Assignment 1

Mobile Computing

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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.

```kotlin
package com.example.currencyconverter

import android.content.Context
import android.os.Bundle
import android.view.View
import android.view.View.VISIBLE
import android.view.View.generateViewId
import android.view.inputmethod.InputMethodManager
import android.widget.Toast
import androidx.appcompat.app.AppCompatActivity
import androidx.appcompat.app.AppCompatDelegate
import androidx.appcompat.app.AppCompatDelegate.MODE_NIGHT_YES
import kotlinx.android.synthetic.main.activity_main.*


class MainActivity : AppCompatActivity() {
    var fromValue: Float = 0.0f
    var toValue = 0.0f

    fun convertButtonPressed() {

        if(fromSpinner.selectedItem == toSpinner.selectedItem) {
            yoWtf( msg: "Please choose different currencies")
            return
        }

        if(editTextAmount.text.isEmpty()) {
            yoWtf( msg: "Please enter an amount to convert")
            return
        }

        try {
            fromValue = editTextAmount.text.toString().toFloat()
        } catch (_: NumberFormatException) {
            yoWtf( msg: "Please Enter A valid Number.")
            return
        }

        resultTextView.visibility = VISIBLE
```

```kotlin
            hideKeyboard(window.decorView.findViewById(android.R.id.content))//I have no idea why this
            //works but it works on my phone so idk

            if(fromSpinner.selectedItem.toString() == "EGP"
                && toSpinner.selectedItem.toString() == "USD"
            ) {
                toValue = fromValue * 15.9f
            } else if (fromSpinner.selectedItem.toString() == "USD"
                && toSpinner.selectedItem.toString() == "EGP"
            ) {
                toValue = fromValue / 15.9f
            } else {
                yoWtf( msg: "huh")
            }

            resultTextView.text = "%.2f".format(toValue)
            toValue = 0.0f

        }

    private fun hideKeyboard(view: View) {
        view?.apply { this: View
            val imm = getSystemService(Context.INPUT_METHOD_SERVICE) as InputMethodManager
            imm.hideSoftInputFromWindow(view.windowToken,  flags: 0)
        }
    }
    fun yoWtf(msg: String) {
        Toast.makeText(this.applicationContext, msg, Toast.LENGTH_SHORT).show()
    }

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        AppCompatDelegate.setDefaultNightMode(MODE_NIGHT_YES) //because reasons.
        setContentView(R.layout.activity_main)
        TehButton.setOnClickListener {convertButtonPressed()}
    }

}
```

activity_main.xml

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

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.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">

    <androidx.constraintlayout.widget.Guideline
        android:id="@+id/guideline2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        app:layout_constraintGuide_percent="0.4" />

    <androidx.constraintlayout.widget.Guideline
        android:id="@+id/guideline4"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:orientation="vertical"
        app:layout_constraintGuide_percent="0.35" />

    <Spinner
        android:id="@+id/fromSpinner"
        android:layout_width="150dp"
        android:layout_height="wrap_content"
        android:entries="@array/fromSpinnerCurrencies"
        app:layout_constraintBottom_toTopOf="@+id/guideline5"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.515"
        app:layout_constraintStart_toStartOf="@+id/guideline4"
        app:layout_constraintTop_toTopOf="parent" />

    <androidx.constraintlayout.widget.Guideline
        android:id="@+id/guideline5"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        app:layout_constraintGuide_percent="0.2" />

    <Spinner
```

```xml
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
```

```xml
    <EditText
        android:id="@+id/editTextAmount"
        android:layout_width="150dp"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="@string/editTextAmountHint"
        android:inputType="number|numberDecimal"
        app:layout_constraintBottom_toTopOf="@+id/guideline6"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="@+id/guideline4"
        app:layout_constraintTop_toTopOf="@+id/guideline2" />

    <androidx.constraintlayout.widget.Guideline
        android:id="@+id/guideline6"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        app:layout_constraintGuide_percent="0.6" />

    <TextView
        android:id="@+id/textView4"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:foregroundTint="#BA1919"
        android:shadowColor="#0090FF"
        android:text="@string/valueTextViewText"
        android:textColor="#FF0090FF"
        android:textSize="24sp"
        android:textStyle="bold"
        app:layout_constraintBottom_toTopOf="@+id/guideline6"
        app:layout_constraintEnd_toStartOf="@+id/guideline4"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="@+id/guideline2" />

    <androidx.constraintlayout.widget.Guideline
        android:id="@+id/guideline7"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        app:layout_constraintGuide_percent="0.75" />
```

```xml
<Button
    android:id="@+id/TehButton"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:backgroundTint="#FF7700"
    android:text="@string/convertButtonText"
    android:textColor="#FFFFFFFF"
    app:layout_constraintBottom_toTopOf="@+id/guideline7"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="@+id/guideline6" />

<TextView
    android:id="@+id/resultTextView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:textSize="36sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="@+id/guideline7" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

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