PROJECT REPORT

Android Application

By:

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- Introduction

Our plan in this semester project was to develop an Android mobile application which allows the users to have an application which enables him to access various android features ranging from a Media Player to Camera , to Accelerometer and Light Detection as well as a Calculator and an Quiz Game to play along with sharing of scores. Sole purpose of this app is to reach people and make their work fast and efficient.

Who are we ?

We are pair of 2nd Year undergrads studying in Motilal Nehru National Institute of Technology, Allahabad enthusiastic about the Android App Devolopement. We both belong to Computer Science and Engineering Department.   What we all want here is to learn more about Android development world and learn how to use all the possibilities around it, either in later at work or in our master thesis.
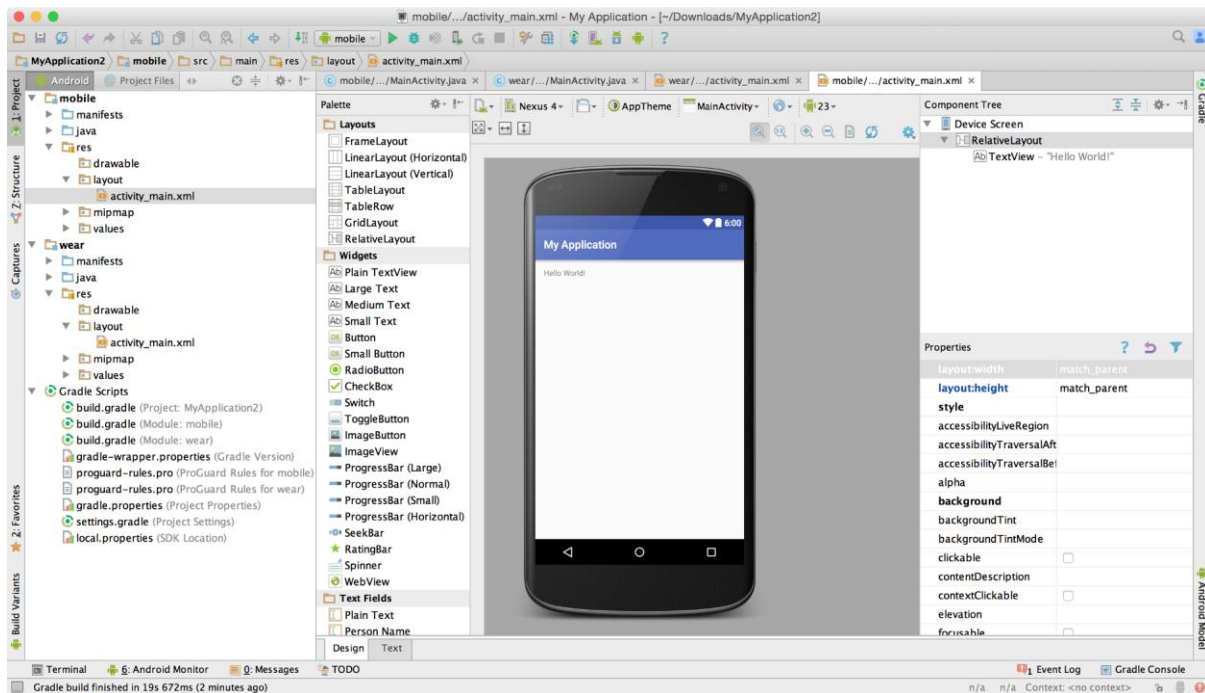
Motivation

The whole idea of this work started from a Training named Netcamp Solutions that was held in our college in winter break. With us learning android further made us capable of building an app of this kind . Earlier experiences in some android apps gave us a thought of to why not combine them into single app and then the App was started .

- Process & Challenges

This project has been one of the challenging processes we have been to, as we had to do both practical work and at the same time come back to academic environment to back our assumptions and defend our choices in an academic manner. We have learnt a lot through this process and all the challenges we had.

- <u>Choice of Programming Language / Platform</u>

We have used Java as our Basic Language , working with the software named Android Studio . Android Studio uses Google Api's and SDK(Software Devolopement Kit) to help android programming go efficiently . It provides a user friendly approach for users to work without any errors.

- <u>Features</u>

This Project includes following features embedded efficiently into app –

1. Login and SignUp Pages with **OTP sign up** .
2. A quiz of some randomly generated questions , if correct – points are awarded , green colour is displayed and a **PopUp** activity asking for proceeding further is shown . If wrong – red colour is shown and points are deducted and then same as above.
3. **Share the scores** on Social Media Accounts like Facebook , Twitter , etc.
4. **Magical Musical Player** is also a feature added which runs Music using Two Sensors – One is the **Light Sensor** (depending upon intensity of light , music is played or paused) and the other is the **Accelerometer** , Upon shaking the phone with Acceleration – Music plays and pauses showing Colours Simultaneously .
5. This app also has an **Camera Feature** to it , which is to capture an image using your inbuilt default camera and displaying it on Screen.
6. **Calculator** is another feature implemented . All the basic Mathematical commands including Addition, Substraction , Multiplication , Division , Power , Logarithm , sin , tan , cos ,etc . Special reset Button is also provided.
7. The most efficient part is the **Media Player** . The Player fetches the songs from your list , You can easily scroll over and select the song. **Play , pause , forward , backward , Scroll Window** etc.

CODE :

Main Activity (Login Page) –

Java –

```java
package com.example.sushantoberoi.netcamp_project;

import android.content.Intent;
import android.content.SharedPreferences;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.preference.PreferenceManager;
import android.support.v7.app.AppCompatActivity;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    Button b1,b2;
    EditText e1,e2;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        b1=(Button)findViewById(R.id.signup);
        b2=(Button)findViewById(R.id.login);
        e1=(EditText)findViewById(R.id.txt1);
        e2=(EditText)findViewById(R.id.txt2);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String s1=e1.getText().toString();
                String s2=e2.getText().toString();

                //database in android
                SQLiteDatabase
data=openOrCreateDatabase("netcamp",MODE_PRIVATE,null); //nobody other can access
                //it is stored in our phone only
                data.execSQL("create table if not exists nita (name
varchar, password varchar,confirm_password varchar,email varchar,city varchar,phone
varchar);");
                //  data.execSQL("create table if not exists sushant (name
varchar, password varchar);");
                String s = "select * from nita where name='" + s1 + "' and
password='" + s2 + "'";
                Cursor cursor = data.rawQuery(s, null); // whatever query i run
i can store something in cursor it is a class
                if (cursor.getCount() > 0) {
                    Toast.makeText(MainActivity.this, "User Already Exist",
Toast.LENGTH_LONG).show();
                }
                else {
                    //data.execSQL("insert into sushant values ('" + s1 + "','"
```

```java
                                        + s2 + "');");
                                //Toast.makeText(MainActivity.this, "database updated",
                        Toast.LENGTH_LONG).show();
                                Intent i = new Intent(MainActivity.this, Second.class);
                                startActivity(i);
                                finish();
                            }

                    }
                });
            b2.setOnClickListener(new View.OnClickListener() {
                    @Override
                    public void onClick(View view) {
                        SQLiteDatabase
                data=openOrCreateDatabase("netcamp",MODE_PRIVATE,null); //nobody other can access
                        //it is stored in our phone only
                        data.execSQL("create table if not exists nita (name varchar,
                password varchar,confirm_password varchar,email varchar,city varchar,phone
                varchar);");
                        //
                        String s1=e1.getText().toString();
                        String s2=e2.getText().toString();
                        String s = "select * from nita where name='" + s1 + "' and
                password='" + s2 + "'";
                        Cursor cursor = data.rawQuery(s, null);
                        if (cursor.getCount() > 0) {
                            SharedPreferences settings =
                PreferenceManager.getDefaultSharedPreferences(getApplicationContext());
                            SharedPreferences.Editor editor = settings.edit();
                            editor.putString("username", s1);
                            Intent i=new Intent(MainActivity.this,Third.class);
                            startActivity(i);
                            finish();
                        }
                        else
                        {
                            Toast.makeText(MainActivity.this, "Not a registered User ,
                Kindly signup first", Toast.LENGTH_LONG).show();
                        }
                    }
                });
        }
}
```

Xml –

```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:background="@drawable/login"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context="com.example.sushantoberoi.netcamp_project.MainActivity">

    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:inputType="textPersonName"
        android:hint="Username"
```

```xml
        android:textColorHint="#00FA9A"
        android:textColor="#00FA9A"
        android:ems="10"
        android:id="@+id/txt1"
        android:layout_alignParentTop="true"
        android:layout_marginTop="78dp"
        android:layout_alignParentLeft="true"
        android:layout_alignParentStart="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentEnd="true" />

    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:inputType="textPassword"
        android:ems="10"
        android:hint="Password"
        android:textColorHint="#00FA9A"
        android:textColor="#00FA9A"
        android:id="@+id/txt2"
        android:layout_below="@+id/txt1"
        android:layout_alignParentLeft="true"
        android:layout_alignParentStart="true"
        android:layout_marginTop="50dp"
        android:layout_alignRight="@+id/txt1"
        android:layout_alignEnd="@+id/txt1"
         />

    <Button
        android:layout_width="150dp"
        android:layout_height="50dp"
        android:background="@drawable/l2"
        android:id="@+id/login"
        android:textColor="#00FA9A"
        android:layout_marginTop="67dp"
        android:layout_below="@+id/txt2"
        android:layout_centerHorizontal="true" />

    <Button
        android:layout_width="150dp"
        android:layout_height="50dp"
        android:id="@+id/signup"
        android:textColor="#00FA9A"
        android:background="@drawable/s2"
        android:layout_below="@+id/login"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="56dp" />
</RelativeLayout>
```

Sign Up Page –

Java -

```java
package com.example.sushantoberoi.netcamp_project;

import android.content.Intent;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.telephony.SmsManager;
```

```java
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import java.util.Random;

public class Second extends AppCompatActivity {
    Button b1,b2,b3;
    EditText e1,e2,e3,e4,e5,e6,e7;
    int id;
    String arr[]={"66164","12694","54242","31561","16151"};
    //String s1="",s2="",s3="",s4="",s5="",s6="";
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_second);
        b1=(Button)findViewById(R.id.back);
        b2=(Button)findViewById(R.id.signup2);
        e1=(EditText)findViewById(R.id.txt1);
        e2=(EditText)findViewById(R.id.txt2);
        e3=(EditText)findViewById(R.id.txt3);
        e4=(EditText)findViewById(R.id.txt4);
        e5=(EditText)findViewById(R.id.txt5);
        e6=(EditText)findViewById(R.id.txt6);
        e7=(EditText)findViewById(R.id.txt7);
        b3=(Button)findViewById(R.id.otp);
        Random rand=new Random();
        id=rand.nextInt(5);
        b3.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                if(e6.getText().toString().equals(""))
                {
                    Toast.makeText(getApplicationContext(),"Please fill phone no.
first",Toast.LENGTH_LONG).show();
                }
                else
                {
                    String s=e6.getText().toString();
                    SmsManager s2=SmsManager.getDefault();
                    s2.sendTextMessage(s,null,"Your otp is: "+arr[id],null,null);
                }
            }
        });
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent i=new Intent(Second.this,MainActivity.class);
                startActivity(i);
            }
        });
        b2.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View view) {
                String s1 = e1.getText().toString();
                String s2 = e2.getText().toString();
                String s3 = e3.getText().toString();
                String s4 = e4.getText().toString();
                String s5 = e5.getText().toString();
                String s6 = e6.getText().toString();
                int n=s4.length(),f=0;
                for(int i=0;i<n;i++)
                {
                    if(s4.charAt(i)=='@')
                    {
                        f=1;
                        break;
```

```java
                }
            }
            if (s1.equals("") || s2.equals("") || s3.equals("") ||
s4.equals("") || s5.equals("") || s6.equals("")) {
                Toast.makeText(Second.this, "Please fill all entries",
Toast.LENGTH_LONG).show();
            }
            else if(f==0)
            {
                Toast.makeText(Second.this, "Invalid Email Address",
Toast.LENGTH_LONG).show();
            }
            else if (!s2.equals(s3)) {
                Toast.makeText(Second.this, "Password Doesnt match, kindly
confirm password", Toast.LENGTH_LONG).show();
            }
            else if(!e7.getText().toString().equals(arr[id])) {
                Toast.makeText(getApplicationContext(), "Otp doesnt match!!",
Toast.LENGTH_LONG).show();
            }else {
                SQLiteDatabase data = openOrCreateDatabase("netcamp",
MODE_PRIVATE, null); //nobody other can access
                //it is stored in our phone only
                data.execSQL("create table if not exists nita (name varchar,
password varchar,confirm_password varchar,email varchar,city varchar,phone
varchar);");
                //data.execSQL("create table if not exists nita (name varchar,
password varchar);");
                String s = "select * from nita where name='" + s1 + "' and
password='" + s2 + "'";
                Cursor cursor = data.rawQuery(s, null); // whatever query i run
i can store something in cursor it is a class
                if (cursor.getCount() > 0) {
                    Toast.makeText(Second.this, "User Already Exist",
Toast.LENGTH_LONG).show();
                } else {
                    data.execSQL("insert into nita values ('" + s1 + "','" + s2
+ "','\" + s3 + \"','\" + s4 + \"','\" + s5 + \"','\" + s6 + \"');");
                    Toast.makeText(Second.this, "Siqnup Successful",
Toast.LENGTH_SHORT).show();
                    Intent i = new Intent(Second.this, MainActivity.class);
                    startActivity(i);
                    finish();
                }
            }
        }
    });
    }
}
```

Xml –

```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"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    android:background="#a7e5fa"
    tools:context="com.example.sushantoberoi.netcamp_project.Second">

    <Button
```

```xml
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Back"
    android:background="#adadae"
    android:id="@+id/back"
    android:layout_alignParentTop="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true" />

<EditText
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:inputType="textPersonName"
    android:hint="Username"
    android:ems="10"
    android:id="@+id/txt1"
    android:layout_below="@+id/back"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"
    android:layout_alignParentRight="true"
    android:layout_alignParentEnd="true" />

<EditText
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:inputType="textPassword"
    android:ems="10"
    android:hint="Password"
    android:id="@+id/txt2"
    android:layout_below="@+id/txt1"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"
    android:layout_alignRight="@+id/txt1"
    android:layout_alignEnd="@+id/txt1" />

<EditText
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:inputType="textPassword"
    android:ems="10"
    android:hint="Confirm Password"
    android:id="@+id/txt3"
    android:layout_below="@+id/txt2"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"
    android:layout_alignRight="@+id/txt2"
    android:layout_alignEnd="@+id/txt2" />

<EditText
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:inputType="textEmailAddress"
    android:ems="10"
    android:hint="Email"
    android:id="@+id/txt4"
    android:layout_below="@+id/txt3"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"
    android:layout_alignRight="@+id/txt3"
    android:layout_alignEnd="@+id/txt3" />

<EditText
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/txt5"
    android:hint="City"
    android:layout_below="@+id/txt4"
    android:layout_alignParentLeft="true"
```

```xml
        android:layout_alignParentStart="true"
        android:layout_alignRight="@+id/txt4"
        android:layout_alignEnd="@+id/txt4" />

    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:inputType="phone"
        android:hint="phone"
        android:ems="10"
        android:id="@+id/txt6"
        android:layout_below="@+id/txt5"
        android:layout_alignParentLeft="true"
        android:layout_alignParentStart="true"
        android:layout_alignRight="@+id/txt5"
        android:layout_alignEnd="@+id/txt5" />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="signup"
        android:background="#adadae"
        android:id="@+id/signup2"
        android:layout_marginLeft="40dp"
        android:layout_marginStart="40dp"
        android:layout_below="@+id/txt7"
        android:layout_alignParentLeft="true"
        android:layout_alignParentStart="true"
        android:layout_marginTop="29dp" />

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/txt7"
        android:hint="otp"
        android:layout_below="@+id/txt6"
        android:layout_alignRight="@+id/txt6"
        android:layout_alignEnd="@+id/txt6" />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Generate Otp"
        android:id="@+id/otp"
        android:background="#adadae"
        android:layout_alignTop="@+id/signup2"
        android:layout_alignRight="@+id/txt7"
        android:layout_alignEnd="@+id/txt7"
        android:layout_marginRight="40dp"
        android:layout_marginEnd="40dp" />
</RelativeLayout>
```

Home Page – (Java)

```java
package com.example.sushantoberoi.netcamp_project;

import android.content.Intent;
import android.content.SharedPreferences;
import android.os.Bundle;
```

```java
import android.preference.PreferenceManager;
import android.support.v7.app.AppCompatActivity;
import android.view.View;
import android.widget.Button;

public class Third extends AppCompatActivity {
    Button b1,b2,b3,b4,b5;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_third);
        b1=(Button)findViewById(R.id.back2);
        b2=(Button)findViewById(R.id.btn1);
        b3=(Button)findViewById(R.id.btn2);
        b4=(Button)findViewById(R.id.btn3);
        b5=(Button)findViewById(R.id.btn4);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                SharedPreferences settings =
PreferenceManager.getDefaultSharedPreferences(getApplicationContext());
                SharedPreferences.Editor editor = settings.edit();
                editor.remove("username");
                Intent i = new Intent(Third.this,MainActivity.class);
                startActivity(i);
                onBackPressed();
            }
        });
        b2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent i = new Intent(Third.this,Fourth.class);
                startActivity(i);
            }
        });
        b3.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent i = new Intent(Third.this,Fifth.class);
                startActivity(i);
            }
        });
        b4.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent i = new Intent(Third.this,Sixth.class);
                startActivity(i);
            }
        });
        b5.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent i = new Intent(Third.this,Seventh.class);
                startActivity(i);

            }
        });
    }
    public void onBackPressed() {
        //do nothing
        finish();
    }
}
```

Xml –

```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"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    android:background="@drawable/w3"
    tools:context="com.example.sushantoberoi.netcamp_project.Third">

    <Button
        android:id="@+id/back2"
        android:background="#adadae"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentStart="false"
        android:layout_alignParentTop="true"
        android:layout_marginTop="400dp"
        android:layout_marginLeft="240dp"
        android:text="Logout" />
    <ScrollView
        android:layout_width="match_parent"
        android:layout_height="320dp"
        android:id="@+id/scrollView"
        android:layout_alignParentRight="true"
        android:layout_alignParentEnd="true">



    <LinearLayout
        android:layout_width="250dp"
        android:layout_height="300dp"
        android:orientation="vertical"
        android:layout_below="@+id/back2"
        android:layout_toRightOf="@+id/back2"
        android:layout_toEndOf="@+id/back2"
        android:layout_marginLeft="29dp"
        android:layout_marginStart="29dp"
        android:layout_marginTop="66dp">
<Button
    android:id="@+id/btn4"
    android:layout_width="130dp"
    android:layout_height="60dp"
    android:text="Special Function"
    android:background="#adadae"
    android:layout_gravity="center_horizontal"
    android:layout_alignParentBottom="true"
    android:layout_centerHorizontal="true" />

<Button
    android:id="@+id/btn3"
    android:layout_width="130dp"
    android:background="#adadae"
    android:layout_height="60dp"
    android:text="Camera"
    android:layout_gravity="center_horizontal"
    android:layout_below="@+id/btn2"
    android:layout_alignLeft="@+id/btn2"
    android:layout_alignStart="@+id/btn2"
    android:layout_marginTop="50dp" />
```

```xml
<Button
    android:id="@+id/btn2"
    android:layout_width="130dp"
    android:layout_height="60dp"
    android:text="Calculator"
    android:background="#adadae"
    android:layout_gravity="center_horizontal"
    android:layout_below="@+id/btn1"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="50dp" />

<Button
    android:id="@+id/btn1"
    android:layout_width="130dp"
    android:layout_height="60dp"
    android:text="Media Player"
    android:background="#adadae"
    android:layout_gravity="center_horizontal"
    android:layout_marginTop="70dp"
    android:layout_alignParentTop="true"
    android:layout_centerHorizontal="true" />
</LinearLayout>
    </ScrollView>
</RelativeLayout>
```

Media Player Home – Java –

```java
package com.example.sushantoberoi.netcamp_project;

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


public class Fourth extends Activity {
    Button b;
    Button b2;

    public static int oneTimeOnly = 0;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_fourth);
        b = (Button) findViewById(R.id.btn1);
        b.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent i = new Intent(Fourth.this, New.class);//this -> current
object java file
                startActivity(i);
            }
        });
    }
}
```

Xml –

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    android:orientation="vertical"
    android:background="#000000"
    tools:context="com.example.sushantoberoi.netcamp_project.Fourth"
    android:weightSum="100">

    <TextView
        android:layout_width="338dp"
        android:layout_height="0dp"
        android:text="AppBert_Music"
        android:textColor="#e40918"
        android:id="@+id/txt1"
        android:layout_weight="40"
        android:textSize="50dp" />

    <Button
        android:layout_marginTop="200dp"
        android:layout_width="80dp"
        android:layout_height="0dp"
        android:text="SONGS"

        android:textColor="#e20f0f"
        android:id="@+id/btn1"
        android:layout_weight="40"
        android:background="@mipmap/icon"
        android:layout_gravity="center_horizontal" />


</LinearLayout>
```

Song Activity –

Java –

```java
package com.example.sushantoberoi.netcamp_project;

/**
 * Created by sushant oberoi on 12-12-2016.
 */
public class Song {
    private long id;
    private String title;
    private String artist;
    public Song(long songID, String songTitle, String songArtist) {
        id=songID;
        title=songTitle;
        artist=songArtist;
    }
```

```
    public long getID(){return id;}
    public String getTitle(){return title;}
    public String getArtist(){return artist;}


}
```

Song Adapter –

Java –

```java
package com.example.sushantoberoi.netcamp_project;

import android.content.Context;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.BaseAdapter;
import android.widget.LinearLayout;
import android.widget.TextView;

import java.util.ArrayList;

/**
 * Created by sushant oberoi on 12-12-2016.
 */
public class SongAdapter extends BaseAdapter {
    private ArrayList<Song> songs;
    private LayoutInflater songInf;

    public SongAdapter(Context c, ArrayList<Song> theSongs){
        songs=theSongs;
        songInf=LayoutInflater.from(c);
    }

    @Override
    public int getCount() {
        // TODO Auto-generated method stub
        return songs.size();
    }

    @Override
    public Object getItem(int arg0) {
        // TODO Auto-generated method stub
        return null;
    }

    @Override
    public long getItemId(int arg0) {
        // TODO Auto-generated method stub
        return 0;
    }

    @Override
    public View getView(int position, View convertView, ViewGroup parent) {
        //map to song layout
        LinearLayout songLay = (LinearLayout)songInf.inflate
                (R.layout.song, parent, false);
        //get title and artist views
        TextView songView = (TextView)songLay.findViewById(R.id.song_title);
        TextView artistView = (TextView)songLay.findViewById(R.id.song_artist);
        //get song using position
        Song currSong = songs.get(position);
```

```java
        //get title and artist strings
        songView.setText(currSong.getTitle());
        artistView.setText(currSong.getArtist());
        //set position as tag
        songLay.setTag(position);
        return songLay;
    }


}
```

Xml –

```xml
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:onClick="songPicked"
    android:orientation="vertical"
    android:padding="5dp" >

    <TextView
        android:id="@+id/song_title"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:textColor="#07d211"
        android:textSize="20dp"
        android:textStyle="bold" />

    <TextView
        android:id="@+id/song_artist"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:textColor="#d90b0b"
        android:textSize="18dp" />

</LinearLayout>
```

Calculator –

Java –

```java
package com.example.sushantoberoi.netcamp_project;

import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;
import android.widget.Toast;

public class Fifth extends AppCompatActivity {

    Button button0 , button1 , button2 , button3 , button4 , button5 , button6 ,
            button7 , button8 , button9 , buttonAdd , buttonSub , buttonDivision ,
            buttonMul , button10 , buttonC , buttonEqual,sin,cos,tan,log,e,powe ;
```

```java
    TextView edt1 ;

    float mValueOne , mValueTwo ;

    boolean mAddition , mSubtract ,mMultiplication ,mDivision,be,bpowe ;

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

        button0 = (Button) findViewById(R.id.button0);
        button1 = (Button) findViewById(R.id.button1);
        button2 = (Button) findViewById(R.id.button2);
        button3 = (Button) findViewById(R.id.button3);
        button4 = (Button) findViewById(R.id.button4);
        button5 = (Button) findViewById(R.id.button5);
        button6 = (Button) findViewById(R.id.button6);
        button7 = (Button) findViewById(R.id.button7);
        button8 = (Button) findViewById(R.id.button8);
        button9 = (Button) findViewById(R.id.button9);
        button10 = (Button) findViewById(R.id.button10);
        sin = (Button) findViewById(R.id.sin);
        cos = (Button) findViewById(R.id.cos);
        tan = (Button) findViewById(R.id.tan);
        log = (Button) findViewById(R.id.log);
        e = (Button) findViewById(R.id.e);
        powe = (Button) findViewById(R.id.powe);
        buttonAdd = (Button) findViewById(R.id.buttonadd);
        buttonSub = (Button) findViewById(R.id.buttonsub);
        buttonMul = (Button) findViewById(R.id.buttonmul);
        buttonDivision = (Button) findViewById(R.id.buttondiv);
        buttonC = (Button) findViewById(R.id.buttonC);
        buttonEqual = (Button) findViewById(R.id.buttoneql);
        edt1 = (TextView) findViewById(R.id.edt1);


        button1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                edt1.setText(edt1.getText()+"1");
            }
        });

        button2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                edt1.setText(edt1.getText()+"2");
            }
        });

        button3.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                edt1.setText(edt1.getText()+"3");
            }
        });

        button4.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                edt1.setText(edt1.getText()+"4");
            }
        });

        button5.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
```

```java
            edt1.setText(edt1.getText()+"5");
        }
    });

    button6.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            edt1.setText(edt1.getText()+"6");
        }
    });

    button7.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            edt1.setText(edt1.getText()+"7");
        }
    });

    button8.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            edt1.setText(edt1.getText()+"8");
        }
    });

    button9.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            edt1.setText(edt1.getText()+"9");
        }
    });

    button0.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            edt1.setText(edt1.getText()+"0");
        }
    });

    buttonAdd.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {

            if (edt1 == null ){
                edt1.setText("");
            }
            else if(edt1.getText().toString().equals("")){
                Toast.makeText(getApplicationContext(),"first enter a
value",Toast.LENGTH_LONG).show();

            } else {
                mValueOne = Float.parseFloat(edt1.getText() + "");
                mAddition = true;
                edt1.setText(null);
            }
        }
    });

    buttonSub.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            if(edt1.getText().toString().equals("")){
                Toast.makeText(getApplicationContext(),"first enter a
value",Toast.LENGTH_LONG).show();

            }
            else {
                mValueOne = Float.parseFloat(edt1.getText() + "");
```

```java
                mSubtract = true;
                edt1.setText(null);
            }
        }
    });

    buttonMul.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            if(edt1.getText().toString().equals("")){
                Toast.makeText(getApplicationContext(),"first enter a
value",Toast.LENGTH_LONG).show();

            }
            else {
                mValueOne = Float.parseFloat(edt1.getText() + "");
                mMultiplication = true;
                edt1.setText(null);
            }
        }
    });

    buttonDivision.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            if(edt1.getText().toString().equals("")){
                Toast.makeText(getApplicationContext(),"first enter a
value",Toast.LENGTH_LONG).show();

            }
            else {
                mValueOne = Float.parseFloat(edt1.getText() + "");
                mDivision = true;
                edt1.setText(null);
            }
        }
    });

    buttonEqual.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            if (edt1.getText().toString().equals("")) {
                Toast.makeText(getApplicationContext(), "first enter a value",
Toast.LENGTH_LONG).show();

            } else {
                mValueTwo = Float.parseFloat(edt1.getText() + "");

                if (mAddition == true) {

                    edt1.setText(mValueOne + mValueTwo + "");
                    mAddition = false;
                }


                if (mSubtract == true) {
                    edt1.setText(mValueOne - mValueTwo + "");
                    mSubtract = false;
                }

                if (mMultiplication == true) {
                    edt1.setText(mValueOne * mValueTwo + "");
                    mMultiplication = false;
                }

                if (mDivision == true) {
                    edt1.setText(mValueOne / mValueTwo + "");
                    mDivision = false;
```

```java
            }
            if (bpowe == true) {
                Double ans = Math.pow(mValueOne, mValueTwo);
                String s = Double.toString(ans);
                edt1.setText(s);
                bpowe = false;
            }
        }
    }
});
e.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        Double d=2.71828;
        String s1=Double.toString(d);
        edt1.setText(s1);
    }
});
powe.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        if(edt1.getText().toString().equals("")){
            Toast.makeText(getApplicationContext(),"first enter a
value",Toast.LENGTH_LONG).show();

        }
        else {
            String s = edt1.getText().toString();
            mValueOne = Float.parseFloat(s);
            edt1.setText("");
            bpowe = true;
        }
    }
});
sin.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        if (edt1.getText().toString().equals("")) {
            Toast.makeText(getApplicationContext(), "first enter a value",
Toast.LENGTH_LONG).show();

        } else {
            String s = edt1.getText().toString();
            Double d = Double.parseDouble(s);
            d = Math.sin(d);
            String s1 = Double.toString(d);
            edt1.setText(s1);
        }
    }
});
cos.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        if(edt1.getText().toString().equals("")){
            Toast.makeText(getApplicationContext(),"first enter a
value",Toast.LENGTH_LONG).show();

        }
        else {
            String s = edt1.getText().toString();
            Double d = Double.parseDouble(s);
            d = Math.cos(d);
            String s1 = Double.toString(d);
            edt1.setText(s1);
        }
    }
});
tan.setOnClickListener(new View.OnClickListener() {
```

```java
            @Override
            public void onClick(View v) {
                if (edt1.getText().toString().equals("")) {
                    Toast.makeText(getApplicationContext(), "first enter a value",
Toast.LENGTH_LONG).show();

                } else {
                    String s = edt1.getText().toString();
                    Double d = Double.parseDouble(s);
                    d = Math.tan(d);
                    String s1 = Double.toString(d);
                    edt1.setText(s1);
                }
            }
        });
        log.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                if (edt1.getText().toString().equals("")) {
                    Toast.makeText(getApplicationContext(), "first enter a value",
Toast.LENGTH_LONG).show();

                } else {
                    String s = edt1.getText().toString();
                    Double d = Double.parseDouble(s);
                    d = Math.log(d);
                    String s1 = Double.toString(d);
                    edt1.setText(s1);
                }
            }
        });
        buttonC.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                edt1.setText("");
            }
        });

        button10.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                edt1.setText(edt1.getText()+".");
            }
        });
    }


}
```

Xml –

```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"
android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    android:background="#a7e5fa"
    android:paddingBottom="@dimen/activity_vertical_margin"
tools:context=".MainActivity"
    android:id="@+id/relative1">
```

```xml
<Button
    style="?android:attr/buttonStyleSmall"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:text="1"
    android:background="#63f92c"
    android:id="@+id/button1"
    android:layout_marginTop="94dp"
    android:layout_toStartOf="@+id/button4"
    android:layout_alignRight="@+id/button4"
    android:layout_alignEnd="@+id/button4"
    android:layout_toLeftOf="@+id/button4" />

<Button
    style="?android:attr/buttonStyleSmall"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:text="2"
    android:background="#63f92c"
    android:id="@+id/button2"
    android:layout_alignTop="@+id/button1"
    android:layout_toLeftOf="@+id/button3"
    android:layout_toStartOf="@+id/button3" />

<Button
    style="?android:attr/buttonStyleSmall"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:text="3"
    android:background="#63f92c"
    android:id="@+id/button3"
    android:layout_alignTop="@+id/button2"
    android:layout_centerHorizontal="true" />

<Button
    style="?android:attr/buttonStyleSmall"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:text="4"
    android:background="#63f92c"
    android:id="@+id/button4"
    android:layout_below="@+id/button1"
    android:layout_toLeftOf="@+id/button2" />

<Button
    style="?android:attr/buttonStyleSmall"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:text="5"
    android:background="#63f92c"
    android:id="@+id/button5"
    android:layout_alignBottom="@+id/button4"
    android:layout_alignLeft="@+id/button2"
    android:layout_alignStart="@+id/button2" />

<Button
    style="?android:attr/buttonStyleSmall"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:text="6"
    android:background="#63f92c"
    android:id="@+id/button6"
    android:layout_below="@+id/button3"
    android:layout_alignLeft="@+id/button3"
    android:layout_alignStart="@+id/button3" />
```

```xml
<Button
    style="?android:attr/buttonStyleSmall"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:text="7"
    android:background="#63f92c"
    android:id="@+id/button7"
    android:layout_below="@+id/button4"
    android:layout_toLeftOf="@+id/button2" />

<Button
    style="?android:attr/buttonStyleSmall"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:text="8"
    android:background="#63f92c"
    android:id="@+id/button8"
    android:layout_below="@+id/button5"
    android:layout_alignLeft="@+id/button5"
    android:layout_alignStart="@+id/button5" />

<Button
    style="?android:attr/buttonStyleSmall"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:text="9"
    android:background="#63f92c"
    android:id="@+id/button9"
    android:layout_below="@+id/button6"
    android:layout_alignLeft="@+id/button6"
    android:layout_alignStart="@+id/button6" />

<Button
    style="?android:attr/buttonStyleSmall"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:text="+"
    android:background="#f5ef33"
    android:id="@+id/buttonadd"
    android:layout_alignTop="@+id/button3"
    android:layout_toRightOf="@+id/button3"
    android:layout_toEndOf="@+id/button3" />

<Button
    style="?android:attr/buttonStyleSmall"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:text="-"
    android:background="#f5ef33"
    android:id="@+id/buttonsub"
    android:layout_below="@+id/buttonadd"
    android:layout_alignLeft="@+id/buttonadd"
    android:layout_alignStart="@+id/buttonadd"
    android:layout_alignRight="@+id/buttonadd"
    android:layout_alignEnd="@+id/buttonadd" />

<Button
    style="?android:attr/buttonStyleSmall"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:text="*"
    android:background="#f5ef33"
    android:id="@+id/buttonmul"
    android:layout_below="@+id/buttonsub"
    android:layout_alignLeft="@+id/buttonsub"
    android:layout_alignStart="@+id/buttonsub"
    android:layout_alignRight="@+id/buttonsub"
    android:layout_alignEnd="@+id/buttonsub" />
```

```xml
<Button
    style="?android:attr/buttonStyleSmall"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:text="."
    android:background="#ec2e08"
    android:id="@+id/button10"
    android:layout_below="@+id/button7"
    android:layout_toLeftOf="@+id/button2" />

<Button
    style="?android:attr/buttonStyleSmall"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:text="0"
    android:background="#63f92c"
    android:id="@+id/button0"
    android:layout_below="@+id/button8"
    android:layout_alignLeft="@+id/button8"
    android:layout_alignStart="@+id/button8" />

<Button
    style="?android:attr/buttonStyleSmall"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:text="C"
    android:background="#ec2e08"
    android:id="@+id/buttonC"
    android:layout_below="@+id/button9"
    android:layout_alignLeft="@+id/button9"
    android:layout_alignStart="@+id/button9" />

<Button
    style="?android:attr/buttonStyleSmall"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:text="/"
    android:background="#f5ef33"
    android:id="@+id/buttondiv"
    android:layout_below="@+id/buttonmul"
    android:layout_alignLeft="@+id/buttonmul"
    android:layout_alignStart="@+id/buttonmul"
    android:layout_alignRight="@+id/buttonmul"
    android:layout_alignEnd="@+id/buttonmul" />

<Button
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:text="="
    android:background="#ef9e4c"
    android:id="@+id/buttoneql"
    android:layout_below="@+id/button10"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"
    android:layout_alignRight="@+id/buttonC"
    android:layout_alignEnd="@+id/buttonC" />

<Button
    style="?android:attr/buttonStyleSmall"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:text="sin"
    android:background="#9d74d2"
    android:id="@+id/sin"
    android:layout_alignTop="@+id/buttonadd"
    android:layout_toRightOf="@+id/buttonadd"
    android:layout_toEndOf="@+id/buttonadd" />
```

```xml
<Button
    style="?android:attr/buttonStyleSmall"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:text="cos"
    android:background="#9d74d2"
    android:id="@+id/cos"
    android:layout_above="@+id/buttonmul"
    android:layout_toRightOf="@+id/buttonsub"
    android:layout_toEndOf="@+id/buttonsub" />

<Button
    style="?android:attr/buttonStyleSmall"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:text="tan"
    android:background="#9d74d2"
    android:id="@+id/tan"
    android:layout_above="@+id/buttondiv"
    android:layout_toRightOf="@+id/buttonmul"
    android:layout_toEndOf="@+id/buttonmul" />

<Button
    style="?android:attr/buttonStyleSmall"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:text="log"
    android:background="#9d74d2"
    android:id="@+id/log"
    android:layout_above="@+id/buttoneql"
    android:layout_toRightOf="@+id/buttondiv"
    android:layout_toEndOf="@+id/buttondiv" />

<Button
    style="?android:attr/buttonStyleSmall"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:text="pow"
    android:background="#9d74d2"
    android:id="@+id/powe"
    android:layout_below="@+id/log"
    android:layout_alignLeft="@+id/log"
    android:layout_alignStart="@+id/log" />

<Button
    style="?android:attr/buttonStyleSmall"
    android:layout_width="70dp"
    android:layout_height="70dp"
    android:text="e"
    android:background="#f5ef33"
    android:id="@+id/e"
    android:layout_below="@+id/buttondiv"
    android:layout_alignLeft="@+id/buttondiv"
    android:layout_alignStart="@+id/buttondiv" />

<TextView
    android:layout_width="wrap_content"
    android:layout_height="50dp"
    android:textSize="5mm"
    android:textColor="#a7e5fa"
    android:background="#000000"
    android:id="@+id/edt1"
    android:layout_alignParentTop="true"
    android:layout_alignLeft="@+id/button1"
    android:layout_alignStart="@+id/button1"
    android:layout_alignRight="@+id/sin"
    android:layout_alignEnd="@+id/sin" />
```

```
</RelativeLayout>
```

Camera –

Java –

```java
package com.example.sushantoberoi.netcamp_project;

import android.content.Intent;
import android.graphics.Bitmap;
import android.os.Bundle;
import android.provider.MediaStore;
import android.support.v7.app.AppCompatActivity;
import android.view.View;
import android.widget.ImageButton;
import android.widget.ImageView;

public class Sixth extends AppCompatActivity {
    ImageButton b1;
    ImageView w1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_sixth);
        b1=(ImageButton)findViewById(R.id.b1);
        w1=(ImageView)findViewById(R.id.w1);
        //image captured
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                // access to camera
                Intent i = new Intent(MediaStore.ACTION_IMAGE_CAPTURE); // to call
my camera
                startActivityForResult(i,0); // 0 -> if nothing is accessed it will
show null
            }
        });

    }
    // store image
    @Override
    protected void onActivityResult(int requestCode, int resultCode, Intent data) {
        super.onActivityResult(requestCode, resultCode, data);
        // to diaplay image ; stores data in image format
        Bitmap b=(Bitmap)data.getExtras().get("data"); //data is a variable storing
image then converted to bitmap to display image
        w1.setImageBitmap(b);
    }
}
```

Xml –

```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"
```

```xml
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    android:background="#a7e5fa"
    tools:context="com.example.sushantoberoi.netcamp_project.Sixth">

    <ImageView
        android:layout_width="match_parent"
        android:layout_height="400dp"
        android:id="@+id/w1"
        android:layout_alignParentBottom="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentEnd="true" />

    <ImageButton
        android:layout_width="60dp"
        android:layout_height="60dp"
        android:id="@+id/b1"
        android:src="@drawable/cam2"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true" />

</RelativeLayout>
```

Quiz –

Java –

```java
package com.example.sushantoberoi.netcamp_project;

import android.content.Intent;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;

public class Seventh extends AppCompatActivity {
    Button b1,b2;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_seventh);
        b1=(Button)findViewById(R.id.enter);
        b2=(Button)findViewById(R.id.b1);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String s1="who is the odi captain of india?";
                String s2="Dhoni";
                String s3="Sachin";
                String s4="Virat";
                String s5="Zaheer";
                String s6="Dhoni";
                String s7="How many times india has won the cricket world cup?";
                String s8="1";
                String s9="2";
                String s10="3";
                String s11="4";
```

```java
                    String s12="4";
                    String i1="1";
                    String i2="2";
                    String s13="who is the test captain of india?";
                    String s14="Virat";
                    String s15="Sachin";
                    String s16="Dhoni";
                    String s17="Zaheer";
                    String s18="Virat";
                    String s19="Which cricket team has never won a world cup";
                    String s20="india";
                    String s21="south africa";
                    String s22="srilanka";
                    String s23="australia";
                    String s24="south africa";
                    String i3="3";
                    String i4="4";
                    String s25="Which is the N0. one team in test?";
                    String s26="India";
                    String s27="Pakistan";
                    String s28="England";
                    String s29="Australia";
                    String s30="India";
                    String i5="5";
                    String s31="Which year is considered as golden year for virat
        kohli";
                    String s32="every year";
                    String s33="2016";
                    String s34="2015";
                    String s35="2014";
                    String s36="2016";
                    String i6="6";
                    String s37="Which team has never won a WC against india";
                    String s38="India";
                    String s39="Pakistan";
                    String s40="England";
                    String s41="Australia";
                    String s42="Pakistan";
                    String i7="7";
                    String s43="Which team has won the cricket WC most no. of times";
                    String s44="India";
                    String s45="Pakistan";
                    String s46="England";
                    String s47="Australia";
                    String s48="Australia";
                    String i8="8";
                    SQLiteDatabase
        data=openOrCreateDatabase("quizz",MODE_PRIVATE,null); //nobody other can access
                    //it is stored in our phone only
                    data.execSQL("create table if not exists it (id varchar,Question
        varchar, op1 varchar,op2 varchar,op3 varchar,op4 varchar,correct varchar);");
                    data.execSQL("insert into it values ('" + i1 + "','" + s1 + "','" +
        s2 + "','" + s3 + "','" + s4 + "','" + s5 + "','" + s6 + "');");
                    data.execSQL("insert into it values ('" + i2 + "','" + s7 + "','" +
        s8 + "','" + s9 + "','" + s10 + "','" + s11 + "','" + s12 + "');");
                    data.execSQL("insert into it values ('" + i3 + "','" + s13 + "','"
        + s14 + "','" + s15 + "','" + s16 + "','" + s17 + "','" + s18 + "');");
                    data.execSQL("insert into it values ('" + i4 + "','" + s19 + "','"
        + s20 + "','" + s21 + "','" + s22 + "','" + s23 + "','" + s24 + "');");
                    data.execSQL("insert into it values ('" + i5 + "','" + s25 + "','"
        + s26 + "','" + s27 + "','" + s28 + "','" + s29 + "','" + s30 + "');");
                    data.execSQL("insert into it values ('" + i6 + "','" + s31 + "','"
        + s32 + "','" + s33 + "','" + s34 + "','" + s35 + "','" + s36 + "');");
                    data.execSQL("insert into it values ('" + i7 + "','" + s37 + "','"
        + s38 + "','" + s39 + "','" + s40 + "','" + s41 + "','" + s42 + "');");
                    data.execSQL("insert into it values ('" + i8 + "','" + s43 + "','"
        + s44 + "','" + s45 + "','" + s46 + "','" + s47 + "','" + s48 + "');");
                    Toast.makeText(getApplicationContext(), "Quiz starts now",
```

```java
Toast.LENGTH_SHORT).show();
            Intent i = new Intent(Seventh.this, Eight.class);
            startActivity(i);
            finish();
        }
    });
    b2.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            Intent i = new Intent(Seventh.this,Seventeen.class);
            startActivity(i);
        }
    });
    }
}
```

Xml –

```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"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:background="#a7e5fa"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context="com.example.sushantoberoi.netcamp_project.Seventh">

    <TextView
        android:layout_width="match_parent"
        android:layout_height="50dp"
        android:text="            Take Quiz"
        android:textStyle="bold"
        android:textColor="#000000"
        android:id="@+id/txt1"
        android:textSize="35dp"
        android:layout_alignParentTop="true" />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Enter"
        android:background="#adadae"
        android:id="@+id/enter"
        android:layout_below="@+id/textView5"
        android:layout_centerHorizontal="true" />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Magical Music Player"
        android:background="#adadae"
        android:id="@+id/b1"
        android:layout_alignParentBottom="true"
        android:layout_centerHorizontal="true" />

    <TextView
        android:layout_width="match_parent"
        android:layout_height="200dp"
        android:text="1. Test is of 5 marks.\n 2.There is negative marking. \n
3.+1=correct  -1= wrong"
        android:id="@+id/textView5"
```

```xml
        android:textSize="4mm"
        android:layout_marginTop="30dp"
        android:layout_centerVertical="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentStart="true" />

    <TextView
        android:layout_width="match_parent"
        android:layout_height="37dp"
        android:text="INSTRUCTIONS :"
        android:textStyle="bold"
        android:id="@+id/textView6"
        android:textSize="35dp"
        android:layout_above="@+id/textView5"
        android:layout_alignParentLeft="true"
        android:layout_alignParentStart="true" />
</RelativeLayout>
```

Quiz Activity –

Java –

```java
package com.example.sushantoberoi.netcamp_project;

import android.content.DialogInterface;
import android.content.Intent;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.graphics.Color;
import android.os.Bundle;
import android.speech.tts.TextToSpeech;
import android.support.v7.app.AlertDialog;
import android.support.v7.app.AppCompatActivity;
import android.view.View;
import android.widget.Button;
import android.widget.RadioButton;
import android.widget.TextView;
import android.widget.Toast;

import java.util.Locale;
import java.util.Random;

public class Eight extends AppCompatActivity {
    Button b1;
    static Random rand = new Random();
    static boolean fn=false;
    static Integer score=0;
    RadioButton r1,r2,r3,r4;
    Integer i1;
    TextView txt1;
    String id;
    TextToSpeech t1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_eight);
        b1=(Button)findViewById(R.id.submit2);
        r1=(RadioButton)findViewById(R.id.r1);
        r2=(RadioButton)findViewById(R.id.r2);
        r3=(RadioButton)findViewById(R.id.r3);
        r4=(RadioButton)findViewById(R.id.r4);
        t1=new TextToSpeech(this, new TextToSpeech.OnInitListener() {
```

```java
        @Override
        public void onInit(int status) {
            t1.setLanguage(Locale.ENGLISH);
            t1.setSpeechRate(0.8f); //frequency
        }
    });
    txt1=(TextView)findViewById(R.id.txt1);
    i1= rand.nextInt(8);
    i1++;
    id=Integer.toString(i1);
    // Toast.makeText(getApplicationContext(),""+id, Toast.LENGTH_LONG).show();
            SQLiteDatabase data = openOrCreateDatabase("quizz", MODE_PRIVATE,
null); //nobody other can access
            //it is stored in our phone only
            data.execSQL("create table if not exists it (id varchar,Question
varchar, op1 varchar,op2 varchar,op3 varchar,op4 varchar,correct varchar);");
            String q1 = "select * from it where id='" + id + "'";
            //Toast.makeText(getApplicationContext(), "" + id,
Toast.LENGTH_LONG).show();
            Cursor c=data.rawQuery(q1,null);
            c.moveToFirst();
            txt1.setText(c.getString(c.getColumnIndex("Question")));
            r1.setText(c.getString(c.getColumnIndex("op1")));
            r2.setText(c.getString(c.getColumnIndex("op2")));
            r3.setText(c.getString(c.getColumnIndex("op3")));
            r4.setText(c.getString(c.getColumnIndex("op4")));
            b1.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            if(id.equals("1")) {
                if (r1.isChecked()) {
                    score++;
                    r1.setBackgroundColor(Color.GREEN);
                    t1.speak(r1.getText().toString() + "is correct",
TextToSpeech.QUEUE_FLUSH, null);
                } else {
                    score--;
                    if(r2.isChecked())
                    r2.setBackgroundColor(Color.RED);
                    else if(r3.isChecked())
                        r3.setBackgroundColor(Color.RED);
                    else if(r4.isChecked())
                        r4.setBackgroundColor(Color.RED);
                    t1.speak("Sorry" + r1.getText().toString() + "is the
correct answer", TextToSpeech.QUEUE_FLUSH, null);
                }
            }
            else if(id.equals("2")) {
                if (r2.isChecked()) {
                    score++;
                    r2.setBackgroundColor(Color.GREEN);
                    t1.speak(r2.getText().toString() + "is correct",
TextToSpeech.QUEUE_FLUSH, null);
                } else {
                    score--;
                    if(r1.isChecked())
                        r1.setBackgroundColor(Color.RED);
                    else if(r3.isChecked())
                        r3.setBackgroundColor(Color.RED);
                    else if(r4.isChecked())
                        r4.setBackgroundColor(Color.RED);
                    t1.speak("Sorry" + r2.getText().toString() + "is the
correct answer", TextToSpeech.QUEUE_FLUSH, null);
                }
            }
            else if(id.equals("4")) {
                if (r2.isChecked()) {
                    score++;
```

```java
                        r2.setBackgroundColor(Color.GREEN);
                        t1.speak(r2.getText().toString() + "is correct",
TextToSpeech.QUEUE_FLUSH, null);
                    } else {
                        score--;
                        if(r1.isChecked())
                            r1.setBackgroundColor(Color.RED);
                        else if(r3.isChecked())
                            r3.setBackgroundColor(Color.RED);
                        else if(r4.isChecked())
                            r4.setBackgroundColor(Color.RED);
                        t1.speak("Sorry" + r2.getText().toString() + "is the
correct answer", TextToSpeech.QUEUE_FLUSH, null);
                    }
                }
                else if(id.equals("5")) {
                    if (r1.isChecked()) {
                        score++;
                        r1.setBackgroundColor(Color.GREEN);
                        t1.speak(r1.getText().toString() + "is correct",
TextToSpeech.QUEUE_FLUSH, null);
                    } else {
                        score--;
                        if(r2.isChecked())
                            r2.setBackgroundColor(Color.RED);
                        else if(r3.isChecked())
                            r3.setBackgroundColor(Color.RED);
                        else if(r4.isChecked())
                            r4.setBackgroundColor(Color.RED);
                        t1.speak("Sorry" + r1.getText().toString() + "is the
correct answer", TextToSpeech.QUEUE_FLUSH, null);
                    }
                }
                else if(id.equals("3")) {
                    if (r1.isChecked()) {
                        score++;
                        r1.setBackgroundColor(Color.GREEN);
                        t1.speak(r1.getText().toString() + "is correct",
TextToSpeech.QUEUE_FLUSH, null);
                    } else {
                        score--;
                        if(r2.isChecked())
                            r2.setBackgroundColor(Color.RED);
                        else if(r3.isChecked())
                            r3.setBackgroundColor(Color.RED);
                        else if(r4.isChecked())
                            r4.setBackgroundColor(Color.RED);
                        t1.speak("Sorry" + r1.getText().toString() + "is the
correct answer", TextToSpeech.QUEUE_FLUSH, null);
                    }
                }
                else if(id.equals("6")) {
                    if (r2.isChecked()) {
                        score++;
                        r2.setBackgroundColor(Color.GREEN);
                        t1.speak(r2.getText().toString() + "is correct",
TextToSpeech.QUEUE_FLUSH, null);
                    } else {
                        score--;
                        if(r1.isChecked())
                            r1.setBackgroundColor(Color.RED);
                        else if(r3.isChecked())
                            r3.setBackgroundColor(Color.RED);
                        else if(r4.isChecked())
                            r4.setBackgroundColor(Color.RED);
                        t1.speak("Sorry" + r2.getText().toString() + "is the
correct answer", TextToSpeech.QUEUE_FLUSH, null);
                    }
```

```java
                }
                else if(id.equals("7")) {
                    if (r2.isChecked()) {
                        score++;
                        r2.setBackgroundColor(Color.GREEN);
                        t1.speak(r2.getText().toString() + "is correct",
TextToSpeech.QUEUE_FLUSH, null);
                    } else {
                        score--;
                        if(r1.isChecked())
                            r1.setBackgroundColor(Color.RED);
                        else if(r3.isChecked())
                            r3.setBackgroundColor(Color.RED);
                        else if(r4.isChecked())
                            r4.setBackgroundColor(Color.RED);
                        t1.speak("Sorry" + r2.getText().toString() + "is the
correct answer", TextToSpeech.QUEUE_FLUSH, null);
                    }
                }
                else if(id.equals("8")) {
                    if (r4.isChecked()) {
                        score++;
                        r4.setBackgroundColor(Color.GREEN);
                        t1.speak(r4.getText().toString() + "is correct",
TextToSpeech.QUEUE_FLUSH, null);
                    } else {
                        score--;
                        if(r1.isChecked())
                            r1.setBackgroundColor(Color.RED);
                        else if(r2.isChecked())
                            r2.setBackgroundColor(Color.RED);
                        else if(r3.isChecked())
                            r3.setBackgroundColor(Color.RED);
                        t1.speak("Sorry" + r4.getText().toString() + "is the
correct answer", TextToSpeech.QUEUE_FLUSH, null);
                    }
                }
                Toast.makeText(getApplicationContext(),"Your Score is
"+score,Toast.LENGTH_LONG).show();
                DialogInterface.OnClickListener dialogClickListener = new
DialogInterface.OnClickListener() {
                    @Override
                    public void onClick(DialogInterface dialog, int which) {
                        switch (which){
                            case DialogInterface.BUTTON_POSITIVE:
                                //Yes button clicked
                                Intent i= new Intent(Eight.this,Ninth.class);
                                startActivity(i);
                                finish();
                                break;

                            case DialogInterface.BUTTON_NEGATIVE:
                                //No button clicked
                                score=0;
                                Intent j= new Intent(Eight.this,Tenth.class);
                                startActivity(j);
                                finish();
                                break;
                        }
                    }
                };
                AlertDialog.Builder builder = new
AlertDialog.Builder(view.getContext());
                builder.setMessage("Do you want to
proceed?").setPositiveButton("Yes", dialogClickListener)
                        .setNegativeButton("No", dialogClickListener).show();
            }
        });
```

```
                }
        }



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"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:background="#a7e5fa"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context="com.example.sushantoberoi.netcamp_project.Eight">

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/txt1"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="32dp"
         />

    <RadioGroup
        android:layout_width="match_parent"
        android:layout_height="250dp"
        android:layout_below="@+id/txt1"
        android:layout_alignParentRight="true"
        android:layout_alignParentEnd="true"
        android:layout_marginTop="57dp">

        <RadioButton
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"

            android:id="@+id/r1"
            android:layout_marginTop="20dp"
            android:layout_gravity="center_horizontal"
            android:checked="false" />

        <RadioButton
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"

            android:id="@+id/r2"
            android:layout_marginTop="20dp"
            android:layout_gravity="center_horizontal"
            android:checked="false" />

        <RadioButton
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"

            android:id="@+id/r3"
            android:layout_marginTop="20dp"
            android:layout_gravity="center_horizontal"
            android:checked="false" />

        <RadioButton
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
```

```xml
            android:id="@+id/r4"
            android:layout_marginTop="20dp"
            android:layout_gravity="center_horizontal"
            android:checked="false" />
    </RadioGroup>

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Submit"
        android:id="@+id/submit2"
        android:layout_alignParentBottom="true"
        android:layout_centerHorizontal="true"
        android:layout_marginBottom="35dp" />

</RelativeLayout>
```

Share Page –

Java –

```java
package com.example.sushantoberoi.netcamp_project;

import android.content.Intent;
import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.view.View;
import android.widget.Button;

public class Fourteen extends AppCompatActivity {
    static String s1="";
    Button b1,b2,b3,b4;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_fourteen);
        b1=(Button)findViewById(R.id.fb);
        b2=(Button)findViewById(R.id.twitter);
        b3=(Button)findViewById(R.id.net);
        b4=(Button)findViewById(R.id.home);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                s1="http://www.facebook.com";
                Intent i=new Intent(Fourteen.this,Fifteen.class);
                startActivity(i);
            }
        });
        b2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                s1="http://www.twitter.com";
                Intent i=new Intent(Fourteen.this,Fifteen.class);
                startActivity(i);
            }
        });
        b3.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                s1="http://www.netcamp.in";
                Intent i=new Intent(Fourteen.this,Fifteen.class);
                startActivity(i);
```

```java
                }
            });
        b4.setOnClickListener(new View.OnClickListener() {
                @Override
                public void onClick(View view) {
                    Intent i=new Intent(Fourteen.this,Third.class);
                    startActivity(i);
                    finish();
                }
            });
    }
}
```

Xml –

```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"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:background="#a7e5fa"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context="com.example.sushantoberoi.netcamp_project.Fourteen">

    <Button
        android:layout_width="70dp"
        android:layout_height="70dp"
        android:background="@drawable/fb"
        android:id="@+id/fb"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true" />

    <Button
        android:layout_width="70dp"
        android:layout_height="70dp"
        android:background="@drawable/tw"
        android:id="@+id/twitter"
        android:layout_below="@+id/fb"
        android:layout_alignLeft="@+id/home"
        android:layout_alignStart="@+id/home"
        android:layout_marginTop="67dp" />

    <Button
        android:layout_width="70dp"
        android:layout_height="70dp"
        android:background="@drawable/netcamp"
        android:id="@+id/net"
        android:layout_marginTop="55dp"
        android:layout_below="@+id/twitter"
        android:layout_alignLeft="@+id/twitter"
        android:layout_alignStart="@+id/twitter" />

    <Button
        android:layout_width="70dp"
        android:layout_height="70dp"
        android:background="@drawable/icon"
        android:id="@+id/home"
        android:layout_marginTop="35dp"
        android:layout_below="@+id/net"
        android:layout_centerHorizontal="true" />
</RelativeLayout>
```

WebView Page –

Java –

```java
package com.example.sushantoberoi.netcamp_project;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.webkit.WebView;

public class Fifteen extends AppCompatActivity {
    WebView wv;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_fifteen);
        wv=(WebView)findViewById(R.id.wv);
        wv.loadUrl(Fourteen.s1);
    }
}
```

Xml –

```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"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:background="#a7e5fa"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context="com.example.sushantoberoi.netcamp_project.Fifteen">

    <WebView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:id="@+id/wv"
        android:layout_centerVertical="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentStart="true" />
</RelativeLayout>
```

Accelerometer –

Java –

```java
package com.example.sushantoberoi.netcamp_project;

import android.app.Activity;
import android.graphics.Color;
import android.hardware.Sensor;
import android.hardware.SensorEvent;
```

```java
import android.hardware.SensorEventListener;
import android.hardware.SensorManager;
import android.media.MediaPlayer;
import android.os.Bundle;
import android.view.View;
import android.view.Window;
import android.view.WindowManager;
import android.widget.TextView;
import android.widget.Toast;

public class Sixteen extends Activity implements SensorEventListener {
    private SensorManager sensorManager;
    private boolean color = false;
    private View view;
    private long lastUpdate;
    private int f;
    MediaPlayer mp;
    TextView t1,t2,t3;

    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        requestWindowFeature(Window.FEATURE_NO_TITLE);
        getWindow().setFlags(WindowManager.LayoutParams.FLAG_FULLSCREEN,
                WindowManager.LayoutParams.FLAG_FULLSCREEN);

        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_sixteen);
        view = findViewById(R.id.txt1);
        view.setBackgroundColor(Color.GREEN);
        mp= MediaPlayer.create(this,R.raw.a);
        t1 = (TextView)findViewById(R.id.textView);
        t2 = (TextView)findViewById(R.id.textView2);
        t3 = (TextView)findViewById(R.id.textView3);

        sensorManager = (SensorManager) getSystemService(SENSOR_SERVICE);
        lastUpdate = System.currentTimeMillis();
    }

    @Override
    public void onSensorChanged(SensorEvent event) {
        if (event.sensor.getType() == Sensor.TYPE_ACCELEROMETER) {
            getAccelerometer(event);
        }

    }

    @Override
    public void onAccuracyChanged(Sensor sensor, int i) {

    }


    private void getAccelerometer(SensorEvent event) {
        float[] values = event.values;
        // Movement
        float x = values[0];
        float y = values[1];
        float z = values[2];
        t1.setText("X :"+Float.toString(x));
        t2.setText("Y :"+Float.toString(y));
        t3.setText("Z :"+Float.toString(z));

        float accelationSquareRoot = (x * x + y * y + z * z)
                / (SensorManager.GRAVITY_EARTH * SensorManager.GRAVITY_EARTH);
        long actualTime = event.timestamp;
        if (accelationSquareRoot >= 2) //
        {
```

```java
            if (actualTime - lastUpdate < 200) {
                return;
            }
            lastUpdate = actualTime;
            Toast.makeText(this, "Device was accelerated", Toast.LENGTH_SHORT)
                    .show();
            if (color) {
                view.setBackgroundColor(Color.GREEN);
                if(f==0)
                {
                    mp.start();
                    f=1;
                }
                else mp.start();
            } else {
                if(f==1)
                    mp.pause();
                else mp.start();
                view.setBackgroundColor(Color.RED);
            }
            color = !color;
        }
    }

    @Override
    protected void onResume() {
        super.onResume();
        // register this class as a listener for the orientation and
        // accelerometer sensors
        sensorManager.registerListener(this,
                sensorManager.getDefaultSensor(Sensor.TYPE_ACCELEROMETER),
                SensorManager.SENSOR_DELAY_NORMAL);
    }

    @Override
    protected void onPause() {
        // unregister listener
        super.onPause();
        sensorManager.unregisterListener(this);
    }
}
```

Xml –

```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"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:background="#a7e5fa"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context="com.example.sushantoberoi.netcamp_project.Sixteen">

    <TextView
        android:layout_width="match_parent"
        android:layout_height="250dp"
        android:id="@+id/txt1"
        android:text="Shake To Play - Pause ! "
        android:textSize="9mm"
        android:textColor="#a7e5fa"
        android:layout_marginTop="20dp"
```

```
        android:textAlignment="center"
        android:layout_alignParentTop="true" />

    <TextView
        android:layout_width="match_parent"
        android:layout_height="40dp"
        android:id="@+id/textView"
        android:textSize="3.5mm"
        android:layout_below="@+id/txt1"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="33dp" />

    <TextView
        android:layout_width="match_parent"
        android:layout_height="40dp"
        android:id="@+id/textView2"
        android:textSize="3.5mm"
        android:layout_below="@+id/textView"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="36dp" />

    <TextView
        android:layout_width="match_parent"
        android:layout_height="40dp"
        android:id="@+id/textView3"
        android:layout_below="@+id/textView2"
        android:textSize="3.5mm"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="39dp"/>

</RelativeLayout>
```

Light Sensor –

Java –

```
package com.example.sushantoberoi.netcamp_project;

import android.content.Intent;
import android.hardware.Sensor;
import android.hardware.SensorEvent;
import android.hardware.SensorEventListener;
import android.hardware.SensorManager;
import android.media.MediaPlayer;
import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;

public class Seventeen extends AppCompatActivity implements SensorEventListener{
    SensorManager sm;
    int g=0;
    Button b1;
    Sensor s;
    TextView t1;
    MediaPlayer mp;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_seventeen);
        b1=(Button)findViewById(R.id.b1);
```

```java
        mp= MediaPlayer.create(this,R.raw.a);
        t1=(TextView)findViewById(R.id.textView4);
        sm=(SensorManager)getSystemService(SENSOR_SERVICE);
        s=sm.getDefaultSensor(Sensor.TYPE_LIGHT);
        sm.registerListener(this,s,SensorManager.SENSOR_DELAY_NORMAL);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                if(g==1)
                mp.pause();
                Intent i=new Intent(Seventeen.this,Sixteen.class);
                startActivity(i);
                finish();
            }
        });
    }
    @Override
    public void onSensorChanged(SensorEvent event) {
        if(event.values[0]>3)
        {
            g=1;
            t1.setText("Light Intensity is: "+event.values[0]);
            mp.start();
        }
        else{
            t1.setText("Light Intensity is: "+event.values[0]);
            g=0;
            mp.pause();
        }
    }
    @Override
    public void onAccuracyChanged(Sensor sensor, int accuracy) {
    }
}
```

Xml –

```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"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:background="#a7e5fa"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context="com.example.sushantoberoi.netcamp_project.Seventeen">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Light Sensor"
        android:textColor="#000000"
        android:textStyle="bold"
        android:textSize="7mm"
        android:id="@+id/textView3"
        android:layout_marginTop="47dp"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true" />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

```xml
        android:text="Accelerometer"
        android:background="#060c0e"
        android:textColor="#a7e5fa"
        android:textSize="5mm"
        android:id="@+id/b1"
        android:layout_alignParentBottom="true"
        android:layout_centerHorizontal="true"
        android:layout_marginBottom="80dp" />

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="5mm"
        android:textStyle="bold"
        android:id="@+id/textView4"
        android:layout_centerVertical="true"
        android:layout_centerHorizontal="true" />
</RelativeLayout>
```