**Assignment – Java Variables and Data types**

1. What is Statically typed and Dynamically typed Programming Language?

***Statically typed***: A language where we need to mention the data type before the variable name and before compiling is called Statically typed Programming Language

***Dynamically typed***: A language where we do not need to mention the data type before the variable name. Data type is dynamically considered during the runtime and memory is also allocated accordingly.

1. What is the Variable in Java?

If we need to store any data or value, we need a Variable. In Java, we need to mention the data type for this variable defined. Memory is allocated as per the data type.

1. How to assign a value to a variable?

<data-type> <variable-name> = <value-of-variable>;

Example: int a = 10; Here *int* is the data type, *a* is the variable name and *10* is the value of the variable.

1. What are Primitive data types in Java?

Primitive data types are the ones used to store specific type of values into the variables.

Primitive data types in Java: **char, byte, short, int, long, float, double**

1. What are Identifiers in Java?

Class names, Variables, Methods are considered as Identifiers in Java.

Identifiers need to follow the below naming conventions:

1. Can start from A-Z, a-z, $, \_
2. Cannot start with a number
3. Cannot have space within the names
4. Java is case sensitive. If there is a method named multiply() and in the program, if we call the method as Multiply(), then compiler throws error
5. Cannot use reserved keywords
6. List the Operators in Java.
7. Arithmetic Operators
8. Increment Operator
9. Decrement Operator
10. Explain about Increment and Decrement Operators and give examples.

***Increment Operator***: Operator used to increment/increase the value (*by 1 at once*) of a variable holding numeric value.

1. *Pre-Increment*: In this, the value is incremented first and stored into memory and then assigned to a variable

int a = 5;

int b = ++a;

Sytem.out.println(a); Output is 6

Sytem.out.println(b); Output is 6

1. *Post-Increment*: In this, first the value is assigned to a variable, then incremented and stored into memory.

int a = 5;

int b = a++;

Sytem.out.println(a); Output is 6

Sytem.out.println(b); Output is 5