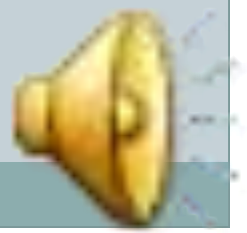
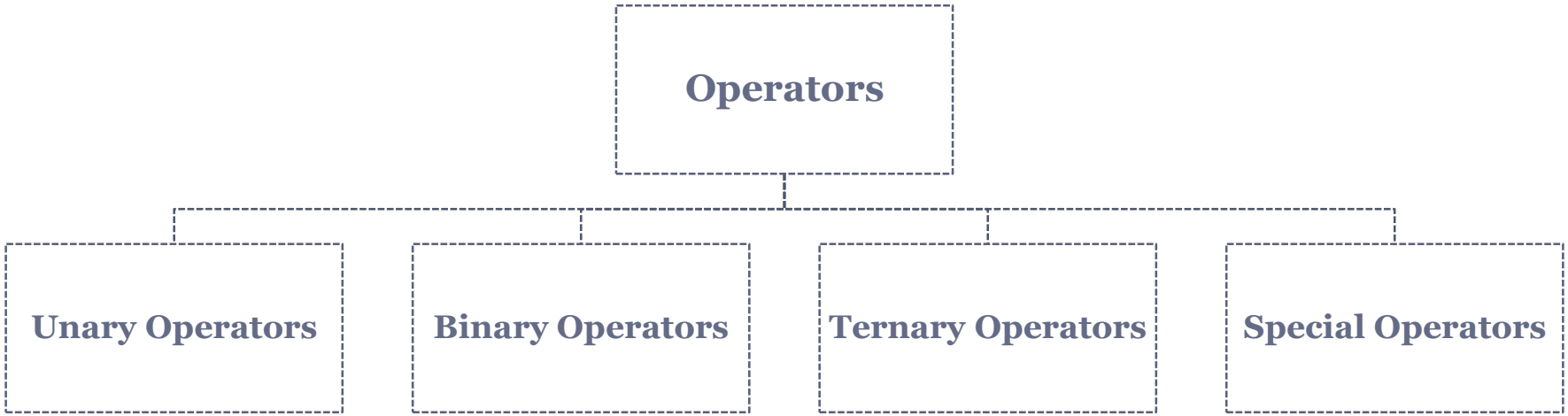
Basic of C Programming

CONCEPT OF OPERATORS



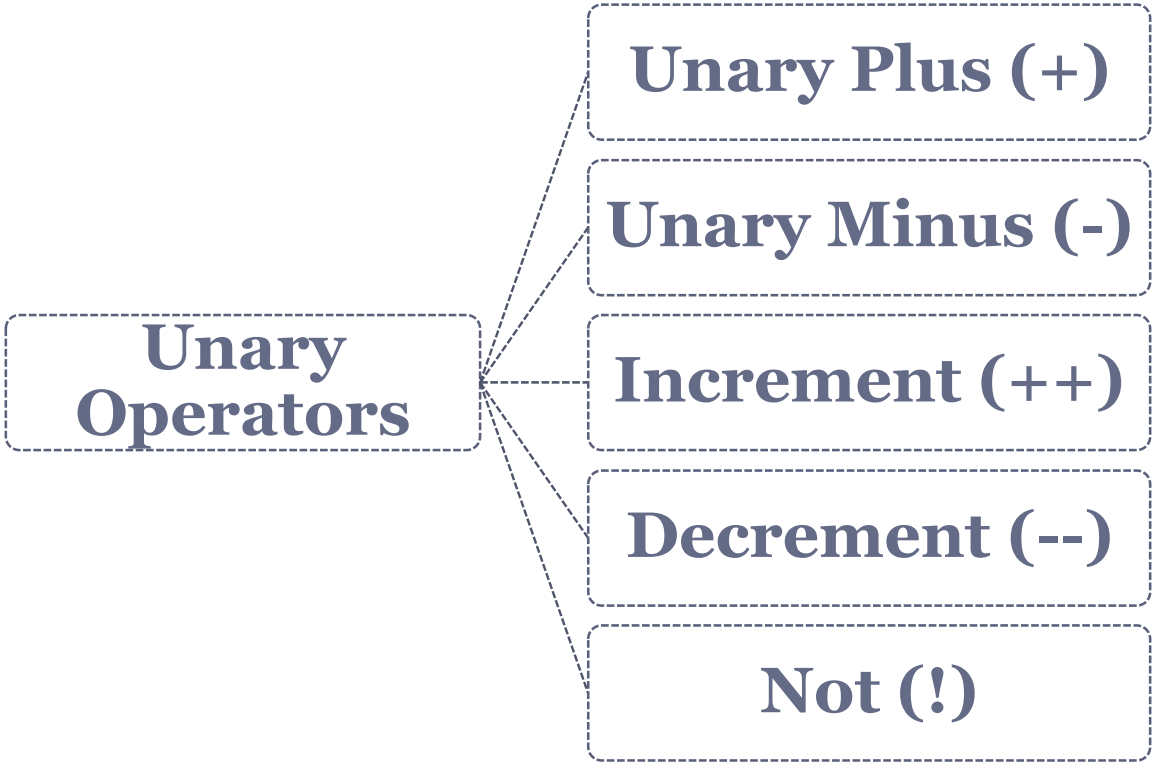
C Operators -

- An **Operator** is simply a symbol that is used to perform operations. There can be many types of operations like arithmetic, logical, bitwise, shift etc.



Unary Operators -

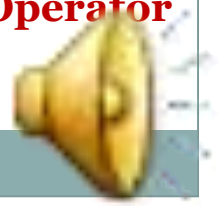
- **Unary Operators** are operators that act upon a single operand to produce a new value.



Unary Operators – in details

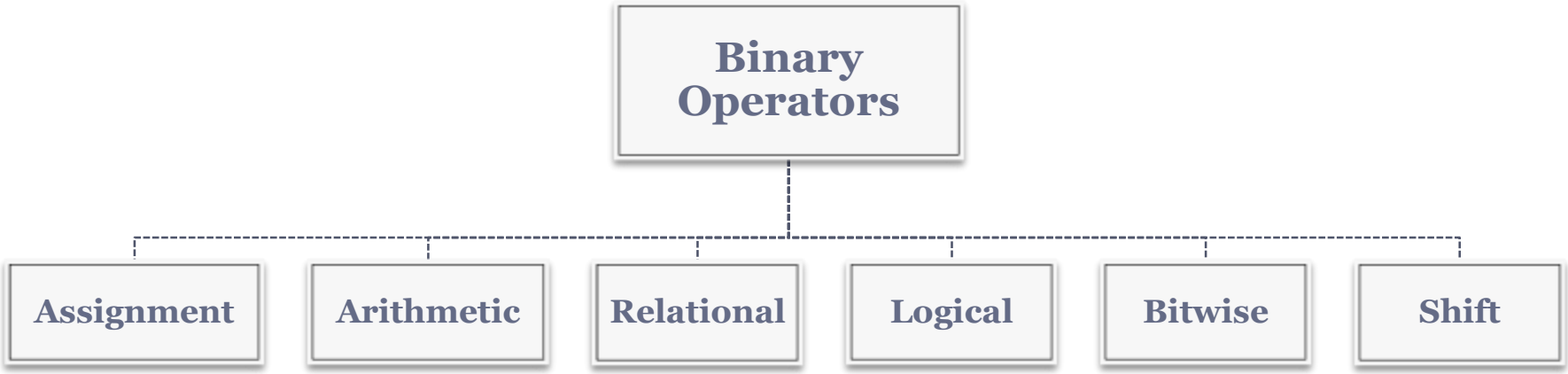
Operators	Description
+	Unary plus operator; indicates positive value (numbers are positive without this, however).
-	Unary minus operator; negates an expression.
++	Increment operator; increments a value by 1.
--	Decrement operator; decrements a value by 1.
!	Logical complement operator; inverts the value of a boolean.

```
#include<stdio.h>
#include<conio.h>

void main()
{
        int x;

        x = 100;                                    //Unary Plus Operator
        printf("\nValue is: %d",x);

        x = -100;                                   //Unary Minus Operator
        printf("\nValue is: %d",x);

        x = 99;

        ++x;                                        //Increment (Prefix) Operator
        printf("\nValue is: %d",x);

        x++;                                        //Increment (Postfix) Operator
        printf("\nValue is: %d",x);

        --x;                                        //Decrement (Prefix) Operator
        printf("\nValue is: %d",x);

        x--;                                        //Decrement (Postfix) Operator
        printf("\nValue is: %d",x);
}
```



Binary Operators -

• **Binary Operators** are those **operators** that work with two operands. The **binary operators** are further subdivided into arithmetic, relational, logical, and assignment **operators**.



Assignment Operators -

• **Assignment Operators** are used to combine the "=" operator with one of the binary arithmetic operators.
• An assignment operator is used for assigning a value to a variable.

Operators	Example	Same As
=	a = b	a = b
+=	a += b	a = a + b
-=	a -= b	a = a – b
*=	a *= b	a = a * b
/=	a /= b	a = a / b
%=	a %= b	a = a % b

Arithmetic Operators -

• **Arithmetic Operators** are used to perform numerical calculations among the values.

Operators	Meaning of Operators
+	Addition or unary plus
-	Subtraction or unary minus
*	Multiplication
/	Division
%	Modulo Division

Relational Operators -

- A **Relational Operator** checks the relationship between two operands. If the relation is true, it returns 1; if the relation is false, it returns value 0.
- Relational operators are used in decision making and loops.

Operators	Meaning of Operators	Example
==	Equal to	a == b
>	Greater than	a > b
<	Less than	a < b
!=	Not equal to	a != b
>=	Greater than or equal to	a >= b
<=	Less then or equal to	a <= b

Thank you…!