Day-7 Assignment Questions (27/01/2023)
(Java Variables and Data types)

Ques 1: - What is statically typed and dynamically typed Programming Language?

Ans: - A language is **statically typed** if the type of a variable is known at **compile-time** instead of at run-time. Common examples of statically typed languages include Java, C, C++, FORTRAN, Pascal, and Scala.

In Statically typed languages, once a variable has been declared with a type, it cannot ever be assigned to some other variable type, and doing so will raise a type error at compile-time (some IDEs generally show a Red Cross mark denoting the error).

Ques 2: - What is the variable in Java?

Ans: - A variable is the name of a reserved area allocated in memory. In other words, it is the name of the memory location. It is a combination of "vary + able" which means its value can be changed.

Ques 3: - How to assign a value to a Variable?

Ans: - we can assign a value to a variable in this way:

DataType **VariableName** = **"Value";**

Ques 4: - What are Primitive Data types in Java?

Ans: - A primitive data type specifies the size and type of variable values, and it has no additional methods.

Primitive data type includes byte, short, int, long, float, double, Boolean, and char.

Ques 5: - What are the identifiers in Java?

Ans: - Identifiers in Java are names that distinguish between different Java entities, such as classes, methods, variables, and packages. Identifiers include the names of classes, methods, variables, packages, constants, etc.

These identifiers are each specified using a specific syntax and naming scheme.

Ques 6: - List the operators in Java?

Ans: - There are various types of operators in Java: -

- Arithmetic Operators
- Assignment Operators
- Logical Operators
- Relational Operators
- Unary Operators
- Bitwise Operators
- Ternary Operators
- Shift Operators

Ques 7: - Explain about increment and decrement operators and give an example.

Ans: - Increment Operators are the unary operators used to increment or add 1 to the operand value. The Increment operand is denoted by the double plus symbol (++). It has two types, Pre Increment and Post Increment Operators.

Pre-increment Operator

The pre-increment operator is used to increase the original value of the operand by 1 before assigning it to the expression.

Ex-

Int a = 5;

Int b = ++a;

Then **b** becomes 6 because **b** store the after the increment the value of **a** also increased by 1.

Post increment Operator

The post-increment operator is used to increment the original value of the operand by 1 after assigning it to the expression.

Ex –

Int a = 5;

Int b = a++;

Then the value of b becomes 5 but **a** increased by 1.

Decrement Operator is the unary operator, which is used to decrease the original value of the operand by 1. The decrement operator is represented as the double minus symbol (--). It has two types, Pre-Decrement and Post-Decrement operators.

Pre Decrement Operator

The Pre Decrement Operator decreases the operand value by 1 before assigning it to the mathematical expression. In other words, the original value of the operand is first decreases, and then a new value is assigned to the other variable.

Ex-

Int a = 5;

Int b = --a;

Then **b** becomes 4 because **b** store the after the decrement the value of **a** also decreased by 1.

Post Decrement Operator

Post decrement operator is used to decrease the original value of the operand by 1 after assigning to the expression.

Ex –

Int a = 5;

Int b = a--;

Then the value of **b** becomes 5 but **a** decreased by 1.

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