

2019

# Java

PROJECT 5  
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## Project

The project is about making an android application on android studio software using java. It's all about getting to know about java development.

## Java

Java syntax was bit hard to get used to but I got used to it after few attempts.

Java functions [FirstApp](#), [WebBrowser](#)

XML code [FirstApp](#), [WebBrowser](#)

## Application screenshots

The application screenshots will show an overview of the app and how to use it.

[FirstAppScreenshots](#)

[WebBrowserScreenshots](#)

## Step by step explanation of the app 1

The first app is a small calculator it, the user can add 2 numbers together and see the result.

[Step1-](#) Add the first number.

[Step2-](#) Add the second number.

[Step3-](#) Click the add button.

[Step-4-](#)Number will be added and will show in the result area.

## Screenshots

The Screenshots and the Java codes are in the project folder and on the [hyperlinks](#).

## Appendix

### Hyperlinks

#### XML code1

```
<?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/NumText"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="8dp"
        android:layout_marginLeft="8dp"
        android:layout_marginTop="56dp"
        android:layout_marginEnd="8dp"
        android:layout_marginRight="8dp"
        android:ems="10"
        android:hint="@string/enter_a_number"
        android:inputType="number"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        android:importantForAutofill="no" tools:targetApi="o"/>

    <EditText
        android:id="@+id/NumText2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="8dp"
        android:layout_marginLeft="8dp"
        android:layout_marginTop="48dp"
        android:layout_marginEnd="8dp"
        android:layout_marginRight="8dp"
        android:ems="10"
        android:hint="@string/enter_a_number"
        android:inputType="number"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/NumText"
        android:autofillHints="" tools:targetApi="o"/>

    <Button
        android:id="@+id/buttonAdd"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="8dp"
        android:layout_marginLeft="8dp"
        android:layout_marginTop="124dp"
        android:layout_marginEnd="8dp"
```

```
        android:layout_marginRight="8dp"
        android:text="@string/add"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/NumText2" />

    <TextView
        android:id="@+id/textView"
        android:layout_width="113dp"
        android:layout_height="37dp"
        android:layout_marginStart="8dp"
        android:layout_marginLeft="8dp"
        android:layout_marginTop="8dp"
        android:layout_marginEnd="8dp"
        android:layout_marginRight="8dp"
        android:layout_marginBottom="8dp"
        android:text="@string/result"
        android:textSize="30sp"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/buttonAdd" />
</android.support.constraint.ConstraintLayout>
```

## Java functions1

```
package com.example.myfirstapp;

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;

import org.w3c.dom.Text;

public class MainActivity extends AppCompatActivity {

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

        Button buttonAdd = (Button) findViewById(R.id.buttonAdd);
        buttonAdd.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                EditText NumText = (EditText) findViewById(R.id. NumText);
                EditText NumText2 = (EditText) findViewById(R.id.NumText2);
                TextView ResultText = (TextView) findViewById(R.id.ResultText);

                int num1 = Integer.parseInt((NumText.getText().toString()));
                int num2 = Integer.parseInt((NumText2.getText().toString()));
                int result = num1 + num2;
                ResultText.setText(result + " ");
            }
        });
    }
}
```

## XML code2

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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"
    android:orientation="vertical"
    tools:context=".MainActivity">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="30dp"
        android:orientation="horizontal">

        <ImageView
            android:id="@+id/myImageView"
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            android:layout_weight="0.9"
            android:src="@mipmap/ic_launcher"
            android:contentDescription="@string/todo" />

        <ProgressBar
            android:id="@+id/myProgressBar"
            style="@style/Widget.AppCompat.ProgressBar.Horizontal"
            android:layout_width="match_parent"
            android:layout_height="42dp"
            android:layout_weight="0.1" />

    </LinearLayout>

    <WebView
        android:id="@+id/myWebView"
        android:layout_width="match_parent"
        android:layout_height="match_parent" />

</LinearLayout>
```



## Java functions2

```
package com.example.bnbrowser;

import android.graphics.Bitmap;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuInflater;
import android.view.MenuItem;
import android.webkit.WebChromeClient;
import android.webkit.WebView;
import android.webkit.WebViewClient;
import android.widget.ImageView;
import android.widget.LinearLayout;
import android.widget.ProgressBar;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    ProgressBar superProgressBar;
    ImageView superImageView;
    WebView superWebview;
    LinearLayout l;

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

        superProgressBar = findViewById(R.id.myProgressBar);
        superImageView = findViewById(R.id.myImageView);
        superWebview = findViewById(R.id.myWebView);

        superProgressBar.setMax(100);

        superWebview.loadUrl("https://brian-nanayakkara.com/");
        superWebview.getSettings().setJavaScriptEnabled(true);
        superWebview.setWebViewClient(new WebViewClient());

        superWebview.setWebChromeClient(new WebChromeClient(){

            @Override
            public void onProgressChanged(WebView view, int newProgress) {
                super.onProgressChanged(view, newProgress);
                superProgressBar.setProgress(newProgress);
            }

            @Override
            public void onReceivedTitle(WebView view, String title) {
                super.onReceivedTitle(view, title);
                getSupportActionBar().setTitle(title);
            }
        })
    }
}
```

```

        @Override
        public void onReceivedIcon(WebView view, Bitmap icon) {
            super.onReceivedIcon(view, icon);
            superImageView.setImageBitmap(icon);
        }
    });
}

@Override
public boolean onCreateOptionsMenu(Menu menu) {
    MenuInflater menuInflater = getMenuInflater();

    menuInflater.inflate(R.menu.super_menu, menu);
    return super.onCreateOptionsMenu(menu);
}

@Override
public boolean onOptionsItemSelected(MenuItem item) {
    switch (item.getItemId()) {
        case R.id.menu_back:
            onBackPressed();
            break;
        case R.id.menu_forward:
            onForwardPressed();
            break;

        case R.id.menu_refresh:
            superWebview.reload();
            break;
    }
    return super.onOptionsItemSelected(item);
}

private void onForwardPressed() {
    if (superWebview.canGoForward()) {
        superWebview.goForward();
    } else {
        Toast.makeText(this, "Can't go further!", Toast.LENGTH_SHORT).show();
    }
}

@Override
public void onBackPressed() {
    if (superWebview.canGoBack()) {
        superWebview.goBack();
    }
    else {
        finish();
    }
}
}
}

```

## First App Screenshots

### LandScapeView

My First App


Enter a number

Enter a number

ADD

1	2	3
4	5	6
7	8	9
⬅ x	0	Next

## PortraitView

The system status bar at the top of the screen displays various icons on the left (a picture, a power button, and a lock) and on the right (Bluetooth, Wi-Fi, cellular signal, 27% battery, and the time 14:54).


**My First App**

Enter a number

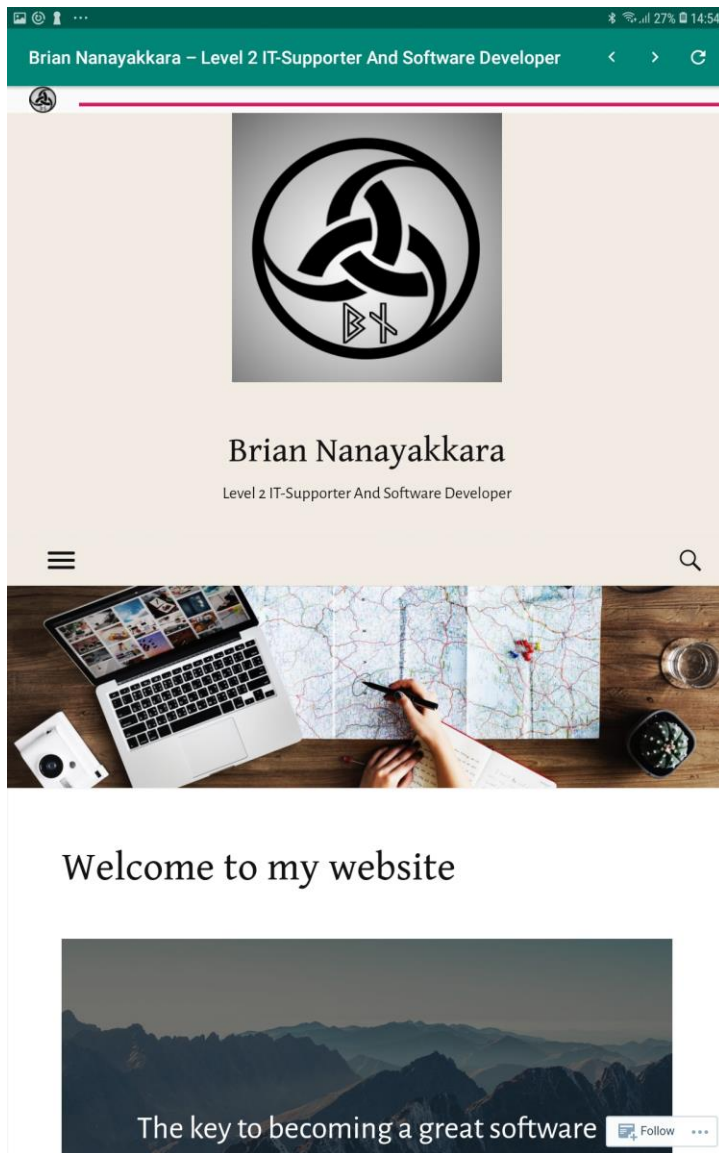
Enter a number

ADD

Result

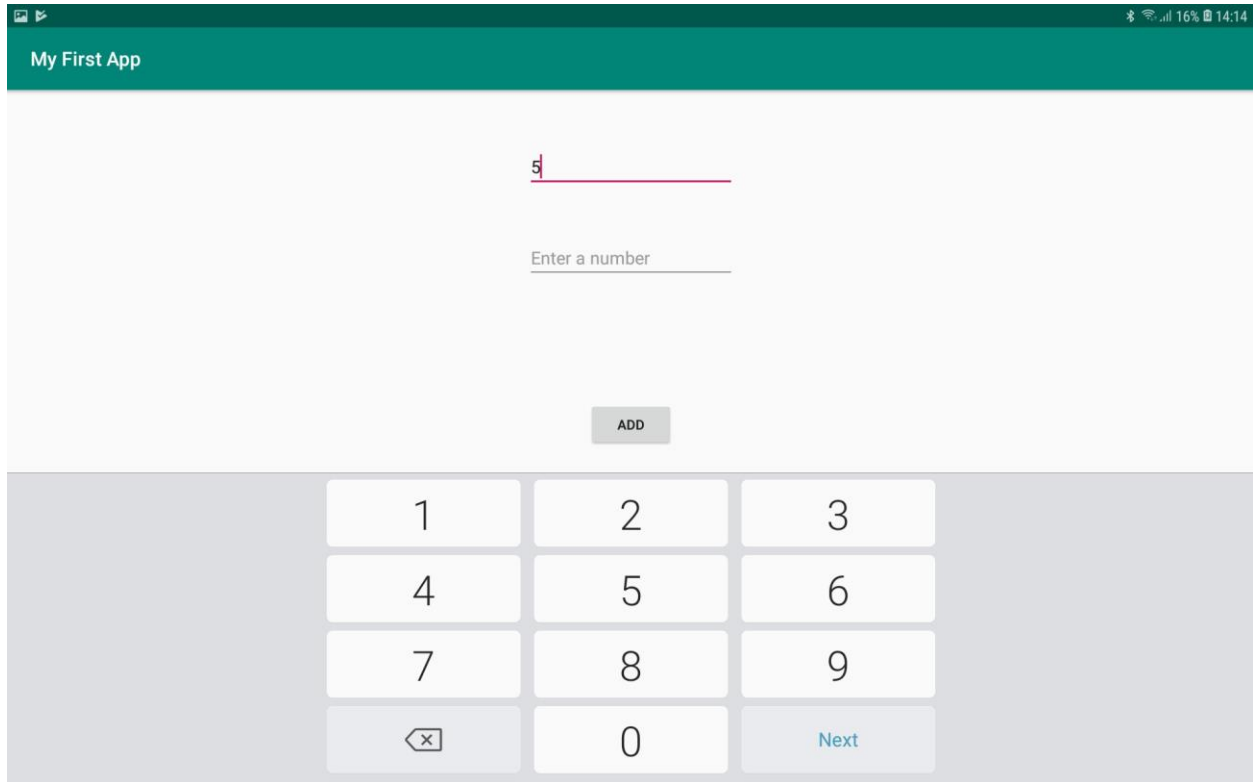
1	2	3
4	5	6
7	8	9
	0	Next

Web browser



## Application

### Step1



The screenshot shows a mobile application interface with a teal header bar labeled "My First App". The status bar at the top indicates 16% battery and the time 14:14. The main content area is light gray and contains a text input field with the number "5" entered. Below the input field is a label "Enter a number" and an "ADD" button. At the bottom, there is a numeric keypad with buttons for digits 1-9, 0, a backspace button (labeled with a left arrow and 'x'), and a "Next" button.

My First App

5

Enter a number

ADD

1 2 3

4 5 6

7 8 9

⬅️ x 0 Next


## Step2

My First App

5

6

ADD

1	2	3
4	5	6
7	8	9
	0	Done

### Step3

16% 14:14

My First App

5

6

ADD

11



## Time schedule

21-03-2019: Checked out all the source videos and read about creating an android app.

22-03-2019: Installed SDK.

25-03-2019: Started programing the on java.

26-03-2019: There were problems with running the program in android studio so I searched up how to solve it.

27-03-2019: Fixed all the errors

28-03-2019: Started creating the second app. (Web Browser)

29-03-2019: Doing the final touches on the application and making the report.

## Conclusion

This project is about leaning to build an android app using java and android studio.

So the main goal in this project is creating and leaning about back end development.

## Sources

Learn java for Beginners <https://beginnersbook.com/java-tutorial-for-beginners-with-examples/>

Learn about android studio: <https://developer.android.com/guide>