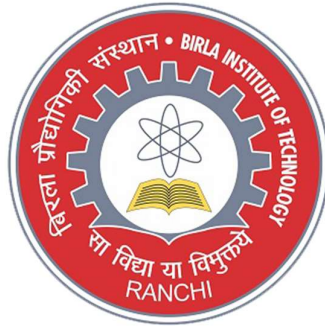# Birla Institute of Technology,Mesra,

Patna Campus

Mi-Assignment

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Roll-Btech/15044/18

Sec-CSE 6th

Assignment-2

Develop an application that uses Layout Managers and event listeners.

Code:-

MainActivity:-

package com.crunchify.tutorials.crunchifycalculator;

import android.os.Bundle;

import android.support.v7.app.AppCompatActivity;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

public class MainActivity extends AppCompatActivity {

    Button button0, button1, button2, button3, button4, button5, button6,

        button7, button8, button9, buttonAdd, buttonSub, buttonDivision,

        buttonMul, button10, buttonC, buttonEqual;

    EditText crunchifyEditText;

    float mValueOne, mValueTwo;

    boolean crunchifyAddition, mSubtract, crunchifyMultiplication, crunchifyDivision;

    @Override

```java
protected void onCreate(Bundle savedInstanceState) {

    super.onCreate(savedInstanceState);

    setContentView(R.layout.activity_main);


    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);

    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);

    crunchifyEditText = (EditText) findViewById(R.id.edt1);


    button1.setOnClickListener(new View.OnClickListener() {
```

```java
        @Override

        public void onClick(View v) {

            crunchifyEditText.setText(crunchifyEditText.getText() + "1");

        }

    });


    button2.setOnClickListener(new View.OnClickListener() {

        @Override

        public void onClick(View v) {

            crunchifyEditText.setText(crunchifyEditText.getText() + "2");

        }

    });


    button3.setOnClickListener(new View.OnClickListener() {

        @Override

        public void onClick(View v) {

            crunchifyEditText.setText(crunchifyEditText.getText() + "3");

        }

    });


    button4.setOnClickListener(new View.OnClickListener() {

        @Override

        public void onClick(View v) {

            crunchifyEditText.setText(crunchifyEditText.getText() + "4");

        }
```

```java
        });

        button5.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                crunchifyEditText.setText(crunchifyEditText.getText() + "5");

            }

        });

        button6.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                crunchifyEditText.setText(crunchifyEditText.getText() + "6");

            }

        });

        button7.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                crunchifyEditText.setText(crunchifyEditText.getText() + "7");

            }

        });

        button8.setOnClickListener(new View.OnClickListener() {

            @Override
```

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

            crunchifyEditText.setText(crunchifyEditText.getText() + "8");

        }

    });


    button9.setOnClickListener(new View.OnClickListener() {

        @Override

        public void onClick(View v) {

            crunchifyEditText.setText(crunchifyEditText.getText() + "9");

        }

    });


    button0.setOnClickListener(new View.OnClickListener() {

        @Override

        public void onClick(View v) {

            crunchifyEditText.setText(crunchifyEditText.getText() + "0");

        }

    });


    buttonAdd.setOnClickListener(new View.OnClickListener() {

        @Override

        public void onClick(View v) {


            if (crunchifyEditText == null) {

                crunchifyEditText.setText("");
```

```java
        } else {

            mValueOne = Float.parseFloat(crunchifyEditText.getText() + "");

            crunchifyAddition = true;

            crunchifyEditText.setText(null);

        }

    }

});


buttonSub.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View v) {

        mValueOne = Float.parseFloat(crunchifyEditText.getText() + "");

        mSubtract = true;

        crunchifyEditText.setText(null);

    }

});


buttonMul.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View v) {

        mValueOne = Float.parseFloat(crunchifyEditText.getText() + "");

        crunchifyMultiplication = true;

        crunchifyEditText.setText(null);

    }

});
```

```java
buttonDivision.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View v) {

        mValueOne = Float.parseFloat(crunchifyEditText.getText() + "");

        crunchifyDivision = true;

        crunchifyEditText.setText(null);

    }

});


buttonEqual.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View v) {

        mValueTwo = Float.parseFloat(crunchifyEditText.getText() + "");


        if (crunchifyAddition == true) {

            crunchifyEditText.setText(mValueOne + mValueTwo + "");

            crunchifyAddition = false;

        }


        if (mSubtract == true) {

            crunchifyEditText.setText(mValueOne - mValueTwo + "");

            mSubtract = false;

        }
```

```java
                if (crunchifyMultiplication == true) {

                    crunchifyEditText.setText(mValueOne * mValueTwo + "");

                    crunchifyMultiplication = false;

                }


                if (crunchifyDivision == true) {

                    crunchifyEditText.setText(mValueOne / mValueTwo + "");

                    crunchifyDivision = false;

                }

            }

        });


        buttonC.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                crunchifyEditText.setText("");

            }

        });


        button10.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                crunchifyEditText.setText(crunchifyEditText.getText() + ".");

            }

        });
```

}

}

design.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/relative1"

    android:layout_width="match_parent"

    android:layout_height="match_parent"

    tools:context=".MainActivity">

    <EditText

        android:id="@+id/edt1"

        android:layout_width="match_parent"

        android:layout_height="wrap_content" />

    <Button

        android:id="@+id/button1"

        style="?android:attr/buttonStyleSmall"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_alignEnd="@+id/button4"

```xml
    android:layout_alignRight="@+id/button4"

    android:layout_below="@+id/edt1"

    android:layout_marginTop="94dp"

    android:text="1" />


<Button

    android:id="@+id/button2"

    style="?android:attr/buttonStyleSmall"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:layout_alignTop="@+id/button1"

    android:layout_toLeftOf="@+id/button3"

    android:layout_toStartOf="@+id/button3"

    android:text="2" />


<Button

    android:id="@+id/button3"

    style="?android:attr/buttonStyleSmall"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:layout_alignTop="@+id/button2"

    android:layout_centerHorizontal="true"

    android:text="3" />


<Button
```

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

    style="?android:attr/buttonStyleSmall"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:layout_below="@+id/button1"

    android:layout_toLeftOf="@+id/button2"

    android:text="4" />


<Button

    android:id="@+id/button5"

    style="?android:attr/buttonStyleSmall"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:layout_alignBottom="@+id/button4"

    android:layout_alignLeft="@+id/button2"

    android:layout_alignStart="@+id/button2"

    android:text="5" />


<Button

    android:id="@+id/button6"

    style="?android:attr/buttonStyleSmall"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:layout_alignLeft="@+id/button3"

    android:layout_alignStart="@+id/button3"
```

```
    android:layout_below="@+id/button3"

    android:text="6" />


<Button

    android:id="@+id/button7"

    style="?android:attr/buttonStyleSmall"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:layout_below="@+id/button4"

    android:layout_toLeftOf="@+id/button2"

    android:text="7" />


<Button

    android:id="@+id/button8"

    style="?android:attr/buttonStyleSmall"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:layout_alignLeft="@+id/button5"

    android:layout_alignStart="@+id/button5"

    android:layout_below="@+id/button5"

    android:text="8" />


<Button

    android:id="@+id/button9"

    style="?android:attr/buttonStyleSmall"
```

```xml
        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_alignLeft="@+id/button6"

        android:layout_alignStart="@+id/button6"

        android:layout_below="@+id/button6"

        android:text="9" />


    <Button

        android:id="@+id/buttonadd"

        style="?android:attr/buttonStyleSmall"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_alignEnd="@+id/edt1"

        android:layout_alignRight="@+id/edt1"

        android:layout_alignTop="@+id/button3"

        android:layout_marginLeft="46dp"

        android:layout_marginStart="46dp"

        android:layout_toRightOf="@+id/button3"

        android:text="+" />


    <Button

        android:id="@+id/buttonsub"

        style="?android:attr/buttonStyleSmall"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"
```

```xml
        android:layout_alignEnd="@+id/buttonadd"

        android:layout_alignLeft="@+id/buttonadd"

        android:layout_alignRight="@+id/buttonadd"

        android:layout_alignStart="@+id/buttonadd"

        android:layout_below="@+id/buttonadd"

        android:text="-" />


    <Button

        android:id="@+id/buttonmul"

        style="?android:attr/buttonStyleSmall"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_alignLeft="@+id/buttonsub"

        android:layout_alignParentEnd="true"

        android:layout_alignParentRight="true"

        android:layout_alignStart="@+id/buttonsub"

        android:layout_below="@+id/buttonsub"

        android:text="*" />


    <Button

        android:id="@+id/button10"

        style="?android:attr/buttonStyleSmall"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_below="@+id/button7"
```

```xml
    android:layout_toLeftOf="@+id/button2"

    android:text="." />


  <Button

    android:id="@+id/button0"

    style="?android:attr/buttonStyleSmall"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:layout_alignLeft="@+id/button8"

    android:layout_alignStart="@+id/button8"

    android:layout_below="@+id/button8"

    android:text="0" />


  <Button

    android:id="@+id/buttonC"

    style="?android:attr/buttonStyleSmall"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:layout_alignLeft="@+id/button9"

    android:layout_alignStart="@+id/button9"

    android:layout_below="@+id/button9"

    android:text="C" />


  <Button

    android:id="@+id/buttondiv"
```

```xml
style="?android:attr/buttonStyleSmall"

android:layout_width="wrap_content"

android:layout_height="wrap_content"

android:layout_alignEnd="@+id/buttonmul"

android:layout_alignLeft="@+id/buttonmul"

android:layout_alignRight="@+id/buttonmul"

android:layout_alignStart="@+id/buttonmul"

android:layout_below="@+id/buttonmul"

android:text="/" />


<Button

android:id="@+id/buttoneql"

android:layout_width="wrap_content"

android:layout_height="wrap_content"

android:layout_alignEnd="@+id/buttondiv"

android:layout_alignLeft="@+id/button10"

android:layout_alignRight="@+id/buttondiv"

android:layout_alignStart="@+id/button10"

android:layout_below="@+id/button0"

android:layout_marginTop="37dp"

android:text="=" />


</RelativeLayout>
```