Homework 2

Complete, to run on CSCI2, the following Programming Challenges from Gaddis:

- 3.17
- 3.19
  - Use the formula `atan(1.0)*4.0` to compute the value of Pi.
- 3.20
  - Have the user enter the angle in units of degrees, then convert to radians.

At least one day prior to submitting your source file and output for each problem to the D2L dropbox, you will submit a flowchart for that problem to the D2L dropbox.

Each Programming Challenge problem will be solved on CSCI2 by its own pair of {source file and executable}.

Each source file will include the following comments:

- Your Name
- "CSCI 201"
- Your section number
- The current semester
- "Homework 2"
- The name of the program and the Programming Challenge number it is solving
- The full pathname on CSCI2 for the executable file.
- A brief description of the purpose of the program

Each source file will:

- Have descriptive identifiers
- Use both vertical and horizontal white space consistently to enhance readability.
- Use internal comments to describe what your code is doing and why.
- Echo (descriptively) the user's input values. (E.g. "`You entered 15 degrees`")

Testing: test with several input values. Validate your program by repeating the calculations for the input values on a scientific calculator.

Use the UNIX `script` command to generate an output file (.txt) consisting of several runs of your executable with different test (input) data.

Save your finished flowchart to a directory for this class (you created in your HuskyNet file space) as a Visio drawing file (*.vsd) and also save as a PDF file for submission to the appropriate D2L Dropbox.