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Green Fields, Vaddeswaram, Guntur (Dt) :: 522502

Department of Computer Science Engineering

Project Based Lab Report

PLATFORM BASED DEVELOPMENT

15 CS 3113

Submitted by

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Under Guidance of

ANJALI DEVI

III Year Engineering Course Work

2018-19

DECLARATION

We declare that the project work entitled "**MOVIE INFORMATION SYSTEM** "was carried out by us during 2017-18, and this work is not the same as that of any other and has not been submitted for award of any other degree/diploma

Place: KL UNIVERSITY Signature

Date:28-10-2018

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Green fields,Vaddeswaram,Guntur Dist.

CERTIFICATE

This is certify that this project work entitled "**MOVIE INFORMATION SYSTEM**" by is a bonafide work carried out by them in Department of Mechanical Engineering.

Project supervisor

Head of the Department

ACKNOWLEDGEMENT

We express my sincere gratitude to **ANJALI DEVI** madam for encouraging and guiding us to

undertake this project work.

We express my deep sense of gratitude to**Dr.M.S.R.Prasad** sir and our beloved course lecturers of department for their encouragement.

Place: KL UNIVERSITY

Date:28-10-2018

Introduction to technology used in this project (Android):

Android introduction about 3 pages here...

ABSTRACT

Movie Information System

We usually come across movie information websites where users are allowed to access the whole details of a movie. This information is provided by admin. The admin will retrieve the full details of any new released movie including its show timings in particular theatres. Here we develop an app that automatically allows users to get the complete details of movie in more efficient manner.

our project includes two modules:

1.Admin: Admin can log into app by making sign in so that user can edit all the details of any movie

2.user:user can easily get the details of movie and he also give rating for any movie. They may comment on a movie provided in the system.

The main activities of this project are:

1.Log in screen

2.Inserting

3.Category information

4.Information Activity

5.DataBase Helper

The main features of this project are:

1) Information about movie names and cast &crew of movie
2) Maintain movie rating
3) Maintain show timings

ANDROID INTRODUCTION

World is contracting with the growth of mobile phone technology. As the number of users is increasing day by day, facilities are also increasing. Starting with simple regular handsets which were used just for making phone calls, mobiles have changed our lives and have become part of it. Now they are not used just for making calls but they have innumerable uses and can be used as a Camera , Music player, Tablet PC, T.V. , Web browser etc . And with the new technologies, new software and operating systems are required.

What is Android?

Operating Systems have developed a lot in last 15 years. Starting from black and white phones to recent smart phones or mini computers, mobile OS has come far away. Especially for smart phones, Mobile OS has greatly evolved from Palm OS in 1996 to Windows pocket PC in 2000 then to Blackberry OS and Android.

One of the most widely used mobile OS these days is **ANDROID**. **Android** is a software bunch comprising not only operating system but also middleware and key applications. Android Inc was founded in Palo Alto of California, U.S. by Andy Rubin, Rich miner, Nick sears and Chris White in 2003. Later Android Inc. was acquired by Google in 2005. After original release there have been number of updates in the original version of Android.

Features & Specifications:

Android is a powerful Operating System supporting a large number of applications in Smart Phones. These applications make life more comfortable and advanced for the users. Hardware that support Android are mainly based on ARM architecture platform.

Android comes with an Android market which is an online software store. It was developed by Google. It allows Android users to select, and download applications developed by third party developers and use them. There are around 2.0 lack+ games, application and widgets available on the market for users.

Android applications are written in java programming language. Android is available as open source for developers to develop applications which can be further used for selling in android market. There are around 200000 applications developed for android with over 3 billion+ downloads. Android relies on Linux version 2.6 for core system services such as security, memory management, process management, network stack, and driver model. For software development, Android provides **Android SDK** (Software development kit).

Applications

These are the basics of Android applications:

• Android applications are composed of one or more application components (activities, services, content providers, and broadcast receivers)

• Each component performs a different role in the overall application behavior, and each one can be activated individually (even by other applications)

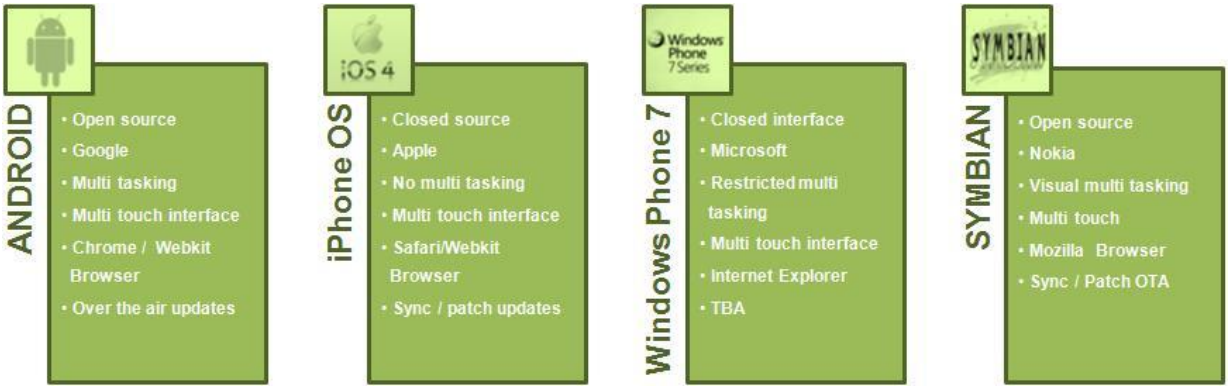
• The manifest file must declare all components in the application and should also declare all application requirements, such as the minimum version of Android required and any hardware configurations required

• Non-code application resources (images, strings, layout files, etc.) should include alternatives for different device configurations (such as different strings for different languages)

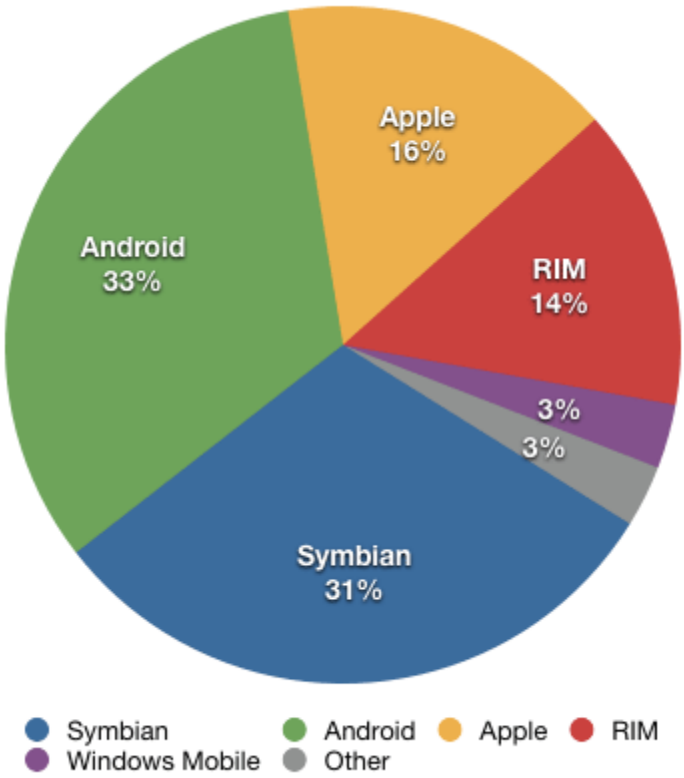
Google, for software development and application development, had launched two competitions ADC1 and ADC2 for the most innovative applications for Android. It offered prizes of USD 10 million combined in ADC1 and 2. ADC1 was launched in January 2008 and ADC 2 was launched in May 2009. These competitions helped Google a lot in making Android better, more user friendly, advanced and interactive.

Other Mobile Oss:

There are different other Mobile operating systems also present in market in competition with Android. Apple's iOS and Windows Phone give strong competition to Android. A simple comparison between features and specifications of latest version of Android and other Operating Systems can be seen in the table given below.



PIE CHART:(comparison of users in world wide)



PROJECT DESCRIPTION

PLATFORM REQUIREMENTS:

Hardware/ Software	Hardware / Software element	Specification /version
Hardware	Processor	Intel multi-core i5
	RAM	8 GB
	Hard Disk	1 TB
Software	OS	Windows 10
	ANDROID STUDIO	

→SOFTWARE REQUIREMENTS SPECIFICATION

Serial Number	Name of the Module
1.	Log in screen
2.	Inserting
3.	Category
4.	Information Activity

FUNCTIONAL REQUIREMENTS

Module Number	Module Name	S.no of function	Function
1.	Log in screen	1.	Validation for user(name and password)
		2.	Validation for admin(name and password)
2.	Inserting	1.	To display movie name,cast and crew of movie
		2.	To display show timings
		3.	To display Reviews and ratings
3.	Category activity	1.	Buttons will be displayed for above functions while clicking a button next activity.java (Information activity) displayed.
4.	Information activity	1.	
		2.	
		3.	
		4.	

NON FUNCTIONAL REQUIREMENTS

Reliability

The system provides storage of all databases on redundant computers with automatic switchover.
The reliability of the overall program depends on the reliability of the separate components. The main pillar of reliability of the system is the backup of the database which is continuously maintained and updated to reflect the most recent changes.
Thus the overall stability of the system depends on the stability of container and its underlying operating system.

Maintainability

A commercial database is used for maintaining the database and the application server takes care of the site. In case of a failure, a re-initialization of the program will be done. Also the software design is being done with modularity in mind so that maintainability can be done efficiently.

Portability

The application is ANDROID based. So The end-user part is fully portable system using any web browser should be able to use the features of the system, including any hardware platform that is available or will be available in the future.
An end-user is use this system on any OS; either it is Windows or Linux.
The system shall run on PC, Laptops, and mobile etc.

MODULE DESCRIPTION

MODULE 1:

→MODULE 2:

→MODULE 3:

→MODULE 4:

SOURCE CODE

MAIN ACTIVITY.JAVA

```
package vij.klu.projectapp;

import android.content.Intent;

import android.support.v7.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

Public class MainActivity extends AppCompatActivity { @Override

   protected void onCreate(Bundle savedInstanceState) {

      super.onCreate(savedInstanceState);

      setContentView(R.layout.activity_main);

      Button btn=(Button)findViewById(R.id.info);

      btn.setOnClickListener(new View.OnClickListener() {

         @Overrid

         public void onClick(View view) {

       Intent intent=new Intent(MainActivity.this,LoginScreen.class)

      startActivity(intent);

   }

      });

}}
```

LOGINSCREEN.JAVA

```
package vij.klu.projectapp;

import android.content.Intent;

import android.support.v7.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;


public class LoginScreen extends AppCompatActivity {

    EditText e1,e2;

    Button b1;


    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_login_screen);

        e1= (EditText) findViewById(R.id.loginid);

        e2= (EditText) findViewById(R.id.pass);

        b1= (Button) findViewById(R.id.button);

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

```
        @Override
        public void onClick(View view) {
            String id=e1.getText().toString();
            String password=e2.getText().toString();
            if(id.equals("admin") && password.equals("admin"))
            {
                Intent intent=new Intent(LoginScreen.this,Inserting.class);
                startActivity(intent);
            }
            if(id.equals("user")&& password.equals("user"))
            {
                Intent intent=new
Intent(LoginScreen.this,CategoryActivity.class);
                startActivity(intent);
            }
            Intent intent=getIntent();
        }
    });
  }
}
```

INSERTING.JAVA

```
package vij.klu.projectapp;

import android.content.Intent;

import android.support.v7.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.RatingBar;

import android.widget.Toast;

 public class Inserting extends AppCompatActivity {

    DataBaseHelper myDb;

   Button btn;

    EditText mname;

    EditText cast;



    EditText time;

    EditText th;

    EditText cat,Rating;

    @Override

    protected void onCreate(Bundle savedInstanceState) {
```

```
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_inserting);
        myDb = new DataBaseHelper(this);
         mname = (EditText) findViewById(R.id.name);
         cast = (EditText) findViewById(R.id.cast);
        Rating=(EditText)findViewById(R.id.r1);
         time = (EditText) findViewById(R.id.Timings);
         th = (EditText) findViewById(R.id.Theatre);
         cat = (EditText) findViewById(R.id.category);
         btn = (Button) findViewById(R.id.insert);
        AddData();
        Intent intent=getIntent();
    }

    public void AddData() {
        btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                boolean isInserted =
myDb.insertData(mname.getText().toString(),
```

```
cast.getText().toString(),Rating.getText().toString(),time.getText().toSt
ring(),th.getText().toString(),cat.getText().toString() );

            if(isInserted == true)

                Toast.makeText(Inserting.this,"Data
Inserted",Toast.LENGTH_LONG).show();

            else

                Toast.makeText(Inserting.this,"Data not
Inserted",Toast.LENGTH_LONG).show();



        }

    });


}
}
```

CATEGORY.JAVA

```
package vij.klu.projectapp;

import android.content.Intent;

import android.support.v7.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;


public class CategoryActivity extends AppCompatActivity {


    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_category);

        Button btn1=(Button)findViewById(R.id.button1);

        Button btn2=(Button)findViewById(R.id.button2);

        Button btn3=(Button)findViewById(R.id.button3);

        Button btn4=(Button)findViewById(R.id.button4);

        Button btn5=(Button)findViewById(R.id.button5);

        btn1.setOnClickListener(new View.OnClickListener() {
```

```
        @Override
        public void onClick(View view) {
            Intent intent=new
Intent(CategoryActivity.this,InformationActivity.class);
            startActivity(intent);


        }
    });
    Intent intent=getIntent();
  }
}
```

INFORMATIONACTIVITY.JAVA

```
package vij.klu.projectapp;
import android.content.Intent;
import android.database.Cursor;
import android.support.v7.app.AlertDialog;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
public class InformationActivity extends AppCompatActivity {
    DataBaseHelper myDb;
   Button btn;
@Override
   protected void onCreate(Bundle savedInstanceState) {
       super.onCreate(savedInstanceState);
       setContentView(R.layout.activity_information);
       myDb = new DataBaseHelper(this);
       btn = (Button)findViewById(R.id.button6);
       viewAll();
       Intent intent=getIntent();
   }
 public void viewAll() {
       btn.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View v) {
               Cursor res = myDb.getAllData();
```

```
            if (res.getCount() == 0) {
                // show message
                showMessage("Error", "Nothing found");
                return;
            }
StringBuffer buffer = new StringBuffer();
            while (res.moveToNext()) {
                buffer.append("MovieName:" + res.getString(0) + "\n");
                buffer.append("castcrew:" + res.getString(1) + "\n");
                buffer.append("Rating:" + res.getString(2) + "\n");
                buffer.append("Timings:" + res.getString(3) + "\n");
                buffer.append("Theatre:" + res.getString(4) + "\n");
                buffer.append("Category:" + res.getString(5) + "\n\n\n\n");
}
showMessage("Data", buffer.toString());
          }
 });}
   public void showMessage(String title,String Message){
       AlertDialog.Builder builder = new AlertDialog.Builder(this);
       builder.setCancelable(true);
       builder.setTitle(title);
       builder.setMessage(Message);
       builder.show();
   }
}
```

DATABASEHELPER.JAVA

```
package vij.klu.projectapp;
import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;

import static vij.klu.projectapp.R.id.category;

public class DataBaseHelper extends SQLiteOpenHelper {

    public static final String DATABASE_NAME = "Movie.db";
    public static final String TABLE_NAME = "TYPE";
    public static final String COL_1 = "MovieName";
    public static final String COL_2 = "castcrew";
    public static final String COL_3 = "Rating";
    public static final String COL_4 = "Timings";
    public static final String COL_5 = "Theatre";
    public static final String COL_6 = "Category";
 public DataBaseHelper(Context context) {
        super(context, DATABASE_NAME, null, 1);
    }

    @Override
    public void onCreate(SQLiteDatabase db) {
```

```
    db.execSQL("create table " + TABLE_NAME +" (MovieName
TEXT,castcrew TEXT,Rating INTEGER ,Timings TEXT,Theatre
TEXT,Category TEXT)");
  }
@Override
  public void onUpgrade(SQLiteDatabase db, int oldVersion, int
newVersion) {
    db.execSQL("DROP TABLE IF EXISTS "+TABLE_NAME);
    onCreate(db);
  }
public boolean insertData(String MovieName,String castcrew ,String
Rating,String Timings,String Theatre,String Category) {
    SQLiteDatabase db = this.getWritableDatabase();
    ContentValues contentValues = new ContentValues();
    contentValues.put(COL_1,MovieName);
    contentValues.put(COL_2,castcrew);
    contentValues.put(COL_3,Rating);
    contentValues.put(COL_4,Timings);
    contentValues.put(COL_5,Theatre);
    contentValues.put(COL_6,Category);


    long result = db.insert(TABLE_NAME,null ,contentValues);


    if(result == -1)
      return false;
    else
```

```
        return true;
    }
public Cursor getAllData() {
        SQLiteDatabase db = this.getWritableDatabase();
        Cursor res = db.rawQuery("select * from "+TABLE_NAME
,null);
        return res;
    }
public boolean updateData(String id,String name,String surname,String
marks) {
        SQLiteDatabase db = this.getWritableDatabase();
        ContentValues contentValues = new ContentValues();
        contentValues.put(COL_1,id);
        contentValues.put(COL_2,name);
        contentValues.put(COL_3,surname);
        contentValues.put(COL_4,marks);
        db.update(TABLE_NAME, contentValues, "ID = ?",new String[]
{ id });
        return true;
    }

    public Integer deleteData (String id) {
        SQLiteDatabase db = this.getWritableDatabase();
        return db.delete(TABLE_NAME, "ID = ?",new String[] {id});
    }
}
```

XML FILES

activity_category.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/activity_category"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context="vij.klu.projectapp.CategoryActivity"
    android:weightSum="1">


    <Button
        android:text="ACTION"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="81dp"
        android:id="@+id/button1" />

    <Button
        android:text="COMEDY"
```

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/button1"
    android:layout_alignLeft="@+id/button1"
    android:layout_alignStart="@+id/button1"
    android:layout_marginTop="33dp"
    android:id="@+id/button2" />

<Button
    android:text="FICTION"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/button2"
    android:layout_alignLeft="@+id/button2"
    android:layout_alignStart="@+id/button2"
    android:layout_marginTop="33dp"
    android:id="@+id/button3" />

<Button
    android:text="SCIENCE"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/button3"
    android:layout_alignLeft="@+id/button3"
    android:layout_alignStart="@+id/button3"
    android:layout_marginTop="37dp"
```

```
        android:id="@+id/button4" />

    <Button
        android:text="OTHERS"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/button4"
        android:layout_alignRight="@+id/button4"
        android:layout_alignEnd="@+id/button4"
        android:layout_marginTop="33dp"
        android:id="@+id/button5" />
</RelativeLayout>
```

activity_information.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:id="@+id/activity_information"
    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"
    tools:context="vij.klu.projectapp.InformationActivity">
```

```
    <Button
        android:text="ViewInfo"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="140dp"
        android:id="@+id/button6" />
</RelativeLayout>
```

activity_iserting.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:id="@+id/activity_inserting"
    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"
    tools:context="vij.klu.projectapp.Inserting">
```

```
<Button
    android:text="INSERT"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/insert"
    android:layout_alignParentBottom="true"
    android:layout_alignLeft="@+id/Theatre"
    android:layout_alignStart="@+id/Theatre"
    android:layout_marginBottom="21dp" />

<EditText
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:inputType="textPersonName"
    android:ems="10"
    android:id="@+id/Theatre"
    android:hint="Theatre"
    android:layout_centerVertical="true"
    android:layout_centerHorizontal="true" />

<EditText
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:inputType="textPersonName"
    android:ems="10"
    android:id="@+id/category"
```

```
    android:hint="Category"
    android:layout_marginTop="11dp"
    android:layout_below="@+id/Theatre"
    android:layout_alignLeft="@+id/Theatre"
    android:layout_alignStart="@+id/Theatre" />

<EditText
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:inputType="textPersonName"
    android:ems="10"
    android:id="@+id/cast"
    android:hint="cast and crew"
    android:layout_above="@+id/Timings"
    android:layout_alignLeft="@+id/name"
    android:layout_alignStart="@+id/name" />

<EditText
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:inputType="textPersonName"
    android:ems="10"
    android:id="@+id/Timings"
    android:hint="Timings"
    android:layout_marginBottom="42dp"
    android:layout_alignBottom="@+id/Theatre"
```

```
        android:layout_alignLeft="@+id/Theatre"
        android:layout_alignStart="@+id/Theatre" />

    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:inputType="textPersonName"
        android:ems="10"
        android:id="@+id/name"
        android:hint="Movie Name"
        android:layout_above="@+id/cast"
        android:layout_alignLeft="@+id/Timings"
        android:layout_alignStart="@+id/Timings" />

    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:hint="enter rating"
        android:id="@+id/r1"
        android:layout_above="@+id/insert"
        android:layout_alignLeft="@+id/category"
        android:layout_alignStart="@+id/category"
        android:layout_marginLeft="12dp"
        android:layout_marginStart="12dp"
        android:layout_marginBottom="42dp" />
</RelativeLayout>
```

activity_login_screen.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:id="@+id/activity_login_screen"
   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"
   tools:context="vij.klu.projectapp.LoginScreen">
   <EditText
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:id="@+id/loginid"
      android:hint="Enter login id"
      android:layout_alignParentRight="true"
      android:layout_alignParentEnd="true"
      android:layout_alignParentLeft="true"
      android:layout_alignParentStart="true" />

   <EditText
      android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
        android:inputType="textPassword"
        android:ems="10"

        android:layout_below="@+id/loginid"
        android:layout_marginTop="24dp"
        android:id="@+id/pass"
        android:hint="Enter ur password"
        android:layout_alignParentRight="true"
        android:layout_alignParentEnd="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentStart="true" />

    <Button
        android:text="Verify"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/pass"
        android:layout_alignParentLeft="true"
        android:layout_alignParentStart="true"
        android:layout_marginLeft="118dp"
        android:layout_marginStart="118dp"
        android:layout_marginTop="68dp"
        android:id="@+id/button" />

</RelativeLayout>
```

activity_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/activity_main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context="vij.klu.projectapp.MainActivity">

    <ImageView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        app:srcCompat="@drawable/image1"
        android:id="@+id/imageView"
        android:layout_marginEnd="16dp"
        app:layout_constraintRight_toRightOf="parent"
        android:layout_marginRight="16dp"
        android:layout_marginStart="16dp"
        app:layout_constraintLeft_toLeftOf="parent"
        android:layout_marginLeft="16dp"
        app:layout_constraintBottom_toBottomOf="parent"
        android:layout_marginBottom="16dp"
        android:layout_marginTop="16dp"
```

```
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintHorizontal_bias="0.45"
        app:layout_constraintVertical_bias="0.12" />

    <Button
        android:text="WELCOME!!!!!!!!"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/info"
        android:layout_marginStart="16dp"
        app:layout_constraintLeft_toLeftOf="parent"
        android:layout_marginLeft="16dp"
        android:layout_marginEnd="16dp"
        app:layout_constraintRight_toRightOf="parent"
        android:layout_marginRight="16dp"
        app:layout_constraintBottom_toBottomOf="parent"
        android:layout_marginBottom="16dp"
        android:layout_marginTop="8dp"
        app:layout_constraintTop_toBottomOf="@+id/imageView" />
</android.support.constraint.ConstraintLayout>
```

OUTPUT SCREEN-SHOTS

CONCLUSION

References:

Any website

Any text book

Any other source