Master Core Java in 30 days

Day-2

JDK18 installation In windows 10,
Setting Class Path ,
Introduction to Variables,
Constants, and Literals

Core Java

@7:30 PM Today

Download & Install JDK

Download From Official Website

https://www.oracle.com/java/technologies/downloads/

Setup Class Path

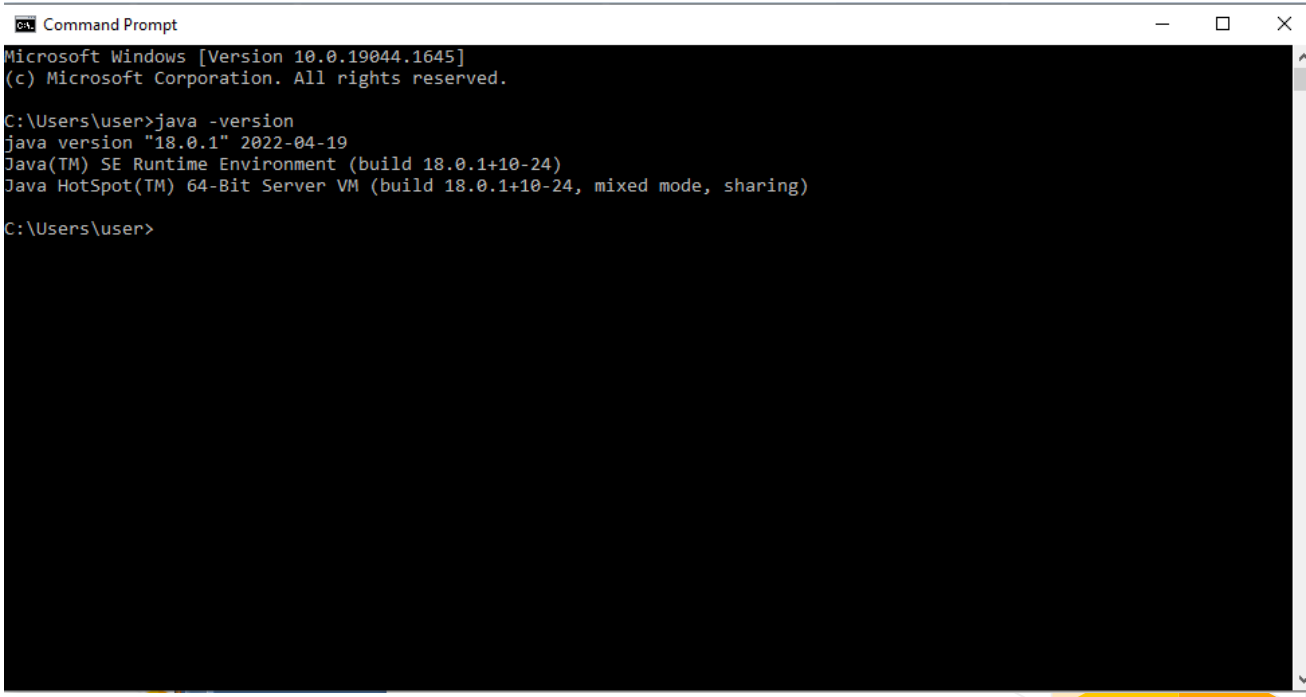
After Successful Installation of JDK in our System.

Setup the Path using the following Steps

1. Go to Control Panel
2. Select System and Security
3. Go to System
4. Select Advanced System Settings
5. Choose environment Variable
6. Go to System Variables and select Path...Double Click on that.
7. Create new environmental variable using new Button
8. Copy and paste the Bin path of JDK 18 from Drive c
9. Click on OK

Check java version

1. Open Command prompt.
2. java – version at command Line



Variables

A variable is a name given to a memory location. It is the basic unit of storage in a program.
The value stored in a variable can be changed during program execution.
A variable is only a name given to a memory location, all the operations done on the variable effects that memory location.

In Java, all the variables must be declared before use.

Declaration of variable:

Data type variable_name;

Rules for naming variables

- A variable name can consist of Capital letters **A-Z**, lowercase letters **a-z** digits **0-9**, and two special characters such as _ underscore and $ dollar sign.
- The first character must be a character
- Blank spaces cannot be used in variable names.
- Reserved words can not used as variable names.
- Variable names are case-sensitive.
- The maximum length of the variable is 64 characters.

- Number;
- Abc;
- A1;
- Var1

- Var name;
- 1ad;
- goto;
- if

Initialisation of variables

data _type *variable_name* = value;

Examples:

String name = "gowri";

Int age=35;

Float marks=560.23;

char Letter = 'D';

boolean result = true;

Local variables

- Local variables are declared in methods, constructors, or blocks.
- Local variables are created when the method, constructor or block is entered and the variable will be destroyed once it exits the method, constructor, or block.
- Access modifiers cannot be used for local variables.
- Local variables are visible only within the declared method, constructor, or block.
- Local variables are implemented at stack level internally.
- There is no default value for local variables, so local variables should be declared and an initial value should be assigned before the first use.

Instance variables

- Instance variables are declared in a class, but outside a method, constructor or any block.
- When a space is allocated for an object in the heap, a slot for each instance variable value is created.
- Instance variables are created when an object is created with the use of the keyword 'new' and destroyed when the object is destroyed.
- Access modifiers can be given for instance variables.
- The instance variables are visible for all methods, constructors and block in the class
- Instance variables have default values. For numbers, the default value is 0, for Booleans it is false, and for object references it is null
- For instance variables values can assigned by methods or constructors

Static variables

- Class variables also known as static variables are declared with the static keyword in a class, but outside a method, constructor or a block.
- There would only be one copy of each class variable per class, regardless of how many objects are created from it.
- Static variables are created when the class is Loaded and destroyed when the program stops.
- Static variables can be accessed by calling with the class name *ClassName.VariableName*.

Constant

A constant is a variable whose value **cannot change once it has been assigned**

In java constant can created by using static and final key words

static final datatype identifier_name=value;

static final double PRICE=432.78;

Types of Literals in Java

In Java, **literals** are the constant values that appear directly in the program

There are t **four** types of literals in Java:

Integer Literal (decimal,octal,hexa decimal)

Character Literal ('') String name="Gowri";

Boolean Literal(true/false)boolean Result=true;

String Literal(" ")

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