Q1 -> What is statically typed and Dynamically typed programming Language?

Answer->

STATICALLY TYPED PROGRAMING LANGUAGE:

A Statically typed programing language is one in which variables are assigned a data

typed at compile time and must adhere to that type of a variable is determined and set

When the code is written and can not be changed at runtime.

Example -> java, c++,c, etc.

DYNAMICALLY TYPED PROGRAMING LANGUAGE:

In Dynamically typed programing language determine the data type of a variable at runtime

This means that the data type can change as the programming is running, and the programmer

Does not need to specify the type of a variable when it is declared.

Example ->: Python, Ruby, JavaScript.

Both statically typed and dynamically typed programming languages have their Advantages and disadvantages, and the choice depends upon the specific need of the

Project and their preference of the team. statically typed language can catch type error

At compile time, on other hand, dynamically typed language can be more flexible and

Allow for faster development and prototyping.

Q2->What is a variable in java?

Answer->

In java, the variable is a named memory location that stores a value of a particular data

Type. variables are used to hold values that can be manipulated, compared, and passed

As arguments for methods

In java, variables can be classified into three categories:

(1- Local variables

(2- Instance variables

(3- Static variables

Local variables ->

Variables declared inside a method, constructor, or block are called local variables.

They are created when the method constructor or block is entered and destroyed when it

Exits.

Instance variables:

Instance variables are declared inside a class but outside a method, constructor, or block.

They are also known as fields or attributes. instance variables hold values that can be accessed and modified by the methods of the class.

Static variables :

Static variables are declared with the static keyword inside a class but outside a method, or constructor. They are associated with the class rather than with any particular instance of the class. a static variable is used to hold values that are shared among all instances of the class

Q3->How to assign a value to variables?

Answer->

In java, you can assign values to variables using the assignment operator

“ = “ followed by the values to be assigned .

For example :->

public class Basic{

public static void main(String[] args){

int integer\_variable ;*// declaring a variable*

integer\_variable = 2;*// assigning a value to the variable*

*//or we can do it like this*

int var = 7;

System.out.println(integer\_variable+var);

}

}

Q4-> What are the primitive data types in Java?

Primitive data are not objects and they do not have methods. They are simple and

efficient for storing and manipulating basic values. The default values of the primitive data

type are 0 or null. except for the boolean data types which default to false.

Example:

int, float, double, long, etc

Q5-> what are the identifiers in java?

Answer->

In java, an identifier is a name given to a variable, method class, or other programing element. identifiers are used to uniquely identify programming elements and to reference them in code.

Here are some rules for naming identifiers in Java:

1 - identifiers can only contain letters, digits, and underscore.

2- identifiers must begin with a letter, or underscore followed by a letter.

3- Identifiers are case-sensitive.

4- identifiers cannot be a keyword or reserved words in Java.

5- identifiers should be descriptive and meaningful so that they convey the purpose or meaning of the program element they represent.

Q6-> List the operator in java?

Answer->

In java, operators are special symbols or keywords that are used to perform operations on operands.Here is a list of some of the commonly used operators in java:

(1- ARITHMETIC OPERATORS:

Addition (+)

Subtraction (-)

Multiplication (\*)

Division (/)

Modulus(%)

(2-ASSIGNMENT OPERATORS:

Assignment (=)

Addition assignment(+=)

Subtraction assignment(-=)

Multiplication assignment(\*=)

Division assignment(/=)

Modulus assignment(%=)

(3-COMPARISON OPERATORS:

Equal to (==)

Not equal to (!=)

Greater than (>)

Greater than or equal to (>=)

Less than (<)

Less than or equal to (<=)

(4 LOGICAL OPERATORS:

Logical AND (&&)

Logical OR (||)

Logical NOT(!)

BITWISE OPERATOR

Bitwise AND(&)

Bitwise OR(|)

Bitwise XOR(^)

Bitwise NOT(~)

->> These are the most common operators in java

Q7->explain increment and decrement operators with examples.

Answer->

In increment and decrement operators are used to increase or decrease the value of a variable by 1 . in java there are two types of increment and decrement operators

pre-increment/decrement opereators (++a and - -a)

It increases or decreases the value of a variable before it is used in an expression. the updated value is then used in the expression.

Post increment/decrement operators (a++ and a- -)

It increases or decreases the value of a variable after it is used in an expression

The original value is used in the expression and then the value is increment

Or decremented.

*// Q6->explain increment and decrement operators with example.*

int a =3;

a++;

System.out.println(a);*//output =4*

a--;

System.out.println(a);*//output =3*

int y = --a;

System.out.println(y);*// output 2*

int z = a--;

System.out.println(z);*//output =2*

int k = a--;

System.out.println(k);*//output = 1*