Computer Science & IT

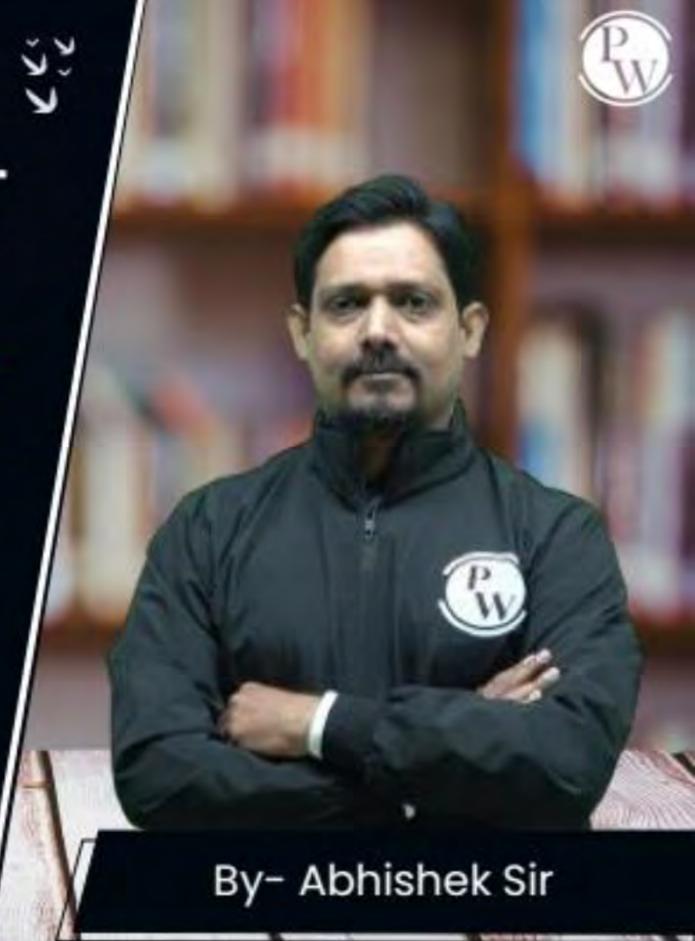
**C** programming





Language Processor

Lecture No. 02





### **Recap of Previous Lecture**



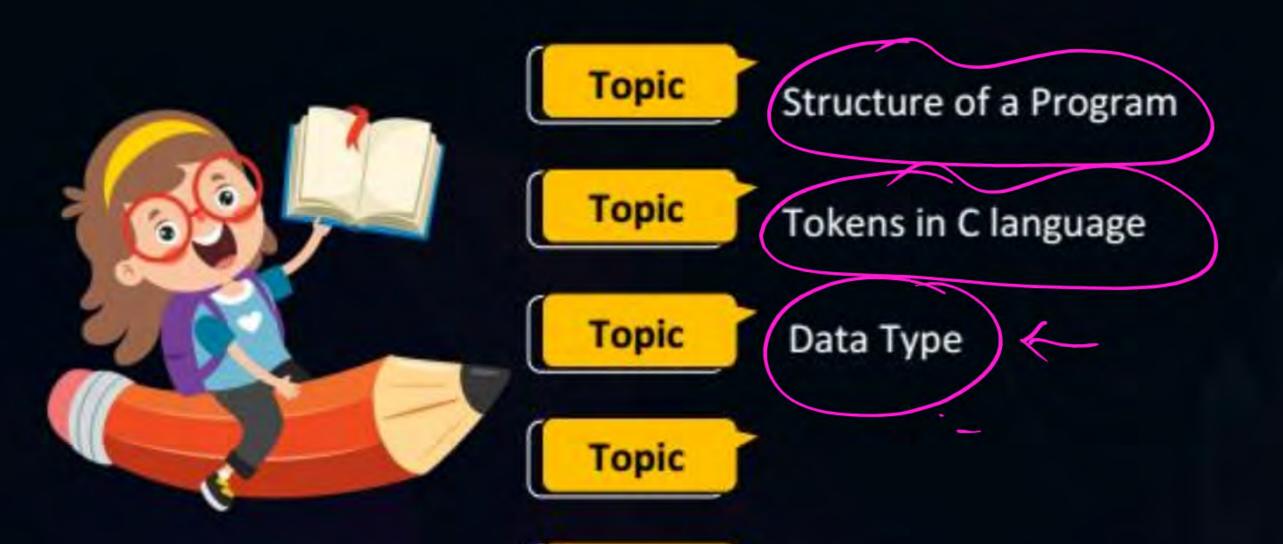


## **Topics to be Covered**









Topic

Basic fundamental unit of Cpoogsamm.

Slide



### Topic: Strcuture of a program



preprocessor Command include < stdio.h> - Punchon Standard input/output comments pront ("Hello world"); // print Hello world Semicolon exe re-uno; Body of function maine Name of function



### Topic: Strcuture of a program



```
point ("Helloworld) - function pront (
                           1 - Punchon
* Statement or exposurion Asgument
terminated by semicolon;

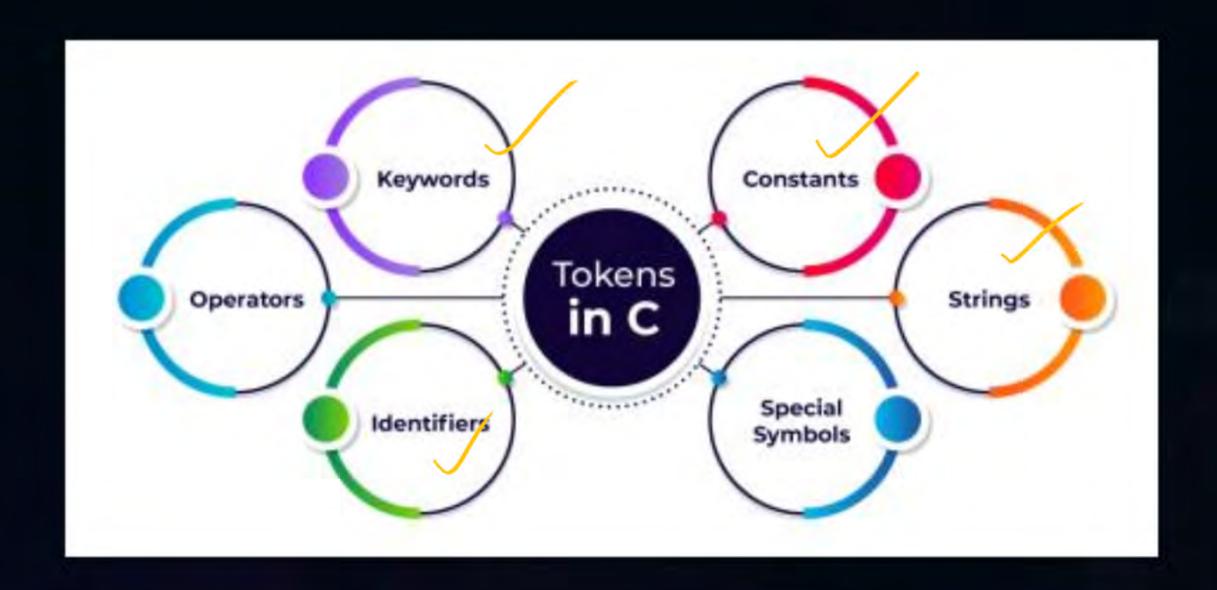
if Not prount then it leads to syntax errors

* Comment one Not executed 2 its used to describe working
 * Jetuin cours function Terminale.
```



### **Topic: Token in C language**







### Topic: Token in C language



```
-fundamenta unit in Cproogramming is called Token
                                                 Decimal (Base 10)
1. Indentifier : Name of variable
                                                  Binary (Bax-2)
2. Kewords:
```

- 3. Stoing "Hello woold"
- (Base 8) 4. Constant: Numeric Constant, character constant, Octal Constant Hexadecimal constant (Base 16)
  5 operator 6. Special character



### **Topic: Identifier**

\* Longth of identifies?

if i want to dedoce integer varioble

(I) int 36a. Int a; Name of variable or function

(II) int \_364.

Identifier

(III) int - Bdox Keyword

Identifier must start with underscore or alphabet followed by underscore all phabet or digit.

(II) int emp\_id;

alphabet, upper, Lower, underscore, digit.

(I) int 36\_dept; 1)

(III) int @-idid

Slide



### Topic: Reserve keyswords



auto	double	int /	struct	Keywood Reserved
break	else	long	switch	we can't use these Name
case	enum	register	typedef	Name of Identier
char	extern	return	union	1 valle of
const	float	short	unsigned	Int allowed
continue	for	signed	void	Case Sensitive
default	goto	sizeof	volatile	
do	if	static	while	inf and Int.



#### **Topic: Constant**



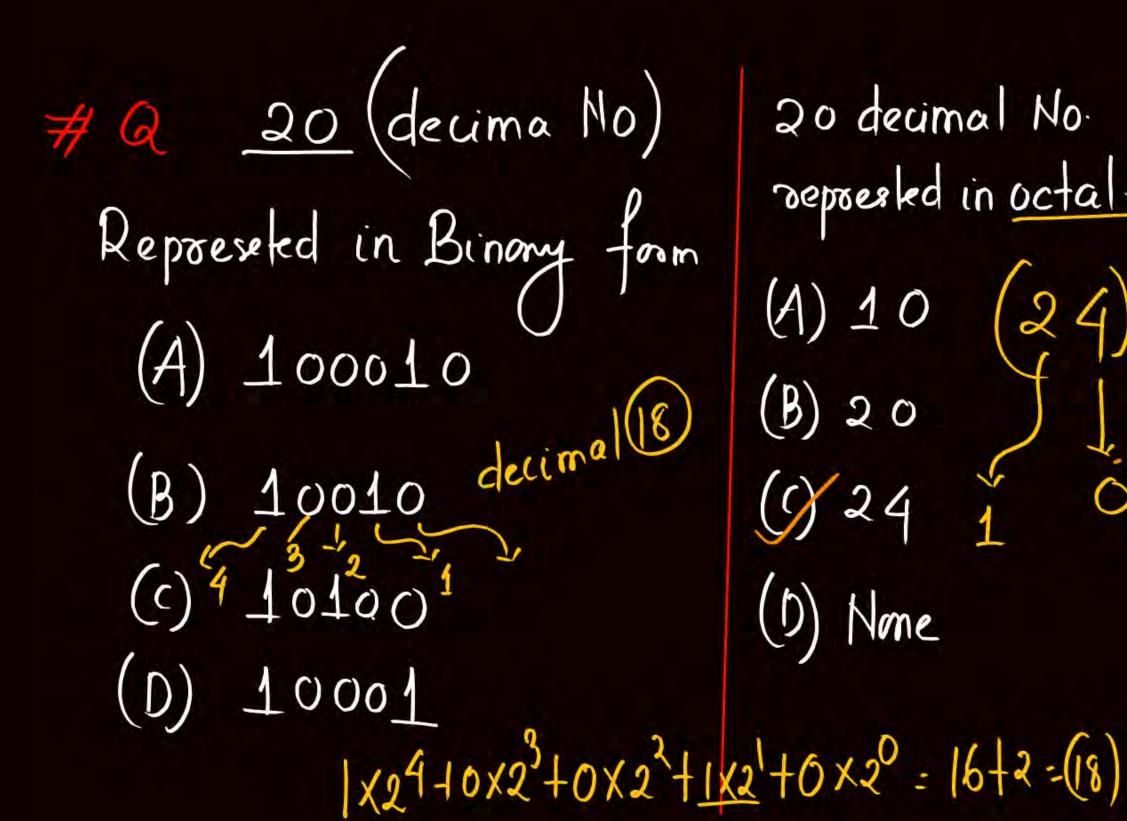
Delarahon 2 Inihalizahon

A variable name a of type integer Declaroda Inihalize to 10.

Declarative Statement

A variable name a of type integer is declared.

10 is Numeric Constant



20 decimal No. represed in octal.

(A) 10 
$$(24)_8 = 2\times 8^{\frac{1}{4}}$$
  
(B) 20  $(24)_8 = 4\times 8^{\frac{1}{4}}$   
(S) 24  $(5)_8 = 2\times 8^{\frac{1}{4}}$   
(D) None

Numeric Constant; octal No. 6 int a = 024; I first Nameric value o'then No. is octal. int a : 0×14; ) Ox then No. is a Hexadecimal  $\frac{41}{5}$   $\frac{1}{1 \times 16^{0}}$   $\frac{4 \times 16^{0}}{1 \times 16^{0}}$ Humeric Constant 16+4 (20)



### **Topic: String**



```
Any thing woitlen between " is a strong constant.
   point? (" Hello woold");
                            ) croqument
                             Stoing
     String is array of characters
```

# Operators unany 1

1. Anthometic operators: +, - \*, /, 0/0, =, +=, -=, \*= (++ --) pust;

-Bingy conversion

Binay. 2

2. Logical operator (AND 22 (++, --) proc;
OR 11, Negation!)

Ternany. 3

3. Relational operator

4 Bitwise operators: (2,1,1,>>, <2,~)

5 ? ternary operated



### **Topic: Special Symbol**



leyword

Jentifier operator Numeric Constant



### **Topic: Unsigned Integer Representation**



Binary Convenion 10

Divide by 2 and Note the

Remainder

$$(1010)_{3}^{2}$$
  
 $1\times2^{3}+0\times2^{3}+1\times2^{1}+0\times2^{0}$   
 $8+0+2+0=10$ 



### **Topic: Unsigned Integer Representation**



$$(27)_{40}$$
  $(11011)_{2}$ 



### **Topic: Unsigned Integer Representation**





### **Topic: Signed Interger Representation**



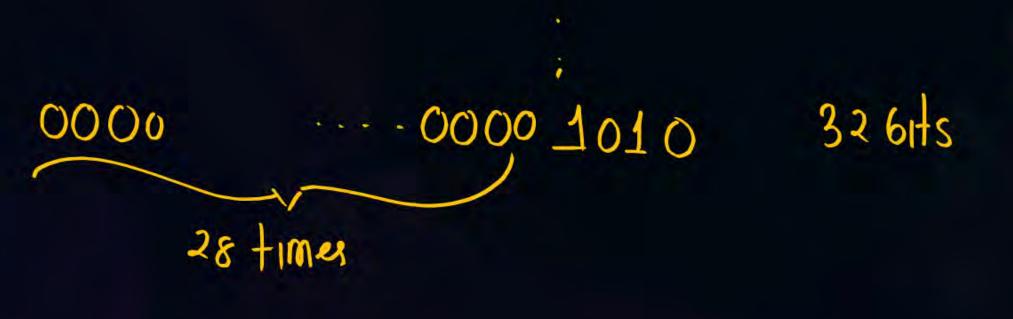
Signed No. Representation

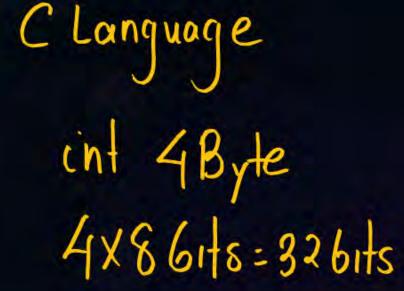


### **Topic: Signed Interger Representation**



inf 
$$a=10$$
;  $0.1010$  56H  
inf  $a=-10$ ;  $0.01010$  66H  
 $0.001010$  76H







### 2 mins Summary



Topic

Structure of a program

Topic

Token (identifier, keyword, string, operator, special chors.
Unsigne 2 Signed No - I ve No

Topic

Topic

Topic



# THANK - YOU