Tidewater Community College

Project 1

Triangle – Circle Geometry

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EGR 125: Intro to Engineering Methods

Professor Simmons

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Program Performance

This project performs well and accomplishes the goals provided. It makes use of looping structures to repeat tasks, such as prompting for valid input during menu options or for restarting the program. Classes were also implemented, although not part of the requirements. The project could have been simplified by directly integrating the class functionality into the main function; however, it may have been less readable. In its current state, this program is limited by it only offering to solve a triangle given three sides, rather than any combination of sides and/or angles.

Extra Credit Features

Each of the four extra credit features are included within this project. Input validation is achieved through do-while loops, requiring integer input, and by using switch structures. Upon an unknown input, the default case is called, causing it to loop again and prompt for new input. At the start of the program, a labeled triangle is displayed to console, which may clarify the required input to the user. As soon as the user inputs data, a menu appears which prompts the user if they wish to select from certain unit measurements of the triangle. The user also has the option of toggling between radians and degrees via the main menu. There are two additional features implemented within this program, a menu option to restart the program and a menu option to terminate the program.

Potential Improvements

An improvement that would be beneficial is the use of delayed output or a timer. Upon selection of a main menu option, information about the triangle is output to console, immediately followed by the main menu options again. To improve user experience, it would be beneficial to improve output readability by adding a delay to the output or by pausing until input is received again.