CS 170

Fall 2018

Assignment #2

Due: Thursday, September 13th, 2018 promptly at the beginning of class

You are to develop an algorithm which will calculate the circumference and area of a circle. The user will provide the radius of the circle. Create a structure chart for your solution. Next write out your algorithm in pseudocode or outline form (English like statements). Then create a C++ source document with a heading of comments listing your name, the date, file name, an explanation of the program and each pseudocode statement as a comment. In a windows folder named CS170-circle-yourlogin submit a word document with your structure chart and pseudocode and a cpp source program which contains nothing but documentation (comments). Submit the folder to the instructor’s H drive by copying the folder and then pasting it to the sand folder on the H drive. Be sure to left click the sand folder, then right click the folder and choose paste.

Calculate Circumference and area of Circle.

Preliminary description:

Write a program for users to calculate the circumference and area of a circle.

Questions:

Do we need the radius? YES

Who provides the radius? The User

Do we need to input diameter? NO

Do we need formulas to calculate the circumference and radius? YES

What is the formula for calculating circumference? C = 2πr  
What is the formula for calculating area? A = πr2

What represents Radius? R

What represents circumference? C

What represents area? A

Screen dialog:

What is the radius: 5

Circumference= 31.42

Area = 78.54

Pseudocode solution:

1. Welcome user
2. Get the radius of Circle
3. Option to choose between calculating circumference or Area
4. Calculate the Circumference using radius
5. Calculate the Area using radius
6. Display value of Circumference
7. Display value of Area