

## OPERATORS

Operator is a special symbol designed for a particular task[work]. In C we are having 44 operators and 14 separators. Operator works on operands.

Based on number of operands participating in operation, the operators divided into 3 types.

1. **Unary operator**: Require one operand operand.

Eg: **a++**, **a--**, **++a**, **--a**, **sizeof(a)**, **+a**, **-a**, **~a**, **!a**,..

2. **Binary operator**: Require two operands.

Eg: **a+b**, **a-b**, **a>b**, **a<=b**, **a==b**, **a!=b**, **a<<b**, **a>>b**,..

3. **Ternary / conditional operator**: Require three operands / expressions.

Eg:

**Conditional part** ? **true part** : **false part**;

Based on operation the operators divided into several types.

1. **Assignment operator [ = ]**: It copies the value on its right side into the variable on its left side. In assignment operation, the left hand side [ **LHS** ] operand should be a variable. i.e. on left hand side **constants** or **expressions not allowed**.

Eg:

int a=10;

```
float b=1.2;  
char c='X';  
char name[ ]="Kishore";  
char name[ ]; ← Error  
char name[10]; /* var declaration */  
name = "kishore"; /* initialization */ ← Error
```

**Note:** In C & C++ we can't initialize a string using = operator. For this we have to use strcpy( ) predefined function available in <string.h>

If we are trying to enter / change a string value, the compiler gives an error called Lvalue error which means Left side value can't be change.

```
≡ File Edit Search Run Compile Debug Project Options Window Help
[ ] NONAME00.CPP 1=[ ]
#include<stdio.h>
#include<conio.h>
void main()
{
int a; // var declaration
float b;
char c;
clrscr();
a=10; // initialization
b=1.2;
c='X';
printf("a=%d, b=%f, c=%c", a,b,c);
getch();
}
```

12:24

F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu

Activate Windows  
Go to Settings  
to activate Windows.

a=10, b=1.200000, c=X\_

Activate  
Windows  
Go to Settings  
to activate  
Windows.

```
File Edit Search Run Compile Debug Project Options Window Help
NONAME00.CPP 1
#include<stdio.h>
#include<conio.h>
void main()
{
char name[30]="Kishore Naidu"; // var declaration & Initialization
clrscr();
printf("Name=%s",name);
getch();
}
```

7:22

F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu

Activate  
Windows  
Go to Settings  
to activate  
Windows.

Name=Kishore Naidu

Activate  
Windows  
Go to Settings  
to activate  
Windows.

```
File Edit Search Run Compile Debug Project Options Window Help
NONAME00.CPP 1=[+]
#include<stdio.h>
#include<conio.h>
void main()
{
char name[30]; // var declaration
name="Kishore Naidu"; // var Initialization
clrscr();
printf("Name=%s",name);
getch();
}
```

Error NONAME00.CPP 6: Lvalue required

6:6

F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu

```
File Edit Search Run Compile Debug Project Options Window Help
NONAME00.CPP
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main()
{
char name[30]; // var declaration
strcpy(name,"Kishore Naidu"); // var Initialization
clrscr();
printf("Name=%s",name);
getch();
}
```

7:30

F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu

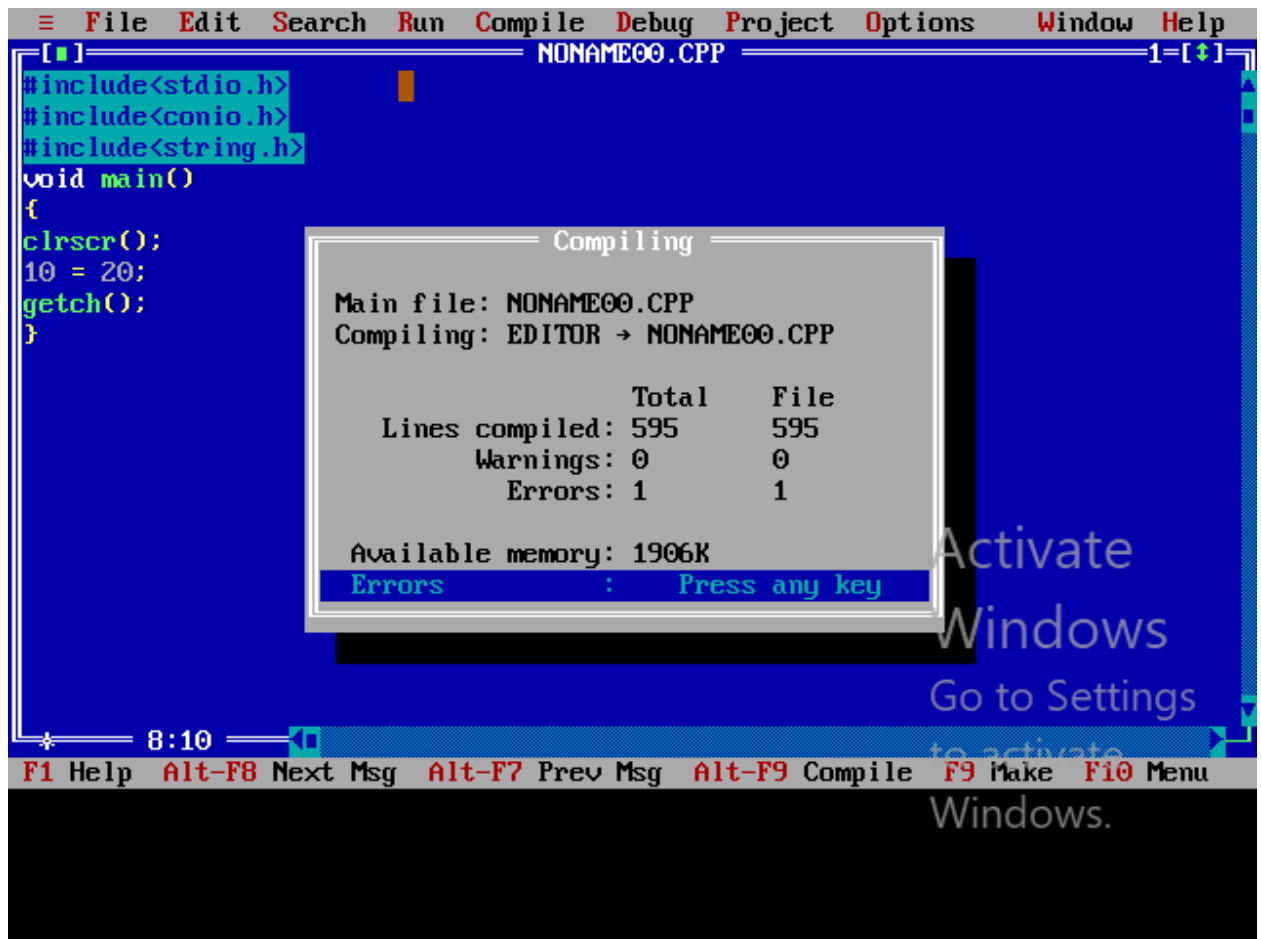


Name=Kishore Naidu

Activate  
Windows  
Go to Settings  
to activate  
Windows.

Eg:

10=20; ➔ Lvalue error ➔ 10 is a constant



Eg:

`a=10+20; ➔ a=30`

`10+20=30; ➔ Error ➔ 10+20=30 ➔ 30=30 ➔ 30 is a constant.`

Eg:

`a=b=c=100;`

```
≡ File Edit Search Run Compile Debug Project Options Window Help
[ ] NONAME00.CPP 1=[ ]
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main()
{
int a,b,c; // var dec
clrscr();
a=b=c=100;
printf("a=%d, b=%d, c=%d",a,b,c);_
getch();
}
```

9:34

F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu

Activate Windows  
Go to Settings  
to activate Windows.

```
a=100, b=100, c=100_
```

Activate  
Windows  
Go to Settings  
to activate  
Windows.

