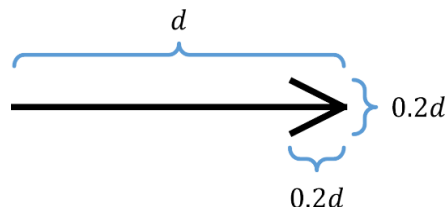# Program 1

Due 9am, Monday, September 27, 2021

Your GitLab repository[1] now contains a folder called `Program-1`, in which I have placed the code for a simple analog clock. All of the hands are currently pointing to 12 (see the figure below, left). Students enrolled in CSCE 4255, your task is to modify a single line of code, line 126 of `Game.cpp`, function `CGame::GetHandEnd`, to get the position of the end of a hand. Once you have done this, the hands will be drawn in their correct positions (see below, center). Students enrolled in CSCE 5255, your task is to also modify this line of code and, in addition, to add code to `CGame::RenderArrowhead` to draw arrowheads at the end of the minute and hour hands (see below, right).

The arrowheads have length (measured along the hand) 20% of the length of the hand, and height (measured orthogonally to the hand) 20% of the length of the hand (see the figure below). Note that the arrowheads must move and rotate with their respective hands.

Once you have completed the task, commit and push your `Program-1` folder before the deadline at the top of this page. The finished program must compile and run without crashing, and your source code must be correct, compact, logical, and legibly commented to receive full credit.

Please Note: Do not make any other changes to any of the files to make your program work. If you have followed my instructions regarding installation of software and setting the corresponding environment variables, then the original code for Program 1 should compile and run the first time.

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[1] If you are in CSCE x255 and your last name is Smith, you can clone your repository from cmd by typing
`git clone git@csegitlab.engineering.unt.edu:ian/cscex255-smith.git`.