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Mobile Application Development

Homework 1

## XML Source code

<?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:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity">

<EditText

android:id="@+id/inputID"

android:layout\_width="200dp"

android:layout\_height="40dp"

android:layout\_marginEnd="10dp"

android:layout\_marginRight="10dp"

android:layout\_marginTop="20dp"

android:hint="@string/your\_id"

android:inputType="number"

android:visibility="visible"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintTop\_toTopOf="parent" />

<EditText

android:id="@+id/inputCC"

android:layout\_width="200dp"

android:layout\_height="40dp"

android:layout\_marginEnd="10dp"

android:layout\_marginRight="10dp"

android:layout\_marginTop="68dp"

android:hint="@string/course\_code"

android:inputType="text"

android:textAllCaps="true"

android:visibility="visible"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintTop\_toTopOf="parent" />

<EditText

android:id="@+id/inputGrade"

android:layout\_width="200dp"

android:layout\_height="40dp"

android:layout\_marginEnd="10dp"

android:layout\_marginRight="10dp"

android:layout\_marginTop="10dp"

android:hint="@string/your\_grade"

android:inputType="numberDecimal"

android:visibility="visible"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/inputCC" />

<Button

android:id="@+id/calculateMarkButton"

android:layout\_width="135dp"

android:layout\_height="35dp"

android:layout\_marginEnd="108dp"

android:layout\_marginRight="108dp"

android:layout\_marginTop="16dp"

android:onClick="buttonClicked"

android:text="@string/calculate"

android:textAllCaps="true"

android:visibility="visible"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/inputGrade" />

<TextView

android:id="@+id/outputID"

android:layout\_width="135dp"

android:layout\_height="40dp"

android:layout\_marginEnd="48dp"

android:layout\_marginRight="48dp"

android:layout\_marginTop="28dp"

android:visibility="visible"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/calculateMarkButton" />

<TextView

android:id="@+id/outputCC"

android:layout\_width="135dp"

android:layout\_height="40dp"

android:layout\_marginEnd="48dp"

android:layout\_marginRight="48dp"

android:layout\_marginTop="10dp"

android:ems="10"

android:visibility="visible"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/outputID" />

<TextView

android:id="@+id/outputGrade"

android:layout\_width="135dp"

android:layout\_height="40dp"

android:layout\_marginEnd="48dp"

android:layout\_marginRight="48dp"

android:layout\_marginTop="10dp"

android:visibility="visible"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/outputCC" />

<TextView

android:id="@+id/outputMark"

android:layout\_width="135dp"

android:layout\_height="40dp"

android:layout\_marginEnd="48dp"

android:layout\_marginRight="48dp"

android:layout\_marginTop="10dp"

android:visibility="visible"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/outputGrade" />

<TextView

android:id="@+id/labelID"

android:layout\_width="135dp"

android:layout\_height="40dp"

android:layout\_marginEnd="24dp"

android:layout\_marginRight="24dp"

android:layout\_marginTop="28dp"

app:layout\_constraintEnd\_toStartOf="@+id/outputID"

app:layout\_constraintTop\_toBottomOf="@+id/calculateMarkButton" />

<TextView

android:id="@+id/labelCourse"

android:layout\_width="135dp"

android:layout\_height="40dp"

android:layout\_marginEnd="24dp"

android:layout\_marginRight="24dp"

android:layout\_marginTop="10dp"

app:layout\_constraintEnd\_toStartOf="@+id/outputCC"

app:layout\_constraintTop\_toBottomOf="@+id/labelID" />

<TextView

android:id="@+id/labelGrade"

android:layout\_width="135dp"

android:layout\_height="40dp"

android:layout\_marginEnd="24dp"

android:layout\_marginRight="24dp"

android:layout\_marginTop="10dp"

app:layout\_constraintEnd\_toStartOf="@+id/outputGrade"

app:layout\_constraintTop\_toBottomOf="@+id/labelCourse" />

<TextView

android:id="@+id/labelMark"

android:layout\_width="135dp"

android:layout\_height="40dp"

android:layout\_marginEnd="24dp"

android:layout\_marginRight="24dp"

android:layout\_marginTop="10dp"

app:layout\_constraintEnd\_toStartOf="@+id/outputMark"

app:layout\_constraintTop\_toBottomOf="@+id/labelGrade" />

</android.support.constraint.ConstraintLayout>

## JAVA Source code

package com.example.alireza.homework;

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.TextView;

public class MainActivity extends AppCompatActivity

{

EditText studentID = null;

EditText courseCode = null;

EditText grade = null;

TextView viewID = null;

TextView viewCC = null;

TextView viewGrade = null;

TextView viewMark = null;

Button calculateMarkButton = null;

@Override

protected void onCreate(Bundle savedInstanceState)

{

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

}

public void buttonClicked(View view) {

studentID = findViewById(R.id.inputID);

courseCode = findViewById(R.id.inputCC);

grade = findViewById(R.id.inputGrade);

viewID = findViewById(R.id.outputID);

viewCC = findViewById(R.id.outputCC);

viewGrade = findViewById(R.id.outputGrade);

viewMark = findViewById(R.id.outputMark);

calculateMarkButton = findViewById(R.id.calculateMarkButton);

String id = studentID.getText().toString();

String cc = courseCode.getText().toString();

String grd = grade.getText().toString();

double g = Double.parseDouble(grd);

if (g <= 100 && g >= 94)

viewMark.setText("A");

else if (g <= 93 && g >= 90)

viewMark.setText("A-");

else if (g <= 89 && g >= 87)

viewMark.setText("B+");

else if (g <= 86 && g >= 84)

viewMark.setText("B");

else if (g <= 83 && g >= 80)

viewMark.setText("B-");

else if (g <= 79 && g >= 77)

viewMark.setText("C+");

else if (g <= 76 && g >= 74)

viewMark.setText("C");

else if (g <= 73 && g >= 70)

viewMark.setText("C-");

else if (g <= 69 && g >= 67)

viewMark.setText("D+");

else if (g <= 66 && g >= 60)

viewMark.setText("D");

else if (g <= 59)

viewMark.setText("F");

else

viewMark.setText("F");

viewID.setText(id);

viewCC.setText(cc);

viewGrade.setText(grd);

}

}

## Screen shots

