Software Development for Mobile Devices

Submission for Assignment A3.2P

Task 2: String and localisation

Localization mechanism

In Android development, developers are able to change text, images, audio files, currency based on device's language supporting by this Android device. Developers create multiple resource files to support other languages in /res directory. When the app is starting, Android chooses the most appropriate resource which closes to the language and region of the device to load (Localize your app 2018). For instance, let say developers want to support English and Vietnamese so that when the device is set to Vietnamese, it will automatically update. First, developers select New >> Resource File >> Locale >> Language >> Vietnamese >> Region >> Vietnam.
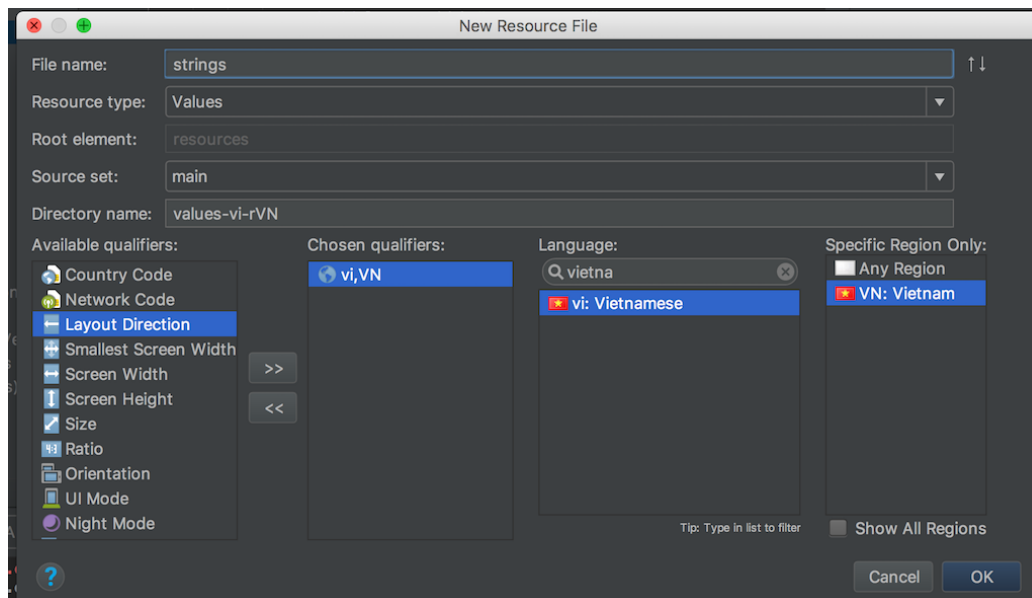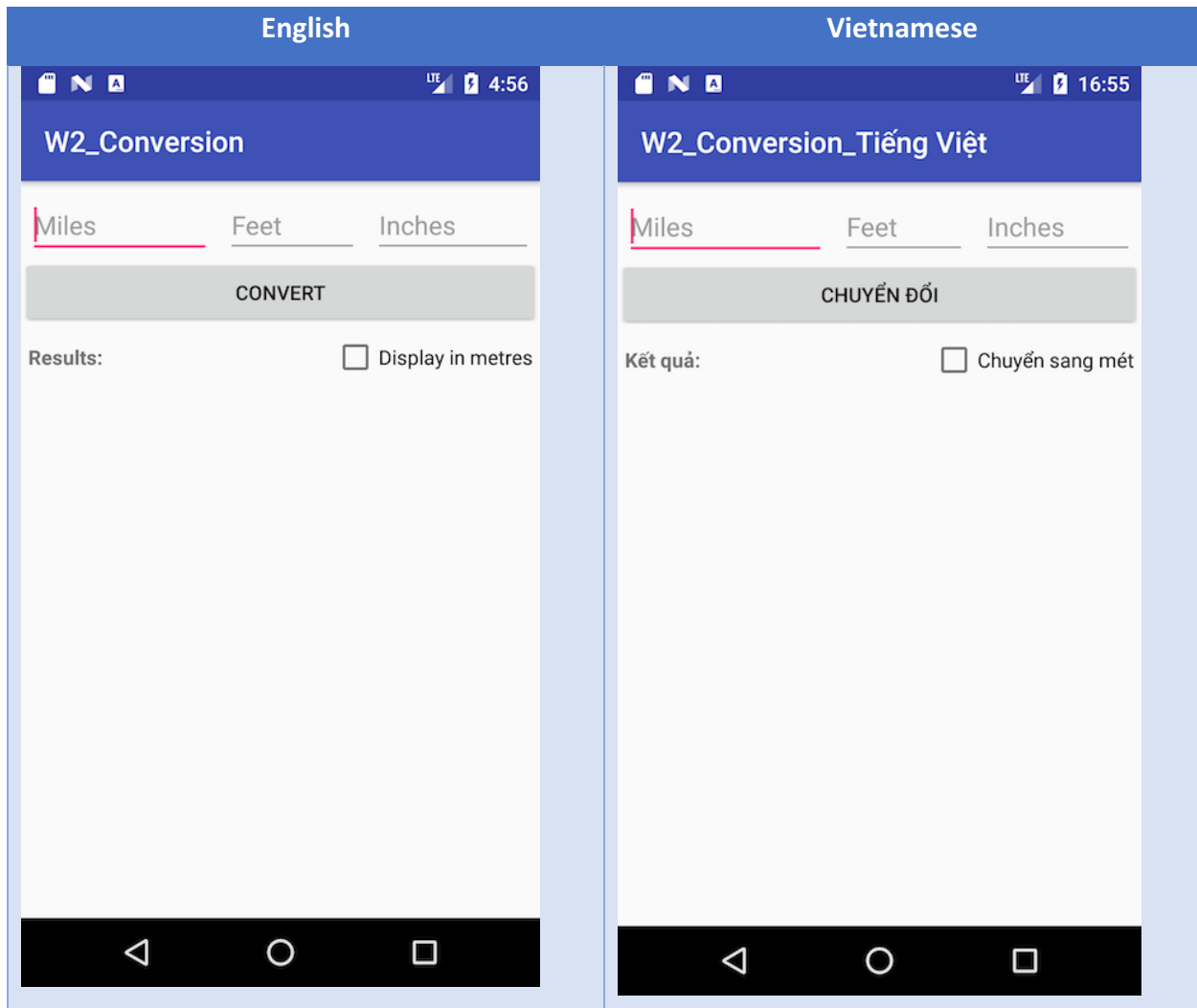

Figure 1: Localize text in Vietnamese

Second translate all of value in /res/strings.xml (vi-rVN) to Vietnamese. Eventually, text which use exactly the same key in the strings.xml will eventually change to Vietnamese if the user change to Vietnamese in Setting >> Languages and Regions.

App screen shot

English	Vietnamese

strings.xml

```xml
<resources>
    <string name="app_name">W2_Conversion</string>
    <string name="btn_convert">Convert</string>
    <string name="checkbox_metres">Display in metres</string>
    <string name="metres">metres</string>
    <string name="result">Results:</string>
</resources>
```

string.xml (vi-rVN)

```xml
<?xml version="1.0" encoding="utf-8"?>
<resources>
```

```xml
        <string name="app_name">W2_Conversion_Tiếng Việt</string>
        <string name="btn_convert">Chuyển đổi</string>
        <string name="checkbox_metres">Chuyển sang mét</string>
        <string name="metres">mét</string>
        <string name="result">Kết quả:</string>
</resources>
```

activity_main.xml

```xml
<?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="com.example.swinburne.w2_conversion.MainActivity">

    <TableLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_marginTop="8dp">
        <TableRow >

            <EditText
                android:id="@+id/edtMiles"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:layout_marginEnd="5dp"
                android:layout_marginStart="5dp"
                android:layout_weight="1"
                android:hint="Miles"
                android:inputType="numberDecimal" />

            <EditText
                android:id="@+id/edtFeet"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:hint="Feet"
                android:inputType="numberDecimal"
                android:layout_marginStart="5dp"
                android:layout_marginEnd="5dp"
                android:layout_weight="1"
                />

            <EditText
                android:id="@+id/edtInches"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:hint="Inches"
                android:inputType="numberDecimal"
                android:layout_marginStart="5dp"
                android:layout_marginEnd="5dp"
                android:layout_weight="1">
            </EditText>

        </TableRow>

        <TableRow>
            <Button
                android:id="@+id/btnConvert"
                android:layout_width="wrap_content"
```

```xml
                    android:layout_height="wrap_content"
                    android:text="@string/btn_convert"
                    android:layout_weight="1"
                    />
            </TableRow>

            <LinearLayout
                android:layout_marginTop="5dp"
                >
                <TextView
                    android:layout_width="wrap_content"
                    android:layout_height="wrap_content"
                    android:layout_marginStart="5dp"
                    android:text="@string/result"
                    android:textStyle="bold" />
                <TextView
                    android:id="@+id/txtViewResult"
                    android:layout_width="wrap_content"
                    android:layout_height="wrap_content"
                    android:layout_marginStart="5dp"
                    android:text=""
                    android:textStyle="bold"
                    android:layout_weight="1"/>

                <CheckBox
                    android:id="@+id/chkboxDisplayMetres"
                    android:layout_width="wrap_content"
                    android:layout_height="wrap_content"
                    android:layout_marginEnd="5dp"
                    android:text="@string/checkbox_metres"/>
            </LinearLayout>

        </TableLayout>

</android.support.constraint.ConstraintLayout>
```

References

Localize your app, viewed 15 August 2018,

<https://developer.android.com/guide/topics/resources/localization>.