

"Assignment - 5"

(1) What is statically typed and Dynamically typed programming language?

⇒ Java is statically typed programming language because in Java the memory of the variable is given during the compilation time itself such types of languages are called statically typed.

Dynamically typed means the memory of the variable is given during the execution time itself such types of languages are called dynamically typed.

(2) What is the variable in java?

⇒ Variable is container that stores a value. This value can be changed during the execution of program. Some rules to declare a variable

(1) Must not begin with any digit.

(2) We ~~do~~ can not use keywords as a variable.

(3) space do not allowed

(4) Name is case sensitive

Three types of variables:-

(1) local variable ⇒

It declares inside the body of method.

(2) Instance variable ⇒

It declares inside the class but outside the body of method.

(3) Static variable ⇒

Static variable is declared by static keyword. we can create a single copy of static variable and share it among all the instances of class.



(3) How to Assign a value to Variable?

→ The syntax is:-

datatype variable\_name = Value;

(4) What are primitive data types in java?

→ 8 primitive datatypes java has supported:-

(1) Byte:-

Value range -128 to 127

Size is 1 Byte

Default value is 0

(2) Short:-

Value range  $-(\frac{2^{16}}{2})$  to  $(\frac{2^{16}}{2}) - 1$

Size is 2 Bytes

Default value is 0

(3) Int:- Value range  $-(\frac{2^{32}}{2})$  to  $(\frac{2^{32}}{2}) - 1$

Size is 4 Bytes

Default value is 0

(4) float:-

Size is 4 Bytes

Default value is 0.0 in decimal form.

(5) long:-

Value range  $-(\frac{2^{64}}{2})$  to  $(\frac{2^{64}}{2}) - 1$

Size is 8 bytes

Default value is 0

(6) double:-

Size is 8 bytes

Default value is 0.000 in long decimal form.

(7) char:-

Value range is 0 to  $(2^{16} - 1)$

Size is 2 Bytes ⇒ It supports Unicode

Default value is 0.

ASCII character is a subset of unicode. It is a code that use numbers to represent a character. ASCII value of lower letters from 97 to 122. Upper letters from 65 to 90.



(8) Boolean :- Value range true/false  
 size depends on JVM  
 Default value is false.

Datatypes are literals means A constant value which can be assigned to a variable.

float  $\Rightarrow$  f

long  $\Rightarrow$  L/l

char  $\Rightarrow$  ' '

string  $\Rightarrow$  " "

In order to choose the datatype for our variable first we need to find the type of data that we want to store After that we Analyze the min. and max value we might use

(5) What are the identifiers in java?

$\Rightarrow$  Identifier is a name that is given to class, variable, methods, package, interface and so on.

(6) List the operators in java?

$\Rightarrow$  operators are used to perform task on variables and values.

(1) Arithmetic operator (+, -, \*, /, %)

(2) Relational operator (==, <, >, <=, >=)

(3) Assignment operator (=, +=, -=, \*=, /=)

(4) Logical operator (&&, ||, !)

(5) Bitwise operator (&)

(6) Increment/Decrement operator. (++ , --)

(7) In increment/Decrement operators:-

(1) pre increment/Decrement:-

In this first value increase or decrease then use

(2) Post increment/Decrement:-

In this first value use then increase/decrease.

Date \_\_\_/\_\_\_/\_\_\_

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Ex  $\Rightarrow$  `int a = 5;` // post  
`int b = a++;`  
`System.out.println(a);`  
" " " (b);  
 $\Rightarrow$  output  $\Rightarrow$  6  
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Ex  $\Rightarrow$  `int a = 5;` // Pre  
`int b = ++a;`  
`System.out.println(a);`  
" " " (b);  
 $\Rightarrow$  output  $\Rightarrow$  6  
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