CSC262 - Week1 Assignment

Due on: Tuesday April 16, 2019

Chapter 1: (10 points)

Q1: A) What is a **Portable** program? B) Describe how Java supports portability.

Chapter 2: (20 points)

Q2: Write a Java program that asks the user to enter an integer number from the keyboard and displays it. Then, on a new line, if the number is negative, displays "The number is negative", if the number is zero displays "The number is zero" and if the number is positive, displays "The number is positive".

Q3: Answer exercise 2.25 of the textbook as shown below:

2.25 *(Odd or Even)* Write an application that reads an integer and determines and prints whether it's odd or even. [*Hint:* Use the remainder operator. An even number is a multiple of 2. Any multiple of 2 leaves a remainder of 0 when divided by 2.]

Chapter 3: (20 points)

Q4: Answer exercises 3.5 of the textbook as shown below:

Exercises

3.5 *(Keyword* **new***)* What's the purpose of keyword `new`? Explain what happens when you use it.

Q5: Answer exercise 3.13 of the textbook as shown below:

3.13 *(`Employee` Class)* Create a class called `Employee` that includes three instance variables—a first name (type `String`), a last name (type `String`) and a monthly salary (`double`). Provide a constructor that initializes the three instance variables. Provide a *set* and a *get* method for each instance variable. If the monthly salary is not positive, do not set its value. Write a test app named `EmployeeTest` that demonstrates class `Employee`'s capabilities. Create two `Employee` objects and display each object's *yearly* salary. Then give each `Employee` a 10% raise and display each `Employee`'s yearly salary again.

Chapter 4: (10 points)

Q6: Answer exercise 4.21 of the textbook as shown below: (Submitting pseudocode is optional)

4.21 *(Find the Largest Number)* The process of finding the largest value is used frequently in computer applications. For example, a program that determines the winner of a sales contest would input the number of units sold by each salesperson. The salesperson who sells the most units wins the contest. Write a pseudocode program, then a Java application that inputs a series of 10 integers and determines and prints the largest integer. Your program should use at least the following three variables:

a) `counter`: A counter to count to 10 (i.e., to keep track of how many numbers have been input and to determine when all 10 numbers have been processed).
b) `number`: The integer most recently input by the user.
c) `largest`: The largest number found so far.

Chapter 5: (20 points)

Q7: Answer exercise 5.11 of the textbook as shown below:

5.11 *(Find the Smallest Value)* Write an application that finds the smallest of several integers. Assume that the first value read specifies the number of values to input from the user.

Q8: A- Use a switch statement to replace the following if-else structure.

B- Include your code in the main method and prompt the user to enter a character value for the qCode and run your switch statement.

C- Complete your code such that it successfully runs.

```
char qCode;
if(qCode == 'A' || qCode == 'a')
{
    System.out.println("High Quality");
}
else if(qCode == 'B' || qCode == 'b')
{
    System.out.println("Medium Quality");
}
else if(qCode == 'C' || qCode == 'c')
{
    System.out.println("Low Quality");
}
else
{
    System.out.println("Error: Unknown Code");
}
```