Up! Wake
Up!");
}

private void sendNotification(String msg) {
Log.d("AlarmService", "Preparing to send notification...: " + msg);
alarmNotificationManager = (NotificationManager) this
.getSystemService(Context.NOTIFICATION_SERVICE);

PendingIntent contentIntent = PendingIntent.getActivity(this, 0,                new Intent(this,
AlarmActivity.class), 0);

NotificationCompat.Builder alamNotificationBuilder = new
NotificationCompat.Builder(
```

this).setContentTitle("Alarm").setSmallIcon(R.drawable.ic_launcher)
.setStyle(new NotificationCompat.BigTextStyle().bigText(msg))
.setContentText(msg);

alamNotificationBuilder.setContentIntent(contentIntent);
alarmNotificationManager.notify(1,
alamNotificationBuilder.build()); Log.d("AlarmService",
"Notification sent."); } }