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SUBJECT **ANDROID APPLICATION**
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INDIVIDUAL ASSIGNMENT

2020

MainActivity.java

```
package com.example.calculator;
import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
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
    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.buttoneq);
        crunchifyEditText = (EditText) findViewById(R.id.edt1);
```

```
button1.setOnClickListener(new View.OnClickListener() {  
    @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");  
    }  
});
```

```
button5.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View view) {  
        crunchifyEditText.setText(crunchifyEditText.getText() + "5");  
    }  
});
```

```
button6.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View view) {  
        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  
    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("");  
        } 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);  
    }  
});
```

```
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 view) {  
        mValueTwo = Float.parseFloat(crunchifyEditText.getText() + "");  
  
        if (crunchifyAddition == true) {  
            crunchifyEditText.setText(mValueOne + mValueTwo + "");  
            crunchifyAddition = false;  
        }  
  
        if (mSubtract == true) {  
            crunchifyEditText.setText(mValueOne - mValueTwo + "");  
            mSubtract = false;  
        }  
  
        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() + ".");
    }
});
if (crunchifyAddition == true) {
    crunchifyEditText.setText(mValueOne + mValueTwo + "");
    crunchifyAddition = false;
}
}
}

```

activity_main.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"
        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"
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"
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"
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"
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>