Assignment 3

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**Question 1**

At point A, count < 100 will always be true. At point B, count < 100 is mostly true, except for the last time the code is executed, at which point the while condition is met, when count = 100, and the loop is broken. At point C, count < 100 is always false, because that point in the code is only reached after the loop.

**Question 2**

package project;

import java.util.Scanner;

public class test {

public static void main(String[] args) {

int count = 1;

int sum = 0;

while(count<=50)

{

sum = count + sum;

System.out.println("Count = "+count+" | Sum = "+sum);

count+=2;

}

}

}

**Question3**

package project;

import java.util.Scanner;

public class testTwo {

public static void main(String[] args) {

Scanner enter = new Scanner(System.in);

System.out.print("Input a value for N: ");

int N = enter.nextInt();

enter.close();

int count = 1;

int sum = 0;

while(count<N)

{

sum = count + sum;

System.out.println("Count = "+count+" | Sum = "+sum);

count+=2;

}

}

}

**Question 4**

package project;

import java.util.Scanner;

public class forChange {

public static void main(String[] args) {

Scanner enter = new Scanner(System.in);

double min=0;

double max=0;

double input;

do {

System.out.println("Input a number: ");

input = enter.nextDouble();

if(max == 0 && min == 0){

max = input;

min = input;

}

if(input>max && input != 0){

max=input;

}

if(input<min && input != 0){

min=input;

}

}

while (input != 0);

enter.close();

System.out.println("Max value of all input numbers is: " + max);

System.out.println("Min value of all input numbers is: "+ min);

}

}

**Question 5**

package project;

import java.util.Scanner;

public class forChange {

public static void main(String[] args) {

Scanner enter = new Scanner(System.in);

System.out.print("Input a double for Principal: ");

double P = enter.nextDouble();

System.out.print("Input the number of years: ");

int N = enter.nextInt();

System.out.print("Input the rate of return as a percentage: ");

double R = enter.nextDouble();

enter.close();

double sum = P;

double count = 1;

while(count <= N) {

System.out.println("At the beginning of year "+count+" the sum is: " + sum);

double earned = (sum \* ((R/100)+1))-sum;

sum = sum \* ((R/100)+1);

System.out.println("Interest earned this year: " + earned);

System.out.println("At the end of year "+count+" the sum is: " + sum);

count ++;

}

}

}

**Question 6**

package project;

public class forChange {

public static void main(String[] args) {

int I = 1;

int J = 1;

int result;

while (I<=5){

while(J<=5){

result = I\*J;

System.out.println(I + " x " + J + " = "+result);

J++;

}

J=1;

I++;

}

}

}

**Question 7**

package project;

public class forChange {

public static void main(String[] args) {

int N = 0;

int min = 12000;

while ((N\*N)<=min){

System.out.println("N: "+N + " | Nsq: " + (N\*N));

N++;

}

System.out.println("N must be a minimum of "+N+" to have a squared value greater than 12000");

}

}