Name: Chan Suvannet

Id: e20210429

# TP01

❖ Lab01.1.  Hello One's Name
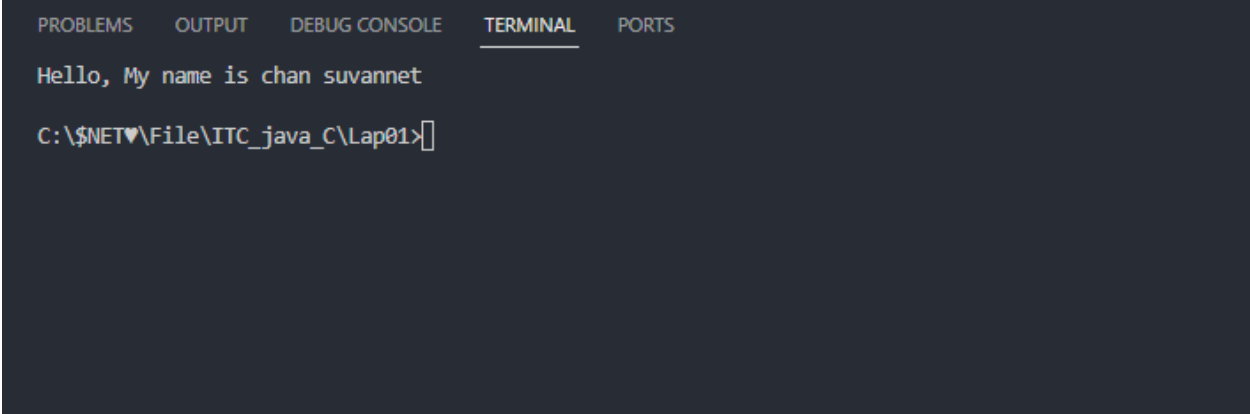Implement an application Java that displays "Hello <your_name>!"
where <your_name>
represents your own name. Example, in case your name is: Visal,
then:

---My Code

```java
1  public class TP01_1{
2      public static void main(String[] args){
3          System.out.println("Hello, My name is chan suvannet");
4      }
5  }
```

---Output

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

Hello, My name is chan suvannet

C:\$NET♥\File\ITC_java_C\Lap01>
```

❖ Lab01.2. Display a Paragraph
Implement an application Java that displays the following
output:

---My Code

```
1  public class TP01_2 {
2      public static void main(String[] args){
3          System.out.println("\\n");
4          System.out.println("\\t");
5          System.out.println("\\'");
6          System.out.println("\\\"");
7          System.out.println("\\\\");
8          System.out.println("//");
9          System.out.println("/*...*/");
10         System.out.println("\"\'\"\'\"\n\tText here\n\"\'\"\'\"");
11
12     }
13 }
```

---Output

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

\n
\t
\'
\"
\\
//
/*...*/
""""
        Text here
""""

C:\$NET♥\File\ITC_java_C\Lap01>
```

❖ Lab01.3. Asterisks
Write a program in Java to display shapes as below:

---My Code

```java
public class TP01_3 {
    public static void main(String[] args){

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

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

        System.out.println("1 2 4 3 5");
        System.out.println("2 2 5 3 1");
        System.out.println("2 1 1 4 7");
        System.out.println("1 5 4 6 8");
        System.out.println("7 8 2 1 9");
    }
}
```

---Output

```
   ************************
    ***********************
     ********************
      ******************
       ***************
        ************
         **********
          ********
           *******
            *****
             ***
              *
************************
*                      *
*                      *
*                      *
*                      *
*                      *
*                      *
*                      *
*                      *
*                      *
*                      *
*                      *
*                      *
*                      *
************************
1 2 4 3 5
2 2 5 3 1
2 1 1 4 7
1 5 4 6 8
7 8 2 1 9

C:\$NET♥\File\ITC_java_C\Lap01>
```

❖ Lab01.4. Table
Write a program in Java to display tables as below with values
declared by variables:
---My Code

```java
public class TP01_4 {
    public static void main(String[] args) {
        System.out.println("*Number 1");
        String line = "+----------------+---------+-------------------+-----+";
        String country = "| Country        | Name    | Profession        | Age |";
        String germany = "| Germany        | Michael | Computer Engineer | 19  |";
        String england = "| England        | Robert  | Artist            | 34  |";
        String uk = "| United Kingdom | Julia   | Designer          | 42  |";
        String us = "| United States  | Jo      | Actor             | 21  |";

        System.out.println(line);
        System.out.println(country);
        System.out.println(line);
        System.out.println(germany);
        System.out.println(line);
        System.out.println(england);
        System.out.println(line);
        System.out.println(uk);
        System.out.println(line);
        System.out.println(us);
        System.out.println(line);

        System.out.println("\n**Number 2");
        // 2 8
        String a = "     " + "|   " + 1 + "|   " + 2 + "|   " + 3 + "|   " + 4 + "|   " + 5 + "|   " + 6 + "|   " + 7
                + "|   " + 8 + "|   " + 9 + "|   " + 10 + "|   ";

        String b = "   " + 1 + "|   " + 1 + "|   " + 2 + "|   " + 3 + "|   " + 4 + "|   " + 5 + "|   " + 6 + "|   " + 7
                + "|   " + 8 + "|   " + 9 + "|   " + 10 + "|   ";

        String c = "   " + 2 + "|   " + 2 + "|   " + 4 + "|   " + 6 + "|   " + 8 + "|   " + 10 + "|   " + 12 + "|   " + 14
                + "|   " + 16 + "|   " + 18 + "|   " + 20 + "|   ";

        String d = "   " + 3 + "|   " + 3 + "|   " + 6 + "|   " + 9 + "|   " + 12 + "|   " + 15 + "|   " + 18 + "|   " + 21
                + "|   " + 24 + "|   " + 27 + "|   " + 30 + "|   ";

        String e = "   " + 4 + "|   " + 4 + "|   " + 8 + "|   " + 12 + "|   " + 16 + "|   " + 20 + "|   " + 24 + "|   " + 28
                + "|   " + 32 + "|   " + 36 + "|   " + 40 + "|   ";

        String f = "   " + 5 + "|   " + 5 + "|   " + 10 + "|   " + 15 + "|   " + 20 + "|   " + 25 + "|   " + 30 + "|   " + 35
                + "|   " + 40 + "|   " + 45 + "|   " + 50 + "|   ";
        String dot = "-------------------------------------------------------";
        System.out.println(a);
        System.out.println(dot);
        System.out.println(b);
        System.out.println(c);
        System.out.println(d);
        System.out.println(e);
        System.out.println(f);
    }
}
```

❖ Lab01.5. String

---My Code

```java
1
2  public class TP01_5 {
3      public static void main(String[] args){
4          // A. Write a program using a String function to print/check the length of a text "I Love My Hometown":
5          String text = "I Love my Home country";
6          int lengthText = text.length();
7          System.out.println("***Answer A: ");
8          System.out.println("The length is: " + lengthText);
9
10         //B. Write a program using a String function to cut the word "my little country" from a text of "I love my little country":
11         String cutText = text.substring(7, 22);
12         System.out.println("***Answer B: ");
13         System.out.println("Cut Text: "+cutText);
14
15         //C. Write a program using a String function to find the index position of vowels in a text of "Hi Students!":
16         String textNumberC ="Hi Students";
17         System.out.println("***Answer C: ");
18         String vowel = "aeiouAEIOU";
19         System.out.println(textNumberC);
20         for(int i = 0; i<textNumberC.length(); i++){
21             char ch = textNumberC.charAt(i);
22             if(vowel.indexOf(ch) != -1){
23                 System.out.println("\"" + ch + "\" is at index: " + i);
24             }
25         }
26
27         //D. Write a program using a String function check if two texts are equal
28         String text1 = "Hi Students!";
29         String text2 = "Students";
30         String text3 = "Hi Students!";
31         boolean isEqual1and2 = text1.equals(text2);
32         boolean isEqual1and3 = text1.equals(text3);
33         System.out.println("***Answer D: ");
34         System.out.println("Text1 is equal to Text2: " + isEqual1and2);
35         System.out.println("Text1 is equal to Text3: " + isEqual1and3);
36
37         //E. Write a program using a String function check if a text contains in another text
38         String text4 = "Hi Students!";
39         String text5 = "Students";
40         String text6 = "Hello";
41
42         boolean containsText2 = text4.contains(text5);
43         boolean containsText3 = text4.contains(text6);
44         System.out.println("***Answer E: ");
45         System.out.println("Text4 contains Text5: " + containsText2);
46         System.out.println("Text4 contains Text6: " + containsText3);
47     }
48 }
```

---Output

## ❖ Lab01.6. Class & Object

Create a model following objects:

- Employee
- Car
- BankAccount
- Video

### ***Employee

1. Create a model of "Employee" class

| | Datatype | Variable Name |
|---|---|---|
| Employee | String | name |
| | int | id |
| | String | position |
| | double | salary |

2. Create objects from "Employee" class

Object 1

| Variable | Value |
|---|---|
| name | Chan Suvannet |
| id | 1234 |
| position | Hacker |
| salary | $150.99 |

Object 2

| Variable | Value |
|----------|-------|
| name | Chan Suvannet |
| id | 1234 |
| position | Hacker |
| salary | $150.99 |

---My code

```java
1  class Employee {
2      String name;
3      int id;
4      String position;
5      double salary;
6  }
7
```
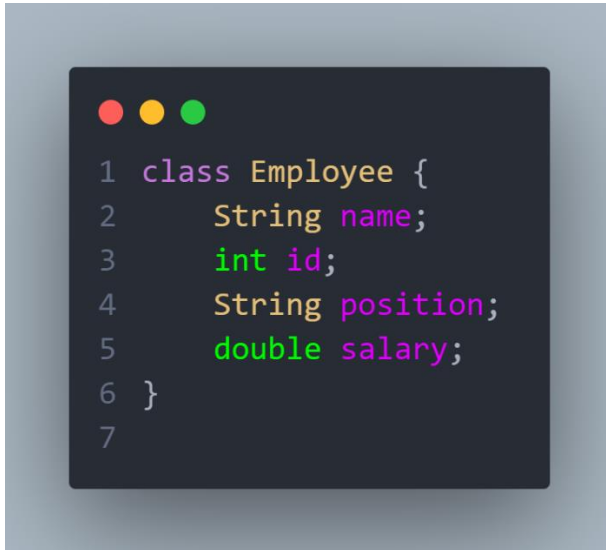
## ***Car

1. Create a model of "Car" class

| Car | Datatype | Variable Name |
|-----|----------|---------------|
| | String | model |
| | String | color |
| | int | year |
| | double | price |

2. Create objects from "Car" class

Object 1

| Variable | Value |
|----------|-------|
| model | Lamborghini |
| color | pink |
| year | 2023 |
| price | $25.99 |

Object 2

| Variable | Value |
|----------|-------|
| model | GTR R35 |
| color | yellow |
| year | 2021 |
| price | $14.99 |

---My code

```
1  lass Car {
2      String model;
3      String color;
4      int year;
5      double price;
6  }
```

***Video

1. Create a model of "Video" class

| | Datatype | Variable Name |
|---|----------|---------------|
| | String | tittle |
| Video | String | subtitle |
| | int | duration |
| | int | releaseYear |
| | int | quality |

2. Create objects from "Video" class
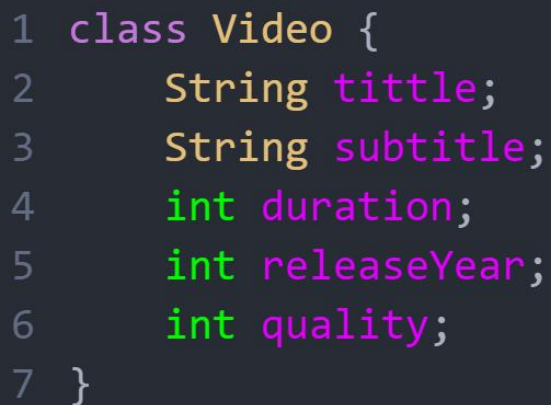
Object 1

| Variable | Value |
|----------|-------|
| tittle | Zero to master to become hacker |
| subtitle | When you finished this course, you will become hacker |
| duration | 120 |
| releaseYear | 2023 |
| quality | 1080 |

Object 2

| Variable | Value |
|----------|-------|
| tittle | OOP course for free |
| subtitle | The best course for student at itc |
| duration | 60 |
| releaseYear | 2023 |
| quality | 180 |

---My code

```java
class Video {
    String tittle;
    String subtitle;
    int duration;
    int releaseYear;
    int quality;
}
```

Note: Hello teacher, if you want to see my code clearly, you can expand it because I took a screenshot with codeSnap.
Githup: https://github.com/ChanSuvannet/Lap01.git