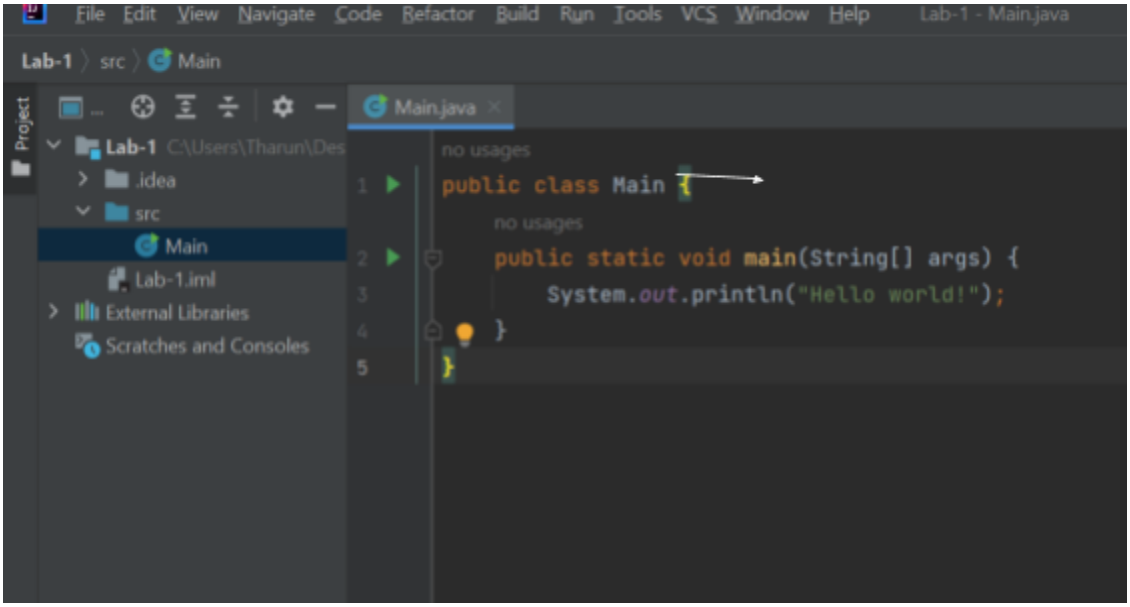
UNIVERSITY OF KELANIYA
SOFTWARE ENGINEERING TEACHING UNIT
ACADEMIC YEAR 2021/2022
SENG 12233 – Object Oriented Programming
Lab 01

Java Basics



Java 17 version : https://www.oracle.com/java/technologies/downloads/#jdk17-windows
Java installation: https://docs.oracle.com/en/java/javase/21/install/installation-jdk-microsoft-windows-platforms.html#GUID-DAF345BA-B3E7-4CF2-B87A-B6662D691840

- **class** keyword is used to declare a class in Java. it is a must for every Java application
- **public** keyword is an access modifier that represents visibility. It means it is visible to all.
- **static** is a keyword. If we declare any method as static, it is known as the static method. The core advantage of the static method is that there is no need to create an object to invoke the static method.
- **main** represents the starting point of the program.
- **String[] args** or String args[] is used for command line arguments.

  In Java applications, any class with a main function will be the root of the application.

1. Write a simple program to print "We are software engineers" using Java.
2. Write a simple program to add two **integer** numbers.
3. Write a simple program to divide two numbers using the **float** data type.
4. Write a simple program to find whether **17676798769** is odd or even using the **if-else** condition.
5. Get two inputs from the user(terminal window), and find the minimum number.

> Reading the number/string in you have to use a scanner
>
> ***Scanner input = new Scanner(System.in);***
> ***int x = input.nextInt()***//it will read the next integer which is user-inputted in a terminal window
> ***String s = input.next();***// to read string
> **float y = input.nextFloat();**// to read float

6. Write a Java program to get your favorite person's FirstName(**String**), LastName(**String**), Age(**int**), Email, and IsMarried(**Boolean**). print it on the Java terminal window. when you print a name use this format (**FirstName LastName)** likewise.

   Tip: **to merge string**

   Method 1: ***System.out.println("Name: "+firstName+" "+ lastName);***

   Method 2: ***String.format("(%s %s)", firstName, lastName);***

7. Create a String array, and get an array range(number of input elements) from the user. Get the car names and store them on the String array

```
//Creating arrays in Java, by creating string objects and we can use it.
  String[] inputs = new String[9];
// Creating Int Array;
 int[]  numbers = new int[9];
```

8. Create a number array and arrange(sort) those numbers in descending order using bubble sort.

9. Get Weekday from the user in a String format (Monday - Sunday) and print the day number(int). **Use a switch case.**
   Use this :- Monday - 1, Tuesday -2, ….Sunday - 7

```
String s=”Monday”;
switch(s){
  case “Monday”:{}
  default :{}
}
```

10. Print the current date time using the Java date library. follow the format **“14-11-2023 17:47:54".**
    Tip : use **java.time.LocalDateTime, java.time.format.DateTimeFormatter.**
    Pattern: "dd-MM-yyyy HH:mm:ss"

11. Write a Java Program to convert the below values to given data types.
    - 125(int) -> double
    - 125(String) -> int
    - 125(int) -> 125(String)
    - 125.00(double) -> int

12. Write a Java program to develop the student grading system using **if-else statements.**
    100-75 -> A
    75-50 -> B
    49-25 -> C
    24-00 -> D

You have to get student marks from the terminal window and print the grade the student obtained.