Part 2

For this assignment you are to implement a class in Java. You must document the classes using Javadoc and turn in the source files, in the appropriate folder structure, as a zip file. You will be evaluated based upon correctness (adhering to the problem description, passing test cases), object-oriented design (e.g. appropriate usage of inheritance, member access control, etc.), and source code documentation (via Javadoc).

1 Assignment Overview

This assignment is the second building block to your final project and involves implementing a simple GUI. This GUI, with small changes, will serve you well for your ClassificationGUI class.

2 Your Task

You must implement a single class (MainGUI) that allows the user to match options from two lists: (i) trigonometric functions and (ii) angle values. The options in the first list should be sin, cos, and tan. The options in the second list should be 0 degrees, 30 degrees, 45 degrees, 60 degrees, and 90 degrees. The user then clicks a button to see a well-formatted answer (meaning either 0, 1, 1/2, 1 / sqrt(2), sqrt(3) / 2, 1 / sqrt(3), sqrt(3), or Not defined). See an example run below:

In addition to adhering to these requirements, you are going to be evaluated on your object-oriented design. Thus, here is a recommended program structure:

- Your combo boxes should be populated with objects, one set designed for trigonometric functions, the other for angular values.

- Upon clicking the run button, you should identify the selected objects, apply the function to the angle input, and then have a strategy in place for producing the well-formatted response.