**\_\_\_\_\_**

**Trace and** Find the errors in the following programs:

1. **public static void main( String args[] )  
    {   
    int n;   
    int N : three;   
    int sum-**1**;   
    n =** 10.5**;   
    sum = n + N:   
    System.out.println(**" Sum is "**+ sum);   
    }**
2. **public static void main( String args[] )  
    {   
    char c;   
    int N = 2, t**.4**;   
    n =** 3**;   
    c =** 'c' **+** 1**;**

**System.out.println(c);  
 N = ( (int)c +** 98 **);**

**System.out.println(N);  
 N+**3 **= n ;   
}**

**Given the following declarations :**

char c1 = 'a'; char c2 = 'x';

String s1 = "Saudi-Arabia" , s2 = "arab";

int n = 5;

**What is the output of the following?**

|  |  |
| --- | --- |
| 1. System.out.println(s1.charAt(n)); |  |
| 1. System.out.println(s1.replace( c1 , c2 )); |  |
| 1. System.out.println(s2.concat("ic" + s1)); |  |
| 1. System.out.println(s1.charAt(8)==s2.charAt(0)); |  |
| 1. System.out.println(s1.equals("Saudi Arabia")); |  |
| 1. System.out.println(s1.indexOf(s2) ); |  |
| 1. System.out.println(s1.indexOf(s2.substring(1,3) , 8) ); |  |
| 1. System.out.println(s1.length() - s2.length()); |  |
| 1. System.out.println(s1.substring( 6 , 12).toLowerCase()); |  |

1. Write a program that prompts the user to enter a two part of string

ID number and year of birth

As the following format:  **YYYY\_NNNNN**

* **Then** split the ID number and the year of birth ,after that calculate the age.

and print the result as following

Example for the output:

Enter a number format YYYY\_NNNNN > 1410\_63291

Your birth year is: 1410

Your ID is: 63291

Your age is: 22

1. Suppose x = 6 , found=true.

if (x == 6 && found)  
System.out.println("Problem 4 is true.\n");  
else  
{  
System.out.println("Problem 4 is false.\n");  
System.out.println("Both conditions must be true.\n");  
}  
System.out.println("End of Problem 4.\n");

1. What is the value of a after the following Java code executes? **(Assume that all variables are declared properly.)**

a = console.nextInt();

if (a > 0)

switch (a)

Input are

A=6 🡪

A=-3 🡪

A=3🡪

A=1🡪

{

case 1:

a = a + 3;

case 3:

a++;

break;

case 6:

a = a + 6;

case 8:

a = a \* 8;

break;

default:

a– –;

}

else

a = a + 2;

1. Trace the following program segments , show the output and any updates on ***the variable’s values:***

char c = 'A';   
while ( c < 'I')  
{  
 System.out.print(c);  
 ++c;  
 if ( c >= 'E' || c <= 'F') break;   
 System.out.print(", "); }

char c = 'A';

while ( c < 'I')

{ System.out.print(c);

++c;

if ( c >= 'E' && c <= 'F') break;

System.out.print(", "); } }

char c = 'A';

while ( c < 'I')

{

System.out.print(c);

++c;

if ( c >= 'E' || c <= 'F') continue;

System.out.print(", "); }

char c = 'A';

while ( c < 'I')

{

System.out.print(c);

++c;

if ( c >= 'E' && c <= 'F') continue;

System.out.print(", "); }

}

1. **Write method headers for the following:**
2. A method that receives three strings and returns nothing.
3. A method that receives an integer and a character and returns a string.
4. A method that returns a Boolean and receives nothing.
5. **Trace the following program and specify its output**

public class Trace

{

public static void main( String[] args )

{

foo3();

System.out.println( "main1" );

foo2();

System.out.println( "main2" );

foo1();

System.out.println( "main3" );

foo2();

}

public static void foo1()

{

foo2();

System.out.println( "A" );

}

public static void foo2()

{

System.out.println( "B" );

foo3();

System.out.println( "C" );

}

public static void foo3()

{

System.out.println( "D" );

}

}