	3:11/2
	3/03/2023
	Pointers
arato	imposedt ni op læin doidw exedmin ett
	interal= 500 and and ag and as invanidable
	5 mattrable control
No. 1	a
	But is it really that memory is given name
baro	But is it really that memory is given name as a. The answer is no. An address is
	assigned to that memory location 4 then we access the variable at that particular
	we access the variable at that barticular
	location. There is a data structure named
	assymbol table in which there is mapping
i	Scarnieu with Carl

stored between the variable name & address.
1751776 (0.000) (0.53)
int x = 12
There will be a mapping stored in symbol
table which will map oc to an address & this
(memory management) is done via OS. But
can we get to know that what is the address
to which x is mapped in the symbol table. The
answer is yes & we can get to know the address
withthe & operator.
4 o perator
This is the ampersand operator & is also known
as address of operator.
int a = 15 june on a sight point 18
cout << a << endlished to the
Cout << &a << endli -> Hexadecimal value will
be displayed of no act
Also different variable will have different address.
Concept of pointers
int * ptr;
The above statement means that it is a
pointer to integer data. If we want to
Store the address gwe can Store That
address with the help of pointers.
int a = 5; raddress of operator
int * p = 4 a; name of variable
I Dome of Pollycor
data Pointer/Dereference type Syntax/operator

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, , , , , ,	Here we get to know that p is the pointer to integer data.								
	to integer data.								
	char * p=Ach;								
, 1	This means p is a pointer to character data.								
1 / 0	This means plis a pointer to boolean data								
\ (c_1)	aland de mission al al badana al a de chand								
MOte-	Also note that in pointer, address is stored								
	always.								
	int b = 5i								
MIMIC	int * ptr = & bin language								
	cout << * ptr > Will print 5								
	4 dereference operator								
	By using * ptr, we can access the value								
	present at the address.								
1	19 1 . 2 cm 3 1 2 11 - Clbn3 25 5,2 2 >> 30 3.								
	int z = 25;								
·acorty	int * k = & Z ; Now aldring to the till								
	112								
	· [112] -> 25 protoing to fdesino)								
	k z								
	Pointer is not a data type. It is basically								
	a variable that stores the address of								
	another variable. We can access address &								
	value via pointer.								
	int * ptr = dai								
	cout << ptr << endl : // Access 11								
	cout << * ptr; //Access value								
	17 recoss value								

	* ptr means the value stored at address
	stored in ptr.
	cout << 4 ptr j -> Address of ptr block?
	Size of pointer
	inta=5; charch=°a';
	int * btr = & a; char * ptrl = & ch;
	What will be the size of ptr and size of ptr1.
	Are they same or dependent on the size of
	data type of pointer. It is not dependent
	to which it is pointing but it is storing some
	thing i.e. address and hence size will be
	same & i.e. 8 bytes.
	ad or mad coses done of see to really
	Sizeof (ptr); ? Will be some - 8 byte / however
	Size of (ptri); Jusystem dependent 80%
	101 FOX 9 (
	Why we need pointer?
	Duanamia mamory allocation is done via
	II The same management pointer is
	10 CCCELL DOCKENS
	pointer. There are other applications of
	pointers also.
0.1	pointers at the state of the st
Note	int * btri & Segmentation fault
·	cout << * ptr j will occur as we are
	accessing memory which
	sound so the and the pointer
	This is a bad practice. To rectify it we use the concept of null pointer.
	the a 14 of hull bointer
	the concept of
1972	·

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Examp	int * ptr = nullptr j // New practice							
	int * ptr = 0; //Old practice							
	Pointer arithemetic							
	int a = 5i $int * b + x = & a i$							
	int * btr = & a i							
	ptr → 104 107							
	ptr = ptr + 1 i // Changing address							
	Now ptr will have 108 Stored as int							
d*	takes 4 bytes space.							
am n a	e in the state of							
	* btr = * btr +1; // Changing value							
	5+1 = 6 min 2							
	Now if we do cout < <a 6="" be<="" i,="" th="" will=""></a>							
	printed.							
622	104 (17)							
ex	ptr System Deed Southers							
	First use							
	a 10 * 20 (* b * 2 20							
	4a 104 (* btr)++ 10							
	ptr 104 ++ (* btr) 12							
	*btr 10 $a = a + 1 + 13$							
	4 p t r 208							
-5	$*b = *b \times 2 = 30$ $*b = *b/2 = 15$							
1	$*p = \pi p/2$							
	Copying pointer to another pointer							
6.71	Copying pointer to another pointer inta=5;							
	int = 5i int * b = & ai							

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							⇒ 5					· ·
				04			104	<b>-</b>				
				312						<u>'</u>		-
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	4a	104		9_	104							-1,
	þ	104		46	312	,	cout	<b>&lt;&lt;</b>	<u>(*q</u>	ر (۱۹)	2	_
	& p	208		* 9	5							_
						0 - 2	-				\	-
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	11	* 9	= þ	ノ	9	312			10	104		
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