Faculty of Engineering & Applied Science

Mobile Application Development Assignment #1

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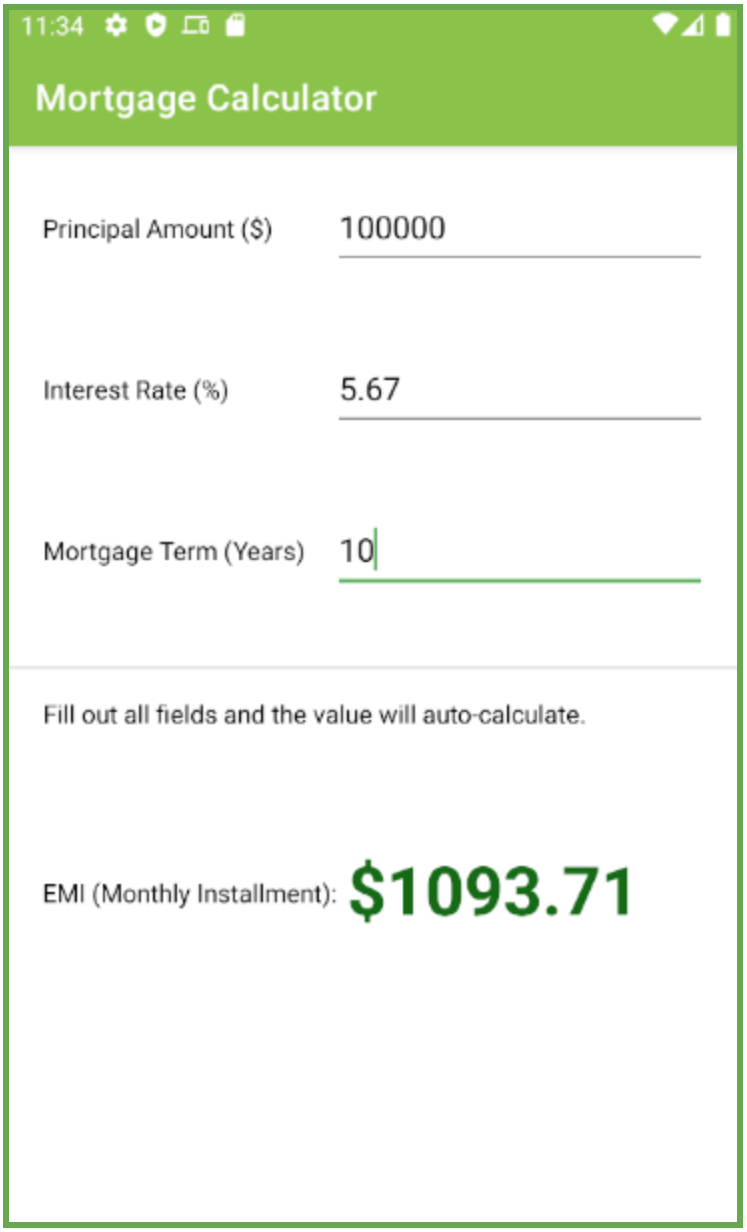

For this assignment, I decided to take a basic, one-page layout for the EMI calculator, with the added functionality of having the EMI auto-calculate when the user changes the numbers. The application only consists of a few key files which I will break down below.

AndroidManifest.xml
This is the manifest file which contains a lot of basic info the application needs to run such as where to find the icon, and what theme to use.

MainActivity.java
This is the java file I used to connect all my on-screen elements together. The structure of this file is quite simple and easy to follow. I have all my imports at the top, and then at the top of my main class I have myupdate() function which is used to update the EMI amount after any EditText is changed. The algorithm for this function is very easy to understand. It first pulls the data from each EditText, and then checks to see if any of them are empty. If any are empty, it does nothing. Eventually, when all EditText boxes are filled, the function will then convert the strings into doubles and run the simple calculation for EMI, and update the TextView on screen to display the value.
The next portion of this file is where all my declarations are located for my variable. After this, we have the final and one of the most important parts of this file; the onCreate() function which has 3 TextWatchers inside to watch for the change of the EditText boxes. If these are changed, then the update() function will be called and the value will be updated.

activity_main.xml
This is the main layout file for this application and includes all the creations of the on-screen elements and views, as well as their attributes. In here you will find an array of EditText boxes, TextViews, and even a horizontal divider! I adhered to design practices such as using the theme.xml file for all my colors and using the strings.xml file for all my strings, to avoid any hard-coded values.

strings.xml/colors.xml/themes.xml
These xml files were used to create a consistent UI that had little to no hard-coding to allow for future changes and evolution.