

**Computer Science or Information Technology**

Instructor: **Dawei Li, Ph.D.**

Day, Month, Year

Day

CSIT 501

Department of CSIT

Assessment

Module-6

Hidalgo, Rafael

Exercise 6.1

How many iterations will the following for loops execute?

a. for (int i = 0; i < 20; i++) { }

This will repeat 20 times.

b. for (int i = 1; i <= 20; i++) { }

This will repeat 20 times.

c. for (int i = 5; i < 20; i++) { }

This will repeat 15 times.

d. for (int i = 20; i > 0; i--) { }

This will repeat 20 times.

e. for (int i = 1; i < 20; i = i + 2) { }

This will repeat 10 times.

f. for (int i = 1; i < 20; i \*= 2) { }

This will repeat 5 times.

Exercise 6.2,

What output is produced by the following code fragment?

for (int highest = 1000; highest > 100; highest = highest / 2)

System.out.println(highest)

The code will print out the following.

1000

500

250

125

Exercise 6.3,

What output is produced by the following code fragment?

for (int count = 1; count <= 100; count += 4)

if (count %3 == 0)

System.out.println(count);

The output is the following.

9

21

33

45

57

69

81

93

Exercise 6.4,

Transform the following while loop into an equivalent do loop (make sure it produces the same output).

int num = 1;

while (num < 20)

{

num++;

System.out.println(num);

}

Please see below for do while version of the code above.

**int** num = 1;

**do** {

num++;

System.***out***.println(num);

} **while** (num < 20);

Exercise 6.6,

Write a do loop that verifies that the user entered value is a multiple of 3.

Please see the code below for the response to this question.

**import** java.util.Scanner;

**public** **class** TestCode {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

**int** value;

Scanner scan = **new** Scanner(System.***in***);

**do** {

System.***out***.print("Please enter an integer that is a multiple a three: ");

value = scan.nextInt();

} **while** ((value % 3) != 0);

System.***out***.print("The number " + value + " is indeed a multiple of three");

}

}

Exercise 6.9,

Write a code fragment that reads 15 floating point values from the user and prints the lowest and the highest value entered.

Please see code below.

**package** module\_6\_HW;

**import** java.util.Scanner;

**public** **class** MaxMin {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

**float** value;

**float** max;

**float** min;

**int** i = 1;

Scanner scan = **new** Scanner(System.***in***);

System.***out***.println("Please enter 15 floating point values ");

System.***out***.println();

System.***out***.println("Please enter floting point value number " + i + ":");

value = scan.nextFloat();

max = value;

min = value;

i++;

**for** (; i <= 15; i++) {

System.***out***.println("Please enter floating point value number " + i + ":");

value = scan.nextFloat();

**if** (value >= max) {

max = value;

}

**if** (value <= min) {

min = value;

}

}

System.***out***.println("The smallest number you have inputted is: " + min);

System.***out***.println();

System.***out***.print("The largest number you have inputted is: " + max);

}

}

Exercise 6.10,

Write a code fragment that determines whether the last character of the String object called text is character ‘n’ or not.

Please see code below

**import** java.util.Scanner;

**public** **class** LastN {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

String text;

Scanner scan = **new** Scanner(System.***in***);

System.***out***.print("Enter a string: ");

text = scan.nextLine();

**if** (text.charAt(text.length() - 1) == 'n')

{

System.***out***.println("This string ends with n");

}

**else**

{

System.***out***.println("This string does not end in n ");

}

}

}

Exercise 6.13,

Write a method called multiplesOfFive that prints the first 5 multiples of 5 (starting with 5). The method takes no parameters and doesn’t return anything.

**public** **static** **void** multiplesOfFive() {

**int** multnum = 0;

**int** i;

**for** (i = 5; i <= (5 \* 5); i += 5) {

multnum++;

System.***out***.println("Multiple number " + multnum + " of five is: " + i);

}

}

Exercise 6.18

Write a method called reverse that accepts a String parameter and returns a string that contains the characters of the parameter in reverse order. Note that there is a method in the String class that performs this operation, but for the sake of this exercise, you are expected to write your own.

**public** **static** String reverse(String str) {

String revstring = "";

**int** i;

**for** (i = (str.length() - 1); i >= 0; i--)

{

revstring = revstring + (str.charAt(i));

}

**return** revstring;

}