GIFT School of Engineering and Applied Sciences

Fall 2020

CS-124: Introduction to Programming - Lab

Lab-2 Manual

Java Fundamentals – Part 1

v1.2
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Task #1: Writing on the console

In this task, you'll practice to print on the console.

Print the following in Java

- Your First name
- Your Last name
- Your University name
- Your Department name
- Your Degree name
- Your CGPA
- Your Email address

Instructions:

1. Create a program called **Lab2Task1.java**
2. Indent your code properly.
3. Correctly display appropriate messages.

Task #2: Writing on the console

In this task, you'll write a simple program which will generate the following output.

Output:

```
Programming is great fun!
I get enough of it.
```

Instructions:

1. Create a program called **Lab2Task2.java**
2. Ident your code properly.
3. Correctly display appropriate messages.

Task #3: Writing on the console using Escape Sequences

In this task, you will write a program which will generate the following output using **escape sequences**.

Output:

School of Electrical Engineering and Computer Science (SEAS) offers:
1. BS Computer Science
2. BS Software Engineering
3. BS Data Science
4. BS Computational Mathematics
5. Associate Degree in Computer Science

Instructions:

1. Create a program called **Lab2Task3.java**
2. Use appropriate Escape Sequence.
3. Indent your code properly.
4. Correctly display appropriate messages.

Task #4: Writing on the console using Escape Sequences

In this task, you are being asked to write a program to generate the following output with the help of escape sequences:

Output

Following are our most enrolled elective courses:

```
        Web Development
                Web Application Development
        Mobile Computing
                Android Application Development
```

Instructions:

1. Create a program called **Lab2Task4.java**
2. Ident your code properly.
3. Correctly display appropriate messages.

Task #5: Variable and Literals

In this task, you are being asked to write a program which will output the value of a variable with description.

Write a program which stores your **roll number** and **cgpa** in appropriate variables and print them on console as follows:

Output

My roll number is 18552110
My CGPA is 3.55

Instructions:

1. Create a program called **Lab2Task5.java**
2. Use meaningful variable names and correct data types.
3. Ident your code properly.
4. Correctly display appropriate messages.

Task #6: Variables and Literals

In this task, you'll write a simple program which will output the square of a given number.

Write a program which will store a number in **`int`** variable, and then outputs the square of that number.

Instructions:

1. Create a program **Lab2Task6.java**
2. Use meaningful variable names and correct data types.
3. Ident your code properly.
4. Correctly display appropriate messages.

Task #7: Variables and Literals

In this task, you are being asked to write a program which will convert the foot (feet) to inches.

Write a program that does following:

- Declare a variable to store number of **`feet`**.
- Initialize the variable declared in above step with some value.
- Declare and initialize a variable **`inches.`**
- Use the formula to convert feet into inches. **(1 foot = 12 inches)**
- Display the number of feet.
- Display the number of inches.

Instructions:

1. Create a program **Lab2Task7.java**
2. Use meaningful variable names and correct data types.
3. Ident your code properly.
4. Correctly display appropriate messages

POST LAB TASKS

1. Swap the Values

In this task, you are being asked to write a program which will swap the values of two variables.

Output

```
Value of variable a before swapping = 5
Value of variable b before swapping = 2
Value of variable a after swapping = 2
Value of variable b after swapping = 5
```

Instructions:

1. Create a program **Lab2PostLabTask1.java**
2. Use appropriate variables to store data and swap values.
3. Indent your code.
4. Print the output with an appropriate message.

2. Percentage of a number

In this task, you are being asked to write a program which will output the percentage of a number.

Write a program which stores a number in appropriate variable and outputs **25%** of that number on console.

Instructions:

1. Create a program **Lab2PostLabTask2.java**
2. Use appropriate variables to store data and calculate final grade.
3. Print the output with an appropriate message.