WIX1002 Fundamentals of Programming Tutorial 4 Flow of Control (Repetition)

1. Write statements for each of the following
   1. Find the largest integer n so that n3 is less than 2000.

int n = 1;

while ((n\*n\*n) < 2000)

n++;

System.out.print(“Largest integer n is: ” + (n-1));

* 1. Display the square number of the first twelve integers starting from 1.

for (int num = 1; num < 13; num++)

System.out.println(“Square number of num is: ” + Math.pow(num,2));

* 1. Display a 4-by-5 matrix using random number within 0 to 100.

Random sc = new Random();

for (int row = 1; row < 5; row++){

for (int col = 1; col < 6; col++)

System.out.print(sc.nextRandom(101) + “ ”);

System.out.println(“ ”);}

* 1. Compute the sum of numbers from 1 to a given number.

Scanner sc = new Scanner (System.in);

int gnum = sc.nextInt(), sum = 0;

for (int i = 1; i <= gnum; i++)

sum += I;

* 1. Compute the sum of the series: 1/25+2/24+3/23 … + 25/1 in two decimal places.

double sum = 0;

for (int i = 1; i <= 25; i++){

sum += (i/(26-i)); }

System.out.print(“Sum of the series is: ” + String.format(“%.2f”.sum);

1. Correct the error for the following statements. a.

for (x = 10; x > 0; x++) sum += x;

for (int x = 10; x > 0; x--)

sum += x;

b.

do

x += 2;

y += x;

System.out.println(x + " and " + y); while (x < 100)

int x = 0, y = 0;

do{

x += 2;

y += 2;

System.out.println(x + “and” + y); }

while (x < 100)

c.

for ( x==1, y==20; x < y, x++, y-=2); System.out.println(x & " " & y);

for(x = 1, y = 1; x < y, x++, y -=2)

System.out.println(x + “ ” + y);

d.

i =1;

while(i<10) { if (i==10)

System.out.println("Program End");

}

int i = 1;

while (I < 10){

if (i == 10)

System.out.rpintln(“Program End”);

i++;

}

1. Write the statements that display the first ten values of the Fibonacci sequence. Given the formula f1 = 1, f2 =1, fn = fn-1 + fn-2.

int[] num = new num[9];

num[0] = 1; num[1] = 1;

System.out.println(num[0]); System.out.println(num[1]);

for (int n = 2; n < 9; n++){

num[n] = num[n-1] + num[n-2];

System.out.println(num[n]);

}

1. Write the statements that display the string in reverse order. (use String.length() to get the length of the string)

String initial, rev = "";

System.out.println("Enter the string to reverse: ");

initial = in.nextLine();

int length = initial.length();

for (int i = length – 1; i >= 0; i--)

rev = rev + initial.charAt(i);

System.out.println("Reversed string: " + rev);