CSC 116 – 002 In-class Exercise #3

Name: ____________________________  Unity ID: ____________  Lab: ____________

1. What is the difference between a while loop and a do-while loop?

   A while loop checks the Boolean expression before executing the loop body. The do-while loop will execute the loop at least once before checking the condition.

2. Write a for loop that calculates 7!. Remember that x! = (x)(x – 1)(x – 2) … (2)(1)

   ```java
   int factorial = 1; //needs to be 1 otherwise multiply by 0
   for(int i = 1; i <= 7; i++) {
       factorial *= i;
   }
   
   int factorial = 1;
   for(int i = 7; i >= 1; i--) {
       factorial *= i;
   }
   
   Extra Credit: What is 7!?  5040```