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INTRODUCING "PROGRAM CONTROL OPERATORS" IN THE JAVA PROGRAMMING LANGUAGE

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ANNOTATION

This article introduces operators in the Java programming language and their functions. Including comparison operator if-else, ternary operators, loop operators for, while, do-while, selection operator switch, break and continue operator. Solutions to problems associated with each operator are shown.

Keyword SWITCH ,Break,Continue.

Enter

1. Comparison operators.
2. Logical operators.
3. Ternary operator "if-else" return operator.
4. WHILE loop statement.
5. DO – WHILE loop statement.
6. FOR loop operator.
7. SWITCH operator.
8. BREAK operator.
9. CONTINUE operator.

Comparison operators.

To compare two expressions, JAVA has a set of operators that represent relation and equality. The table below lists them.

Operator	Result
! =	Not equal
>	Big
<	Small
>=	Greater than or equal to
<=	Less than or equal to

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Any kind of meaning, including integers and real numbers, symbols, logical meanings, and dependencies can be represented by equality " - " and inequality -

" !- " can be compared using the validation operator.

Logical operators.

Logical operators work only with Boolean operators. All binary logical operators accept one of two values of type Boolean as operands and return a result of that type.

Boolean logical operators.

Operator	Result
&	Logical AND _
|	Logical ONE (OR)
^	Logical UNation (XOR)
&	= Logical AND
|=	Logical ORing
^=	Mastering the logical ONE by cancellation (XOR).
||	The OR operator is a quick evaluation of an expression (short circuit OR)
&&	AND operator quick evaluation of the expression (short circuit AND)
!	Logical negation (NOT)
= =	Eq
!=	Not equal
?:	If-then-else ternary operator

There are two complements to the set of logical operators. This is AND and OR

is an alternative variant of operators that serves for quick evaluation of logical expressions. You know that if the first operand of the OR operator is true, the result of the operation will be true regardless of the meaning of the second operand. Similarly, the AND operator, if the first operand is false, the meaning of the second operand does not affect the result - it is always false. A gar you the usual & and | instead of the operators && and || operators, JAVA does not evaluate a Boolean expression on its operand, the answer is obvious from the meaning of the left operand.

If – then – else is a ternary operator.

The overview of the if – then – else operator is as follows:

expression1? expression2 : expression3

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As the first operand "expression1", an arbitrary expression can be used, the result of which has a value of type Boolean. If the result is true, the operator specified in the second operand is executed, i.e. "expression2". If the result is false, the third operand - "expression3" is executed. The second and third operands, expression2 and expression3, must return values of the same type and must not be void.

Conditional operators of JAVA.

if–else statement. In its generalized form, this operator is written as follows:

if (boolean expression) operator1; [else operator2;]

There is no need for an else section. Any "operator1" and "operator2" can be replaced by a structural operator enclosed in curly braces. A boolean expression is an optional expression that returns a Boolean value.

```
static int test(int testvvl) {
int result = 0;
if (testval > target)
result = - 1;
else if (testval < target)
result = + 1;
otherwise
result = 0; // match
return result;
}
return
```

A return statement can be placed anywhere in the program, which immediately terminates the work and transfers control to the program that calls this method. Here is an example of using the return operator = to return control immediately when using the Java environment.

```
slass ReturnDemo {
public static void main (String args [ ]) {
boolean t = true;
Ssystem.out.println ("before return statement"); // before the return statement.
if (t) return;
System .out .println("This cannot be done"); // This will fail
}
```

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```
}
```

Cycles.

Any loop can be divided into 4 parts – setup (initial value), body, iteration and termination condition. There are three types of loop constructions in JAVA: while (condition before), do–while (condition after) and for (with parameter).

while This loop is executed until the value of the logical expression is equal to true. The general form of the while operator is as follows:

```
[ sur natish;]
while (end)
{
the body;
[iteration;]
}
```

Installation and iteration are not required. Below is an example of how the while loop works.

```
public class WhileTest {
public static void main(string [] args) {
double r = 0;
while (r<0.99d) {
r = Math.Random () ;
system .out .println(r)
}
}
} /// : ~
```

do-while. Sometimes there is a requirement to execute the loop body at least once even if the boolean evaluates to false. For such cases, do-while loop structure is used in JAVA. Its general appearance is as follows:

```
[ install ;] do
{
the body; [iteration;]
} while (end);
```

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In the example below, the loop body executes until the first check of the termination condition. This allows the iteration code to be combined with a termination condition:

```
class DoWhile {
public static void main (String args [ ]) {
int n = 10;
do {
System.out.println("tich" + n);
} while (--n>0);
}}
```

for. This loop operator provides space for all four parts of the loop.

```
for ( set ; end ; iteration ) body ;
```

When entering a loop, if the termination condition is not met according to the initial condition, then the loop body and iteration operators are not executed even once. in the canonical form of the for loop, the integer value of the counter is incremented from the minimum value to a specified limit.

```
public class ListCharacters {
public static void main(String[] args) {
for (char c = 0; c < 128; c++)
if (c != 26) // ANSI Clear screen
System.out.println("value :" + (int) c + "character :" + c);
}
} /// : ~
```

The operator ``," sometimes occurs when the setup or iteration sections of a for loop require multiple operators. We know that you can't put a structural operator in curly braces in a for loop header, so JAVA shows an alternative way. A comma (,) can be used inside the parentheses of the for operator to separate multiple operators. Below is a trivial example of a for loop with several operators in the setup and iteration sections:

```
class Comma {
public static void main (string args [ ]) {
int a, b;
for (a = 1, b = 4; a < b; a ++, b --) {
system .out .println("a =" + a),
```

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```
system .out .println("b =" + b),
```

The output of this program shows that the loop is executed only twice.

```
a = 1

b = 4

a = 2

b = 3
```

SWITCH. This operator provides the ability to select different parts of the program code depending on the value of a variable or expression. The general form of this operator is as follows:

```
switch (expression)

{

case value1:

break;

case value2:

break;

case valueN:

break;

[default:]

}
```

The result of the evaluated expression can be any value of the simple type, where the type of each of the values specified in the case-operators must match the type of the expression in the switch operator. If two case operators specify the same value, the translator reports an error.

If the value of the expression does not match any of the case operators, control is passed to the code following the default keyword. Note that default is not a necessary operator.

the break operator. This operator tells the execution environment to stop execution of the named block and pass control to the operator next to the given block. Symbols are used as a named block in the JAVA programming language. The break operator can be used unsigned when used in loops and switch statements. In this case, it performs the task of stopping the work of the current block and exiting it.

An unsigned switch inside a break statement causes control to pass to the code following the switch statement. If there is no A gar break, the one after the current case section is executed.

The break operator can be used to jump to one of the currently inserted blocks.

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Continue operator. In some cases, there is a need to prematurely jump to the next iteration by rejecting the part of the loop body operators that the current iteration has not yet executed. For such purposes, JAVA provides the continue operator. below is an example of using this operator.

```
class Continue Demo {
public static void main (String args [ ]) {
for (int i = 0; i < 10; i++) {
system .out .print (i + " ");
if (i % 2 = = 0) continue;
system .out .println (" ");
}
}}
```

If the cycle index is even, it does not go to a new line, but continues to print. The result of running this program is as follows:

```
0 1
2 3
4 5
5 7
8 0
```

As in the case of the break operator, the continue operator can be used to indicate at which of the set iterations you want to terminate the execution of the current iteration before the deadline.

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