SNS COLLEGE OF TECHNOLOGY

Coimbatore-36.
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COURSE CODE AND NAME : 23IT101 C Programming and Data structures

I YEAR/ I SEMESTER

UNIT – I INTRODUCTION TO C

Topic:OPERATORS

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operator

› An operator is a symbol that tells the computer to perform certain mathematical or logical manipulations.

› These operators are used in programs to manipulate data and variables.

Types of Operators

1. Arithmetic operators

2. Relational operators

3. Logical operators

4. Assignment operators

5. Increment and decrement operators

6. Conditional operators

7. Bitwise operators

8. Special operator

› Arithmetic operators are used to perform numerical calculations among the values.

OPERATOR	MEANING
+	Addition
	Subtraction
*	Multiplication
/	Division
%	Modulo Division

```c
#include«stdio.h»
int main()

    int a, b, add, sub, mul, div, rem;
    printf("Enter a, b values : "):
    scanf("%d%d",&a,&b):                         // Reading fwo values
    add=a+b:                             // Addition Operator
    sub=a-b;                             // Subtraction Operator
    mul=a"b:                             // Multiplication Operator
    div=a/b;                             // Division Operator
    rem=a%b:                             // Remainder (Modulo) Operator
    printf("Result of addition is=%d\n", add);
    printf(" tesult of subtraction=%d\n", sub):
    printf("Result of multiplication is=%d\n", mul);
    printf("Result of division is=º/ad\n", div);
    printf("Result of remainder-%d\n™,rem);
    return 0;     }
```

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RELATIONAL OPERATOR:

› Relational Operators are used to compare two quantities and take certain decision depending on their relation.

If the specified relation is true it returns one.

If the specified relation is false it returns zero.

OPERATOR	MEANING
<	Is less than
<=	Is less than or equal to
>	Is greater than
>=	Is greater than or equal to
	Is eqital to
!=	1s not equal lu

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› Logical operators are used for testing more than one condition and making decisions.

OPERATOR	MEANING
&&	Logical AND
I	Logical OR
!	Logical NOT

Logical Operator

```c
#include<stdio.h»
    void main()

        int a, b;
        printf("Enter values for a and b : ");
        scanf(""%d %d", &a, &b);
        printf(""\n %d",(a<b)&&(a!=b));
        printf(""\n %d",(a<b)||(b<a));
        printf(""\n %d',!(a==b));
```

ASSIGNMENT OPERATORS

- › These operators are used for assigning the result of an expression to a variable.

- › b=a; OPERATORS:
          ==,   +=,   *=,   /=,   %=,

```c
#include«stdio.h»
void main()

int a, b, c;
printf("Enter the values for a and b : ");
scanf("%d %d",&a,&b):
printf("\n the values of= is.%d",c=a+b);
printf("\n the values of +=is:%d",c+=b);
printf("\n the value of-= is:%d",c-=a);
printf("\n the value of *=is:%d",c*—a):
printf("\n the value of /=is:%d",c/=b);
printf("\n the value of %—is:%d",c%=b);
```

INCREMENT & DECREMENT OPERATORSi

- Two most useful operators which are present in 'c'
- are increment and decrement operators.

- Operators: *+ and --

- The operator +* adds one to the operand

- The operator -- subtracts one from the operand.

- Both are unary operators and can be used as pre or
- post increment/decrement.

Special Operators Contd...

Sizeof Operator:

Sizeof is an operator used to return the number of bytes the operand occupies.

Syntax:

Int a;

Sizeof(a) -2

Float v;

Sizeof(v) -4