**CSC110AB**

**Ch 5 Activity 2 : Looping/Iterations Worksheet (10 pts)**

Names:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Work on answering these questions using pencil. Then you can code and check your answers.

Please indicate the output that will be produced. Assume the following declarations are made just before each exercise.

const int MIN = 10;

const int MAX = 20;

int num = 15;

|  |  |
| --- | --- |
| #1.  while (num < MAX)  {  System.out.println( num );  num++;  }  15  16  17  18  19 | #2  do  {  System.out.println( num );  num++;  } while (num < MAX);  15  16  17  18  19 |
| #3.  do  {  num++;  System.out.println( num );  } while (num < MAX);  16  17  18  19  20 | #4.  for (int value = 1; value < MAX; value +=4)  {  System.out.println( value );  }  1  5  9  13  17 |

What is displayed (or what happens) in the following examples? Some common logic errors that we all make, but these code snippets compile! These can be tricky.

int count;

|  |  |
| --- | --- |
| #5.  count = 10;  while (count <= 10)  {  System.out.println( count);  }  It prints “10” forever  They probably wanted count to be incremented, but forgot.  #7.  int counter;  for (counter = 0; counter < 1000; counter++);  System.out.println( counter);  Brackets were forgotten, so all it prints “1000” | #6.  count = 1;  while (count <= 5);  {  System.out.println( count++ );  }  It will print 2 forever  #9.  count = 10;  while (count <= 5)  {  System.out.println( count++ );  }  Nothing will happen, because count is initially greater than 5 |
| #9.  count = 5;  while (count <= 10)  {  count++;  System.out.println( count);  }  It won’t start with printing 5, it will start the count with 6 | #10.  count = 3;  while (count <= 5)  System.out.println( count );  count++;  Brackets were forgotten, it will just print 3 forever |
| **Answer the Following Question:** | |
| #11. Write a **nested for loop** that generates the following:  1  22  333  4444  for (int i = 1; i <= 4; i++) {  for(int count = 0; count<i; count++) {  System.out.print(i);  }  System.out.println("");  } | |
| #12. What is displayed?  int num1 = 1;  int num2 = 1;  int sum = 1;  System.out.println( num1 );  for (int count = 1; count <= 9; count += 1)  {  System.out.println( sum );  sum = num1 + num2;  num1 = num2;  num2 = sum;  } //end for  The Fibonacci sequence up to 55 | |