

Lecture - 2

Introduction to C++ and Write first code

Computer Memory units:

Smallest unit of Memory : 1 bit

(1 transistor can represent 1 bit)

1 Byte 1 8 bit

(Kilo Bute) 1 KB = 210 byte (Mege Bute) 1 MB = 220 byte = 210 KB

(Giga Byte) 1 GB = 230 byte = 210 MB

= 240 byte = 210 GB (Tera Byte) 1TB

Computer only understand Binary number. 0 & 1.

ASCII TABLE:

Every symbol, sign present in keyboard have

Unique ASCII Value.

A -> 65 -> 1000001

B → 66 → 1000010

0 -> 48 -> 00110000

a -> 97 -> 01100001

 $z \rightarrow 122 \rightarrow 01111010$

to sinds it work and must employed

Introduction to C++ 8

C++ is extension of c language.

simple code to point a message:

int main () { -> Tells from where it start reading Cout << "Hello CoderArmy";

(Peturn 0; -> Lell end of program.

} -> tells where it can stop reading

→ #include (isstream) → Header file, library where meaning using namespace std; is defined.

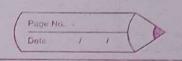
Cout (<" Hello CoderArmy"; Fefurn 0;

J

9f we don't put "using namespace std;" at
Starting then like have to Write at every
Staktement When I've use Cout.

Std:: Cout <<" Hello CoderArmy";

Starre Court (Metro Codanting



: nextline or endl 10

include (ibstream)

by 9+ is a library where meaning of every term which is used in program is defined.

Cout << a << b << c>

*

4) 9t print Value of a, b, C.

Variables and datatypes

A human can understant Number System, Alphabet, Word, Boolean.

Just like Computer also understand these With different names the same same same same same

1) int -> Example : 4, 69, 0, -9, et.c. Size: 4 byte

for Storing a integer value it takes 4 bytes.

€x % 10 → 1010

In int

10 in Binary, number.

int

datatype Variable Value

Rules for Writing a variable name:

- -> Name your variable is related to your code
- -> Variable name always start with alphabet or underscore.
- -> Variable name Consist of number, approper or underscore.
- -> Keylword are not put as variable name.

keywords:

	The	keywords are reserv	ed and the me	eoning are fixed.	
	asm	double	new	Shitch	
	auto	else	operator	template	
	break	enum	private	this	
	Case	extern	protected	throw	
	Cotch	float	Public	try	
	char	for	register	typedef	
200	class	friend	return	union	
	Const	goto	short	unsigned	
	Continue	e if	signed	virtual	
	default	inline	Sizeof	Void	
Control of the last	delete	into the into	Static	Volatile	
	90	long	Struct	While	
	-	9			

(2) char

Ex: charc = 1/b;

is represent Within single quote

Size : 1 byte.

main() { int

int a = 10;

cout << a; -> It prints 10.

int man() f

int a = 10;

char c = 'z';

cout << "a"; → prints a

Cout << a; → prints 10

Cout << c;

→ prints Z

return o;

(3) float -> decimal value

ex: float a = 9.62;

froat height = 5.9;

Size : 4 byte.

Double -> big decimal value (4)

size : 8 byte

Ex: 634. 982398648326

L) This can't be stored

in float.

Size : 8 byte.

Teacher's Signature.....

(5) long int : ex: long int a = 56789234; for storing large value.

Nhich can't be doted in int. size = 8 byte. int main () f float num = 23.45; Cout << num << endl; double num1= 29.685674; Cout << num + << end); return 0; Comment: Sular Years & Assault * single line 11 This is single line Comment Multi line This is Multi line house and and Comment */ How to store Negative Number: Num = 5 L) 101 for -5
find 2's Complement of 5

101

I's Complement (010)

2's comprement(011)

2's complement :

positive Negative

for 3 space (bit)

Total possible -> 8

positive = 3 / Negative = 4

zero = 1

32 bit

Total possible -> 232

positive = 231 -1

bool

ex ? bool isprime = true;

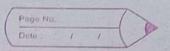
bool isodd = 0;

Size = 1 byte

0 01 1

tue or false.

```
int moin () {
        bool num = true;
         Cout << num << endl;
         return o;
   To find the size of any datatype:
    Code :
      int main () {
          int number = 10;
          Cout << sizeof(number) << endl; return → 4
          float num = 10.99;
           Cout << sizeof (num) << endl; return -> 8
   Typecasting:
*
      int main () {
           char c = '8';
            cout << c << endl; → output = 8
            char a = 65;
            Cout << a << endl; -> output = A
          return o;
                     -> Typecasting
```



Char a = 65; / 4 2 I we take that datatype and store integer so Computer Convert integer value to Binary number 65 = 1000001 then it is converted and checked in the Ascil table and print the character associate With it. 10 in desired 1000001 → A int main() { 01110010 int c = 'A'; - Converted into Binary and Cout << c << endl; then check in AscII return o; and return the integer Value associated With Output = 65 int main () & material temperature that I have char c = 590; cout << c << ends; output = N. return 0; Daines to Gives a Warning Statement an character we can store only 28 value. Maximum We can store 28 = 256 value. 0 to 255. 1 miles

But We give as input
590 So, it take Modulo With Maximum storage capacity 596 % 256 1) (78)

L) It give output which character is associated With Binary representation of 78. 64 32 16 8 4 2 1 78 -> 01001110 L) It give 'N' output of previous code. Conditional Statement : (If - else condition) * Find greatest among two number. a = 10; b = 15 int main() { int a = 10, b = 15; if (a > b) 11 Output : 15 Cout << a; else Cout << b; return o;

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Operator:

Comparison operator:

check given number is even or odd.

$$\rightarrow$$
 even % 0, 2, 4, 6, ---

Number %/6 2 = 0 (Even)

code :

e 13e

return o;

*	For Multiple Condition:				
	FOR MATHUE CONSTRUCT.				
	if () {				
	3 A Proposition of the state of				
	else if () {				
	3				
	else if () {				
	the tought site and the second site of the second to				
	1 TO THE STATE OF				
	the state of the s				
	else {				
	The state of the s				
	3				
	0				
->	find given number is +ve, -ve or zero.				
	int main () {				
	int number = 16 ;				
	cout << "positive";				
	cout ((" Negative") positive.				
- 114	else for any the				
	Cout (<" zero";				
	3				
	return 0;				
	3				
	Teacher's Signature				

	Page No.: Date: / /	
->	22 -> AND operator	
	II → OR operator	
	Given 3 number, print Maximum	
	int main () {	
	10+ 0 = 10, b= 15, C= 20; - 0 000	
	if (a)=b && a>=c) +0	
	Cout << a; Output	×
	e19e if (b)=a && b)=c) 20	
	Cout (b)	
	Cout << c; "Water supression trace)"	
	return 0;	
	1 () anoma to the	
	toli = dent stal	
	O AND O O	
	O AND I -O	
	ID AND O -	
	1 AND 1 1	
	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
The same	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
- 620	1 OR 1 -> 1	