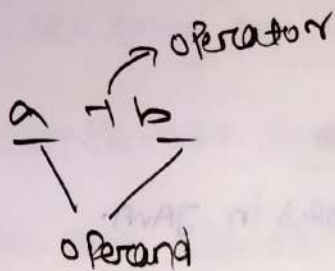(Operators in java)

Symbol that Perform an operation.

(i) unary operator: if it acts on single variable it's called.

(ii) Binary: if it act on two variable it is called binary.

(iii) Ternary: if it act on three variable.

(i) Airthematic operators:-

(ii) unary operators

(iii) Increment operators

(iv) Decrement operators

(v) Assignment operator

(vi) Relational operators

(vii) logical operator

(viii) Boolean operator

(ix) Bitwise OR operator

(x) Bitwise XOR operator

(xi) Bitwise left & right shift operator

(xii) Bitwise zero fill eight shift operator

(xiii) Ternary operator or conditional operator

(xii) member (.) operator

(xiii) instances or operator

xiv) New operator

xv) Cast operator

Airthematic operators

There are 5 airthematic operators in JAVA.

+ -> add
- -> minus
* -> multi
/ -> division
% -> modulus

+ -> also used to join two
string together
(String concatenation operator)

Unary operators

it acts on only one operand, There are of three kinds.

(i) unary minus operator(-)
(ii) Increment operator(- -)
(iii) Decrement operator(++)

Boolean operators

Acts on boolean variables and Produce boolean type results.

& -> boolean and

| -> boolean or

! -> boolean not

Bitwise Operators:- used to Perform Operations on individual bits (0 and 1). act only on integer data type : i.e Short, byte, long, int)

① Bitwise compliment operator (~)
$\llcorner$ tilde

② Bitwise and operator (&)

③ Bitwise OR Operator (|)

④ Bitwise XOR (operator (^)

⑤ Bitwise << (right) >> (left) shift operator.

⑥ Bitwise zero bill right shift operator (>>>)

⑦ ~~Co~~

Ternary operator :- call ternary as it alt on three variables.

Syntax:-

variable = expression 1 ? expression 2 : expression 3;
                        ↓   ↓   ↓
                  (Condition)   true   false

member (.) operator :- also called as dot operator. used to tell about the member of Package or classes.

Syntax:-

Package name. Classname;

eg→

Java.io. Bufferedreader

instanceof operator :- used to test is an object belongs to a class or not. instances mean object.

Syntax:-

boolean variable = object instanceof class;

boolean variable = object instanceof interface.

eg:

boolean x = emp instanceof employee;

new operator:- Used to create object to classes. Objects are created on heap memory by Jvm, dynamically (at runtime).

    Syntax:-

        Classname obj = new classname();

    eg:-

        employee emp = new employee();
                 ↳new obj of employee
                     class.

---

cast operator:- used to convert one datatype into another datatype.

        double $x = 10.54$;
          int $y = x$; //error as datatype of x and y are different).

          int $y = (int)x$; //here x datatype is converted and stored in y.

Priority of operators:- rules set to know when operators are used.

- (), [].
- ++, --;
- *, / and %
- +, -
- :

and so on.

6) Control Statement in JAVA.

Control Statement are the Statement which alter the flow of execution and Provide better Control to the Programmer on the flow of execution.

Control Statement in JAVA.
- if...else (in c) yes/no
- do....while (in c) do these till
- while (in c) Condition limit.
- for..(in c) → repeat it.
- for each
- Switch
- break
- Continue
- return

For-each (loop) : used to ~~hold~~ handle element of a collection.

——— x ———

Collection :- group of element like integer values or objects. eg (array and Java.util classes (stack, linked list, vector, etc)

Syntax:

for(Var : Collection)   ← each number one by one)
                              → Collection of elements.
{
    statement;
}

eg. like array traversal.
{
    int arr[] = {200, 19, -56, 44, 99};
    for (int i : arr)
    {
        System.out.Print ln(i);
    }
}
                    ⇒ 200, 19, -56, 44, 99