

Lecture No 5.

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➤ Operators

Operator are the symbols that are used to perform certain operations on data. These include arithmetic operators, relational operators, logical operators, bitwise operators etc.

Unary operators

A type of operator that work with one operand is known as **unary operator**.

Like. - ++ --

Example

```
-a;  
N++;  
--y;
```

Binary operators

A type of operator that work with two operands is known as **binary operators**.

Like. + - * / %

Example

```
a+b;  
a-b;  
x/y;
```

➤ Arithmetic operators

Arithmetic operators is a symbol that performs mathematical operation on data.

Example

Suppose we have two variables **A** and **B** where **A = 10** and **B = 5**. Arithmetic operators can be used on **A** and **B** as follows.

Operation	Result
A+B	15
A-B	5
A*B	50
A/B	2

➤ Assignment

A%B	0
-----	---

statement

A statement that assign a value to a variable is known as **Assignment statement**. The assignment operator = is use in assignment statement to assign a value to a variable. The name of variable is written on the left side of the assignment operator and the value is written on the right side of the assignment operator

Syntax

Variable = expression;

Examples

A = 50;

B = C + D;

Y = C – D + 50;

Program 3.3

Write a program that performs all mathematical operations on two variables.

```
#include<iostream>
Using namespace std;
Main()
{
Int a,b;
A = 10;
B = 3;
Cout<< " a + b = " << a + b << endl;
Cout<< " a - b = " << a - b << endl;
Cout<< " a * b = " << a * b << endl;
Cout<< " a / b = " << a / b << endl;
Cout<< " a % b = " << a % b << endl;
}
```

➤ Compound assignment statement

An assignment statement that assign a value to many variables is known as compound **assignment statement**.

Example

A = B = 10;

Assign the value **10** to both **A** and **B**.

X = y = z = 80;

J = k = 20;

➤ Compound assignment operators

Compound assignment operators that combine assignment operator with arithmetic operators. Compound assignment operator are used to perform mathematical operations more easily.

Syntax

Variable op = expression;

Like. N += 10;

Is equivalent to

N = N + 10;

Example

A += 10;	is equivalent to	A = A + 10;
A -= 10;	is equivalent to	A = A - 10;
A *= 10;	is equivalent to	A = A * 10;
A /= 10;	is equivalent to	A = A / 10;
A %= 10;	is equivalent to	A = A % 10;

Program 3.4

Write a program that performs all compound assignment operations on an integer.

```
#include<iostream>
```

```
Using namespace std;
```

```
Main()
```

```
{
```

```
Int a;
```

```
a=10;
```

```
Cout<< " value of a : " << a << endl;
```

```
a+=5;
```

```
Cout<< " value of a after a += 5 : " << a << endl;
```

```
a-=5;
```

```
Cout<< " value of a after a -= 5 : " << a << endl;
```

```
a*=2;
```

```
Cout<< " value of a after a *= 2 : " << a << endl;
```

```
a/=2;
```

```
Cout<< " value of a after a /= 2 : " << a << endl;
```

```
A%=2;
```

```
Cout<< " value of a after a %= 2 : " << a << endl;
```

```
}
```

Output

```
value of a : 10
value of a after a += 5 : 15
value of a after a -= 5 : 10
value of a after a *= 5 : 20
value of a after a /= 5 : 10
value of a after a %= 5 : 0
```