Quiz-3 Group-2

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What is y after the following switch statement is executed? * 3 points

```
x = 3; y = 3;
switch (x + 3) {
  case 6: y = 1;
  default: y += 1;
}
```

- ○ 4
- ○ 3
- ◉ 2
- ○ 1

How many times is the println statement executed? 2 points

```
for (int i = 0; i < 10; i++)
  for (int j = 0; j < i; j++)
    System.out.println(i * j)
```

- ○ 100
- ○ 50
- ◉ 45
- ○ 46

Clear selection

Suppose when you run the following program, you enter the input 2 3 6 from the console. What is the output? 2 points

```
public class Test {
  public static void main(String[] args) {
    java.util.Scanner input = new java.util.Scanner(System.in);
    double x = input.nextDouble();
    double y = input.nextDouble();
    double z = input.nextDouble();

    System.out.println((x < y && y < z) ? "sorted" : "not sorted");
  }
}
```

- (●) sorted
- ( ) not sorted
- ( ) none of the above

Clear selection

Write a program that prompts the user to enter two strings, and reports whether the second string is a substring of the first string. 3 points

Test cases below.

```
Enter string s1: ABCD Enter
Enter string s2: BC Enter
BC is a substring of ABCD
```

```
Enter string s1: ABCD Enter
Enter string s2: BDC Enter
BDC is not a substring of ABCD
```

StringProgram.ja... ×

Suppose the input is 2 3 4 5 0. What is the output of the following code? 2 points

```
import java.util.Scanner;

public class Test {
  public static void main(String[] args) {
    Scanner input = new Scanner(System.in);

    int number, max;
    number = input.nextInt();
    max = number;

    while (number != 0) {
      number = input.nextInt();
      if (number > max)
        max = number;
    }

    System.out.println("max is " + max);
    System.out.println("number " + number);
  }
}
```

- (●) max is 5, number 0
- ( ) max is 0, number 5
- ( ) max is 0, number 0
- ( ) max is 5, number 5

Clear selection

Write a Java code for the following. 5 points

(*Perfect number*) A positive integer is called a *perfect number* if it is equal to the sum of all of its positive divisors, excluding itself. For example, 6 is the first perfect number because 6 = 3 + 2 + 1. The next is 28 = 14 + 7 + 4 + 2 + 1. There are four perfect numbers < 10,000. Write a program to find all these four numbers.

Add File

Write the following method that first takes two lists as input from user, sort them and merges the two sorted lists into a new sorted list: 5 points

public static int[ ] merge(int[ ] list1, int[ ] list2)

```
Enter list1 size and contents: 5 1 5 16 61 111 Enter
Enter list2 size and contents: 4 2 4 5 6 Enter
list1 is 1 5 16 61 111
list2 is 2 4 5 6
The merged list is 1 2 4 5 5 6 16 61 111
```

Add File

Write a hangman game that randomly generates a word and prompts the user to guess one letter at a time, as presented in the sample run. Each letter in the word is displayed as an asterisk. When the user makes a correct guess, the actual letter is then displayed. When the user finishes a word, display the number of misses and ask the user whether to continue to play with another word. Declare an array to store words, as follows: 10 points

```
    // Add any words you wish in this array
String[ ] words = {"write", "that",...};
```

```
(Guess) Enter a letter in word ******* > p Enter
(Guess) Enter a letter in word p****** > r Enter
(Guess) Enter a letter in word pr**r** > p Enter
     p is already in the word
(Guess) Enter a letter in word pr**r** > o Enter
(Guess) Enter a letter in word pro*r** > g Enter
(Guess) Enter a letter in word progr** > n Enter
     n is not in the word
(Guess) Enter a letter in word progr** > m Enter
(Guess) Enter a letter in word progr*m > a Enter
The word is program. You missed 1 time
Do you want to guess another word? Enter y or n>
```

Add File

PRACTICE QUESTION: (No points) 0 points

Write a Java Code for the following.

(*Largest block*) Given a square matrix with the elements 0 or 1, write a program to find a maximum square submatrix whose elements are all 1s. Your program should prompt the user to enter the number of rows in the matrix. The program then displays the location of the first element in the maximum square submatrix and the number of rows in the submatrix. Here is a sample run:

```
Enter the number of rows in the matrix: 5 Enter
Enter the matrix row by row:
1 0 1 0 1 Enter
1 1 1 0 1 Enter
1 0 1 1 1 Enter
1 0 1 1 1 Enter
1 0 1 1 1 Enter

The maximum square submatrix is at (2, 2) with size 3
```

Your program should implement and use the following method to find the maximum square submatrix:

```
public static int[] findLargestBlock(int[][] m)
```

The return value is an array that consists of three values. The first two values are the row and column indices for the first element in the submatrix, and the third value is the number of the rows in the submatrix.

- (●) Looks tough
- ( ) Easy peasy
- ( ) I will do it
- ( ) Bye. I quit Java

Clear selection

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