



# Assignment 1

Mobile Computing

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Ahmed Alaa Ahmed

16p6071

## MainActivity.kt

I'm using Kotlin because I'm just really sick of Java. I've used it way too much past couple of years that I just don't want to ever use it again.

```
1 package com.example.currencyconverter
2
3 import android.content.Context
4 import android.os.Bundle
5 import android.view.View
6 import android.view.View.VISIBLE
7 import android.view.View.generateViewId
8 import android.view.inputmethod.InputMethodManager
9 import android.widget.Toast
10 import androidx.appcompat.app.AppCompatActivity
11 import androidx.appcompat.app.AppCompatActivityDelegate
12 import androidx.appcompat.app.AppCompatActivityDelegate.MODE_NIGHT_YES
13 import kotlinx.android.synthetic.main.activity_main.*
14
15
16 class MainActivity : AppCompatActivity() {
17     var fromValue: Float = 0.0f
18     var toValue = 0.0f
19
20     fun convertButtonPressed() {
21
22         if(fromSpinner.selectedItem == toSpinner.selectedItem) {
23             yoWtf( msg: "Please choose different currencies")
24             return
25         }
26
27         if(editTextAmount.text.isEmpty()) {
28             yoWtf( msg: "Please enter an amount to convert")
29             return
30         }
31
32         try {
33             fromValue = editTextAmount.text.toString().toFloat()
34         } catch (_: NumberFormatException) {
35             yoWtf( msg: "Please Enter A valid Number.")
36             return
37         }
38
39         resultTextView.visibility = VISIBLE
40     }
```

```

40
41     hideKeyboard(window.decorView.findViewById(android.R.id.content))//I have no idea why this
42     //works but it works on my phone so idk
43
44     if(fromSpinner.selectedItem.toString() == "EGP"
45         && toSpinner.selectedItem.toString() == "USD"
46     ) {
47         toValue = fromValue * 15.9f
48     } else if (fromSpinner.selectedItem.toString() == "USD"
49         && toSpinner.selectedItem.toString() == "EGP"
50     ) {
51         toValue = fromValue / 15.9f
52     } else {
53         yowtf( msg: "huh")
54     }
55
56     resultTextView.text = "%.2f".format(toValue)
57     toValue = 0.0f
58
59 }
60
61 private fun hideKeyboard(view: View) {
62     view?.apply { this: View
63         val imm = getSystemService(Context.INPUT_METHOD_SERVICE) as InputMethodManager
64         imm.hideSoftInputFromWindow(view.windowToken, flags: 0)
65     }
66 }
67
68 fun yowtf(msg: String) {
69     Toast.makeText(this.applicationContext, msg, Toast.LENGTH_SHORT).show()
70 }
71
72 override fun onCreate(savedInstanceState: Bundle?) {
73     super.onCreate(savedInstanceState)
74     AppCompatDelegate.setDefaultNightMode(MODE_NIGHT_YES) //because reasons.
75     setContentView(R.layout.activity_main)
76     TehButton.setOnClickListener {convertButtonPressed()}
77
78 }
79

```

## **activity\_main.xml**

I used guidelines instead of manually constraining everything because it's easier for me

```

1  <?xml version="1.0" encoding="utf-8"?>
2  <androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"
3      xmlns:app="http://schemas.android.com/apk/res-auto"
4      xmlns:tools="http://schemas.android.com/tools"
5      android:layout_width="match_parent"
6      android:layout_height="match_parent"
7      tools:context=".MainActivity">
8
9      <androidx.constraintlayout.widget.Guideline
10         android:id="@+id/guideline2"
11         android:layout_width="wrap_content"
12         android:layout_height="wrap_content"
13         android:orientation="horizontal"
14         app:layout_constraintGuide_percent="0.4" />
15
16     <androidx.constraintlayout.widget.Guideline
17         android:id="@+id/guideline4"
18         android:layout_width="wrap_content"
19         android:layout_height="wrap_content"
20         android:orientation="vertical"
21         app:layout_constraintGuide_percent="0.35" />
22
23     <Spinner
24         android:id="@+id/fromSpinner"
25         android:layout_width="150dp"
26         android:layout_height="wrap_content"
27         android:entries="@array/fromSpinnerCurrencies"
28         app:layout_constraintBottom_toTopOf="@+id/guideline5"
29         app:layout_constraintEnd_toEndOf="parent"
30         app:layout_constraintHorizontal_bias="0.515"
31         app:layout_constraintStart_toStartOf="@+id/guideline4"
32         app:layout_constraintTop_toTopOf="parent" />
33
34     <androidx.constraintlayout.widget.Guideline
35         android:id="@+id/guideline5"
36         android:layout_width="wrap_content"
37         android:layout_height="wrap_content"
38         android:orientation="horizontal"
39         app:layout_constraintGuide_percent="0.2" />
40
41     <Spinner

```

```
41 <Spinner
42     android:id="@+id/toSpinner"
43     android:layout_width="150dp"
44     android:layout_height="wrap_content"
45     android:entries="@array/toSpinnerCurrencies"
46     app:layout_constraintBottom_toTopOf="@+id/guideline2"
47     app:layout_constraintEnd_toEndOf="parent"
48     app:layout_constraintStart_toStartOf="@+id/guideline4"
49     app:layout_constraintTop_toTopOf="@+id/guideline5" />
50
51 <TextView
52     android:id="@+id/textView2"
53     android:layout_width="wrap_content"
54     android:layout_height="wrap_content"
55     android:text="@string/fromTextViewText"
56     android:textSize="20sp"
57
58     app:layout_constraintBottom_toTopOf="@+id/guideline5"
59     app:layout_constraintEnd_toStartOf="@+id/guideline4"
60     app:layout_constraintStart_toStartOf="parent"
61     app:layout_constraintTop_toTopOf="parent" />
62
63 <TextView
64     android:id="@+id/textView3"
65     android:layout_width="wrap_content"
66     android:layout_height="wrap_content"
67     android:text="@string/toTextViewText"
68     android:textSize="20sp"
69
70     app:layout_constraintBottom_toTopOf="@+id/guideline2"
71     app:layout_constraintEnd_toStartOf="@+id/guideline4"
72     app:layout_constraintStart_toStartOf="parent"
73     app:layout_constraintTop_toTopOf="@+id/guideline5" />
74
```



```

75 <EditText
76     android:id="@+id/editTextAmount"
77     android:layout_width="150dp"
78     android:layout_height="wrap_content"
79     android:ems="10"
80     android:hint="@string/editTextAmountHint"
81     android:inputType="number|numberDecimal"
82     app:layout_constraintBottom_toTopOf="@+id/guideline6"
83     app:layout_constraintEnd_toEndOf="parent"
84     app:layout_constraintStart_toStartOf="@+id/guideline4"
85     app:layout_constraintTop_toTopOf="@+id/guideline2" />
86
87 <androidx.constraintlayout.widget.Guideline
88     android:id="@+id/guideline6"
89     android:layout_width="wrap_content"
90     android:layout_height="wrap_content"
91     android:orientation="horizontal"
92     app:layout_constraintGuide_percent="0.6" />
93
94 <TextView
95     android:id="@+id/textView4"
96     android:layout_width="wrap_content"
97     android:layout_height="wrap_content"
98     android:foregroundTint="#8A1919"
99     android:shadowColor="#0090FF"
00     android:text="@string/valueTextViewText"
01     android:textColor="#FF0090FF"
02     android:textSize="24sp"
03     android:textStyle="bold"
04     app:layout_constraintBottom_toTopOf="@+id/guideline6"
05     app:layout_constraintEnd_toStartOf="@+id/guideline4"
06     app:layout_constraintStart_toStartOf="parent"
07     app:layout_constraintTop_toTopOf="@+id/guideline2" />
08
09 <androidx.constraintlayout.widget.Guideline
10     android:id="@+id/guideline7"
11     android:layout_width="wrap_content"
12     android:layout_height="wrap_content"
13     android:orientation="horizontal"
14     app:layout_constraintGuide_percent="0.75" />
15

```

```
116 <Button
117     android:id="@+id/TehButton"
118     android:layout_width="wrap_content"
119     android:layout_height="wrap_content"
120     android:backgroundTint="#FF7700"
121     android:text="@string/convertButtonText"
122     android:textColor="#FFFFFF"
123     app:layout_constraintBottom_toTopOf="@+id/guideline7"
124     app:layout_constraintEnd_toEndOf="parent"
125     app:layout_constraintStart_toStartOf="parent"
126     app:layout_constraintTop_toTopOf="@+id/guideline6" />
127
128 <TextView
129     android:id="@+id/resultTextView"
130     android:layout_width="wrap_content"
131     android:layout_height="wrap_content"
132     android:textSize="36sp"
133     app:layout_constraintBottom_toBottomOf="parent"
134     app:layout_constraintEnd_toEndOf="parent"
135     app:layout_constraintStart_toStartOf="parent"
136     app:layout_constraintTop_toTopOf="@+id/guideline7" />
137
138 </androidx.constraintlayout.widget.ConstraintLayout>
```

APK:<https://drive.google.com/file/d/1gm-cEM8UmzANJNTMFF913BSxKchjElyU/view?usp=sharing>