

Ques:

Date: 21/11/2022

int \rightarrow 4 bytes

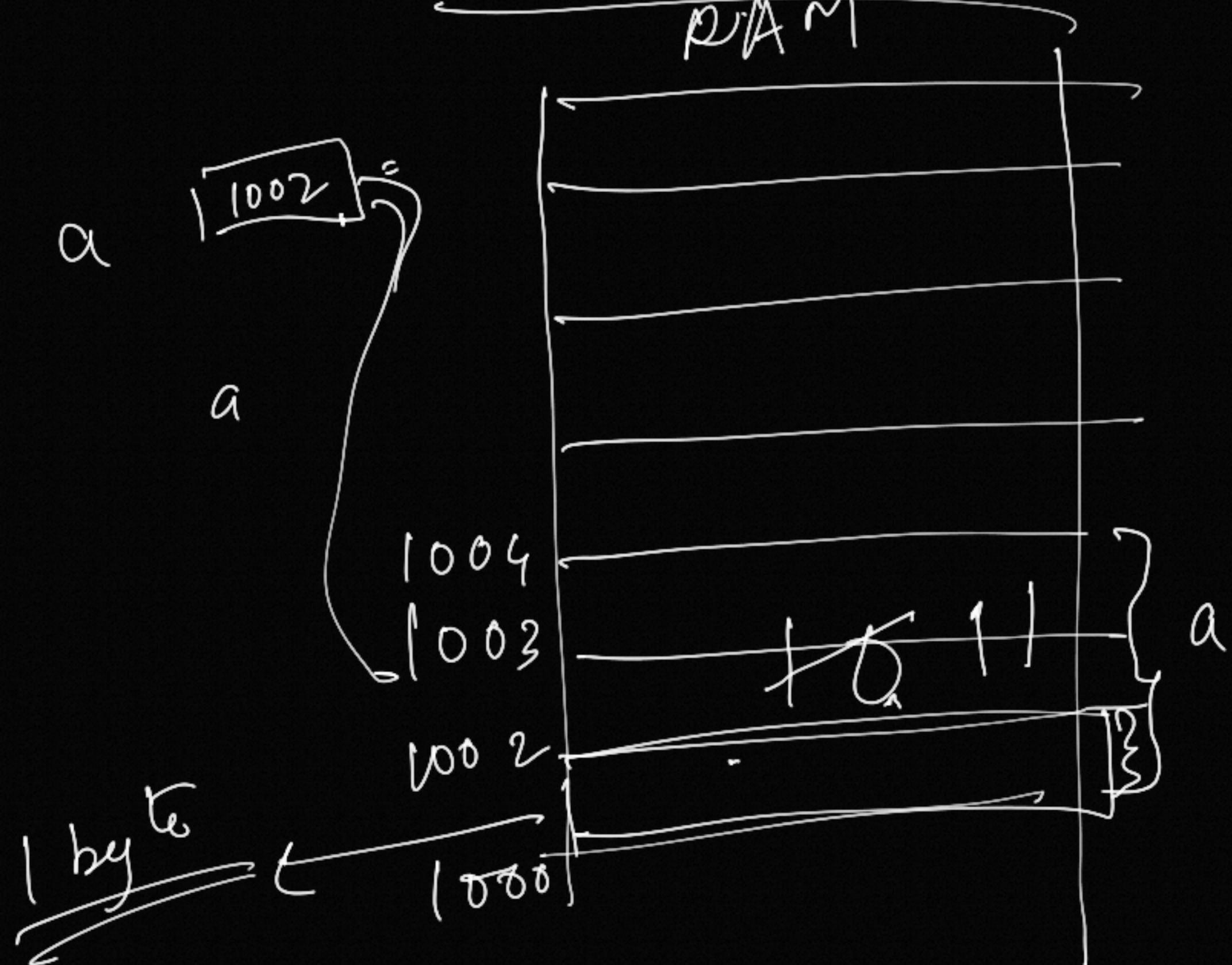
char \rightarrow 1 byte

float \rightarrow 4 bytes



$$a = 10$$

a++



Pointers

↳ variable ptr stores the address of
an other variable.

int a;

a = 154;

print(*P)

int *P;

(54)

(& a)

& P

P = & a

1203

*P = 80

int *P

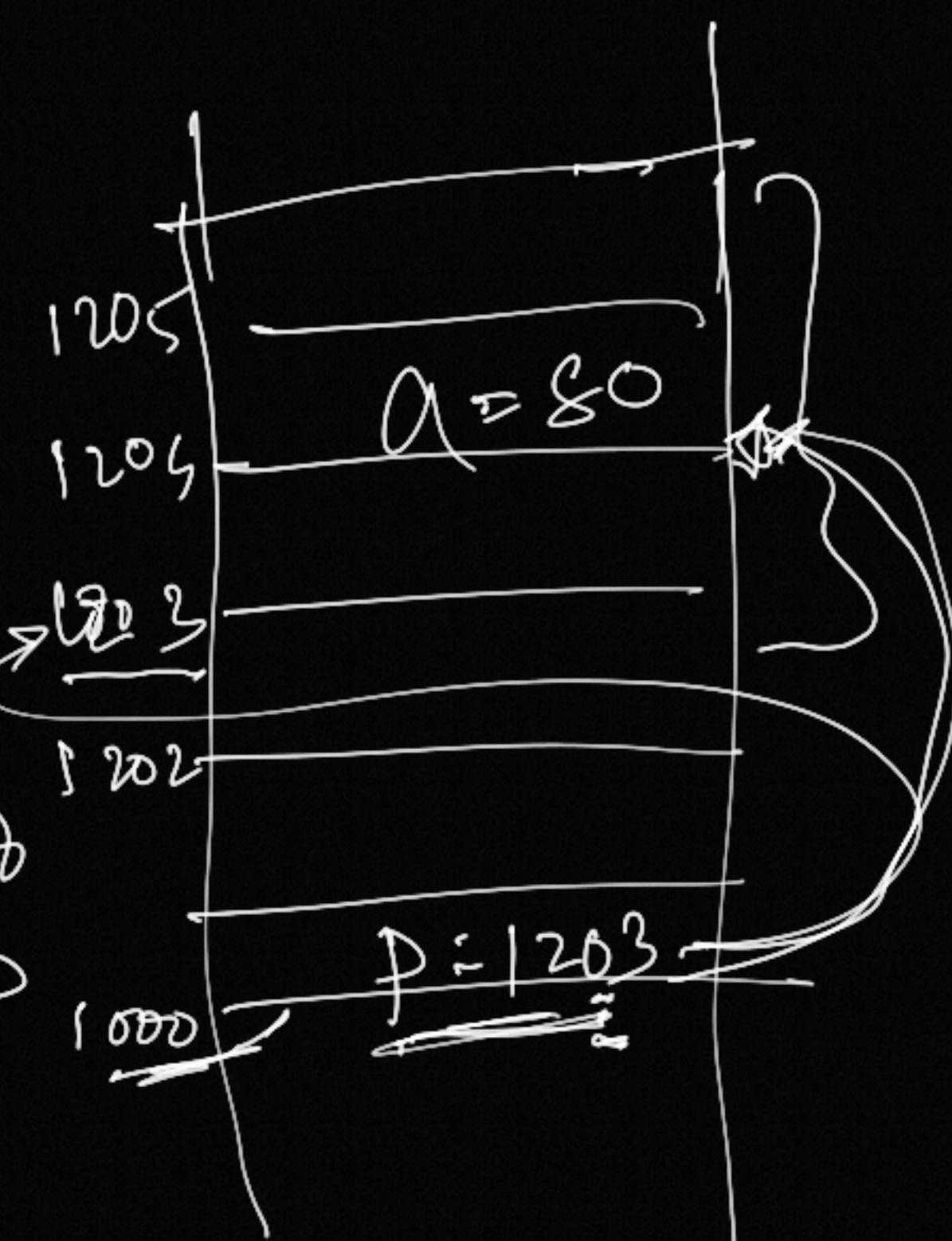
a → 1203
value at the address of

P

P

1000

P = 1203



dec:

$$\text{cnt} = 4 \text{ bytes}$$
$$5 \times 4 = 20 \text{ bytes}$$

if p =

cnt A [5]; size

$$A[2] = 3$$

$$A[4] = 5$$

$$P = 2000$$

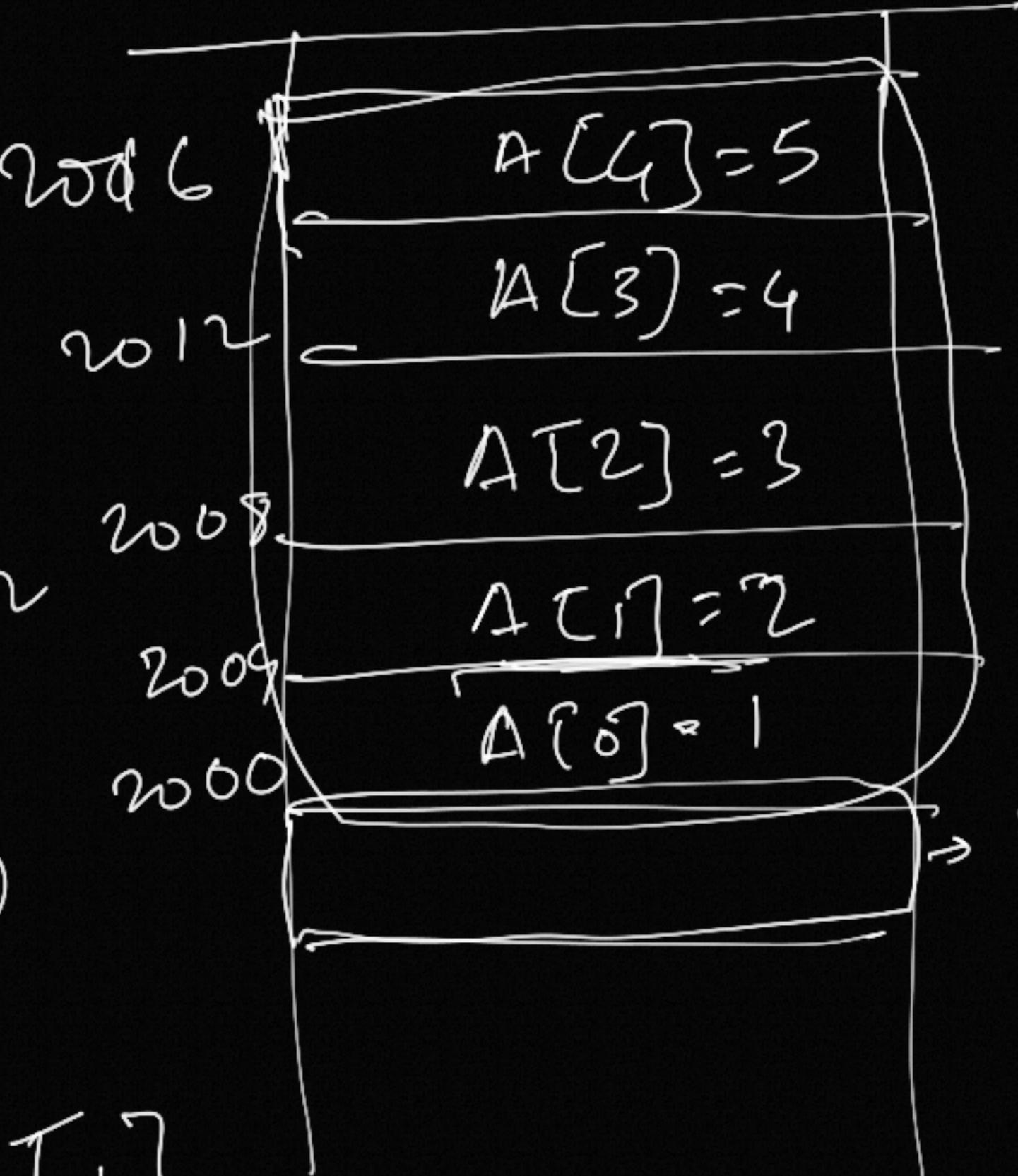
$$P + 1 = 2009$$

$$*(P+1) = 2 \Rightarrow A[1]$$

i

$$P + 3 = 2012$$
$$*(P+3) = 4 \rightarrow A[3]$$

Date: 22/11/2022

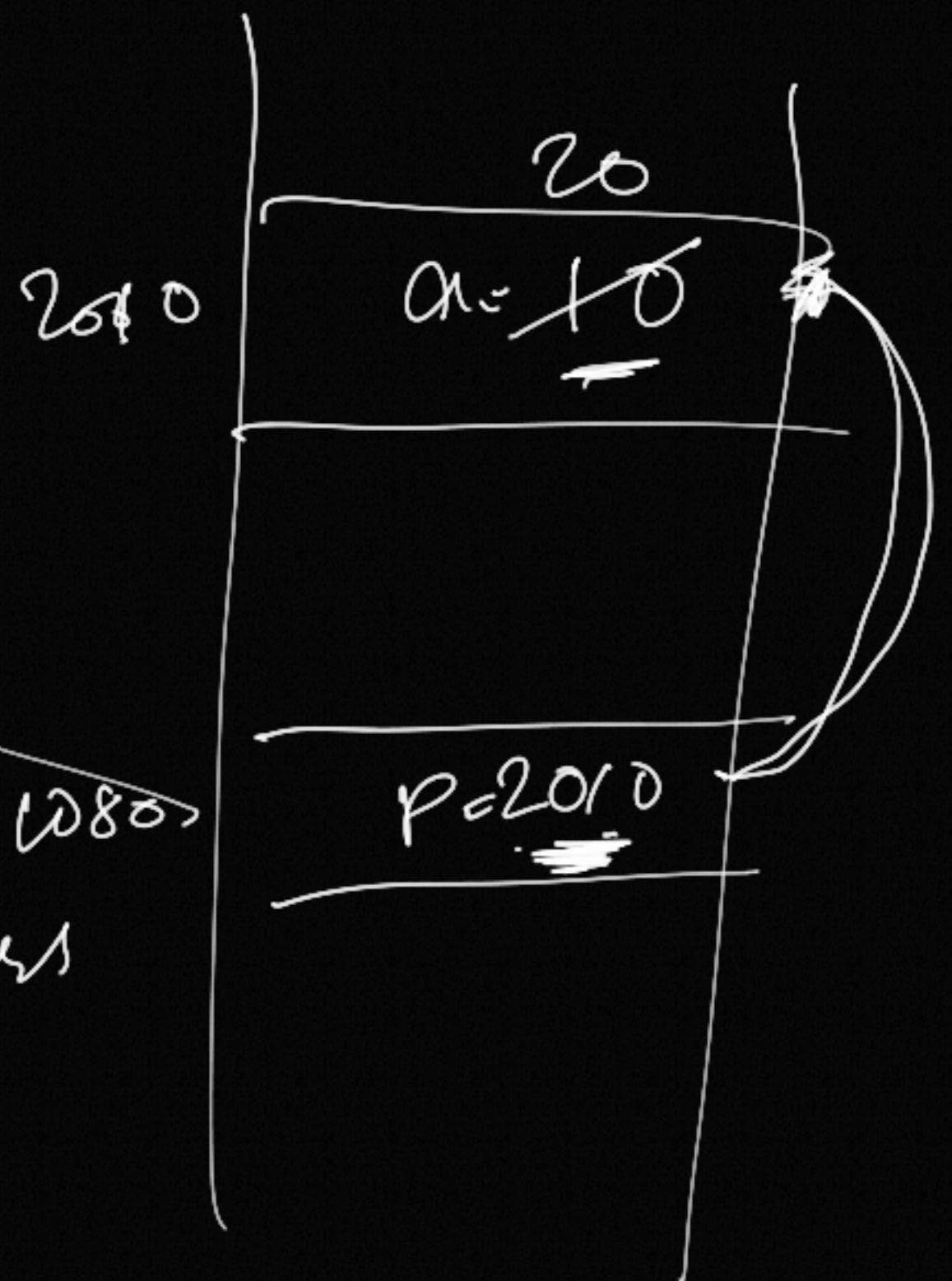


int a = 10;

int *P; \rightarrow address

P = &a; \leftarrow value at 1080
 \rightarrow the address

*P \leftarrow γ
*P = 20



Lee:

Array

Date: 29/11/2022

Array as ADT

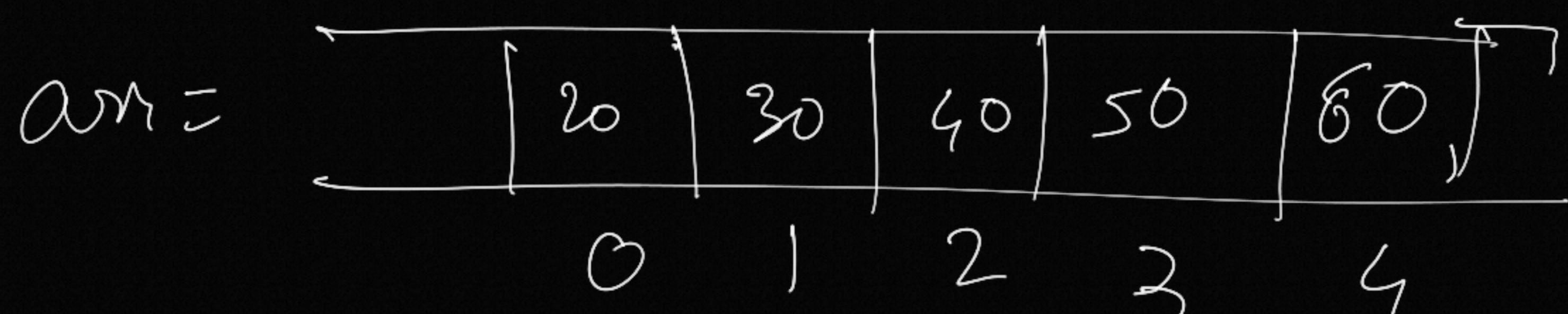
C → Create

R → Remove

U → Update

D → Read

} 3 basic operations
Search
Insert
Delete



found_element = 40 $i=0$ $arr[0] = 20$ 40 N

$arr[1] = 30$ 40 N

$arr[2] = 40$ 40 ✓

i < n-1 arr[3] = 60
arr[4] = 260 ✓

A	↓	$A[5] =$
$=$	0 1 2 3 4 5 22 41 2 12 13 1	33

$$\max = A[6] = 22$$

$$\min = A[0] = 2$$

for ($i = 1$ to 5)
 if $22 < 41$
 $\max = 41$

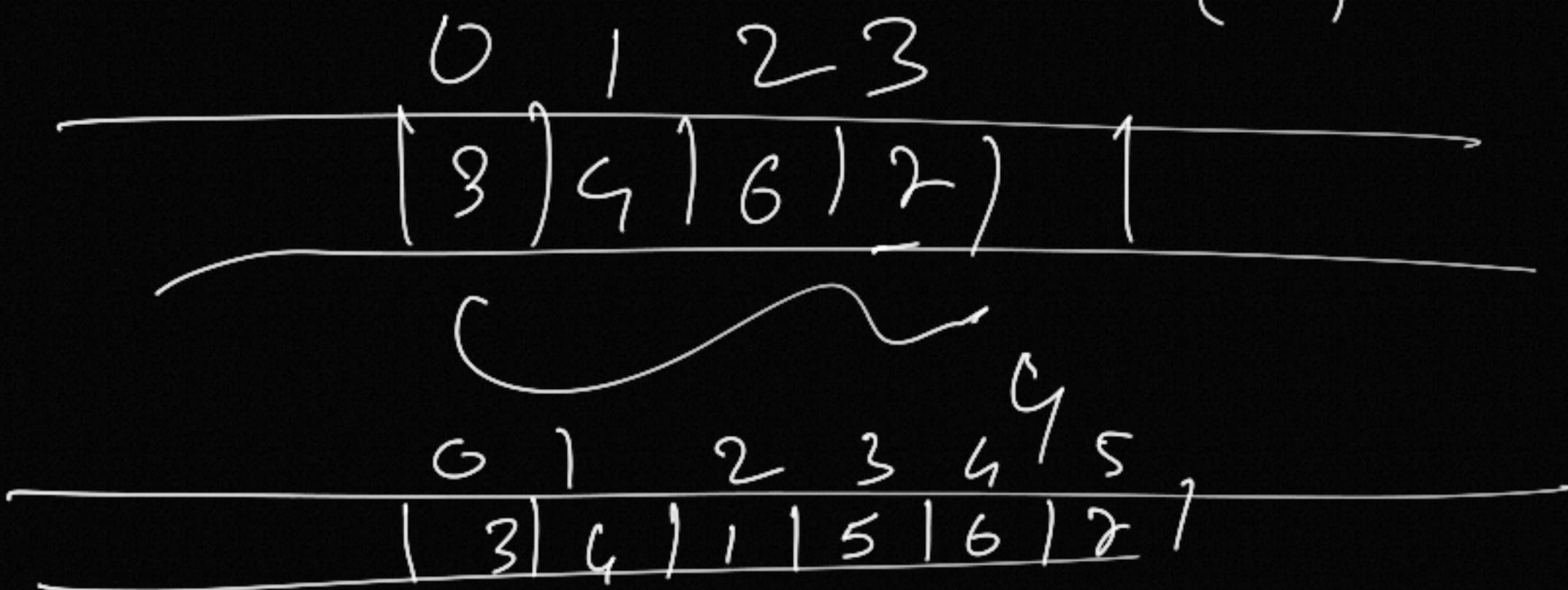
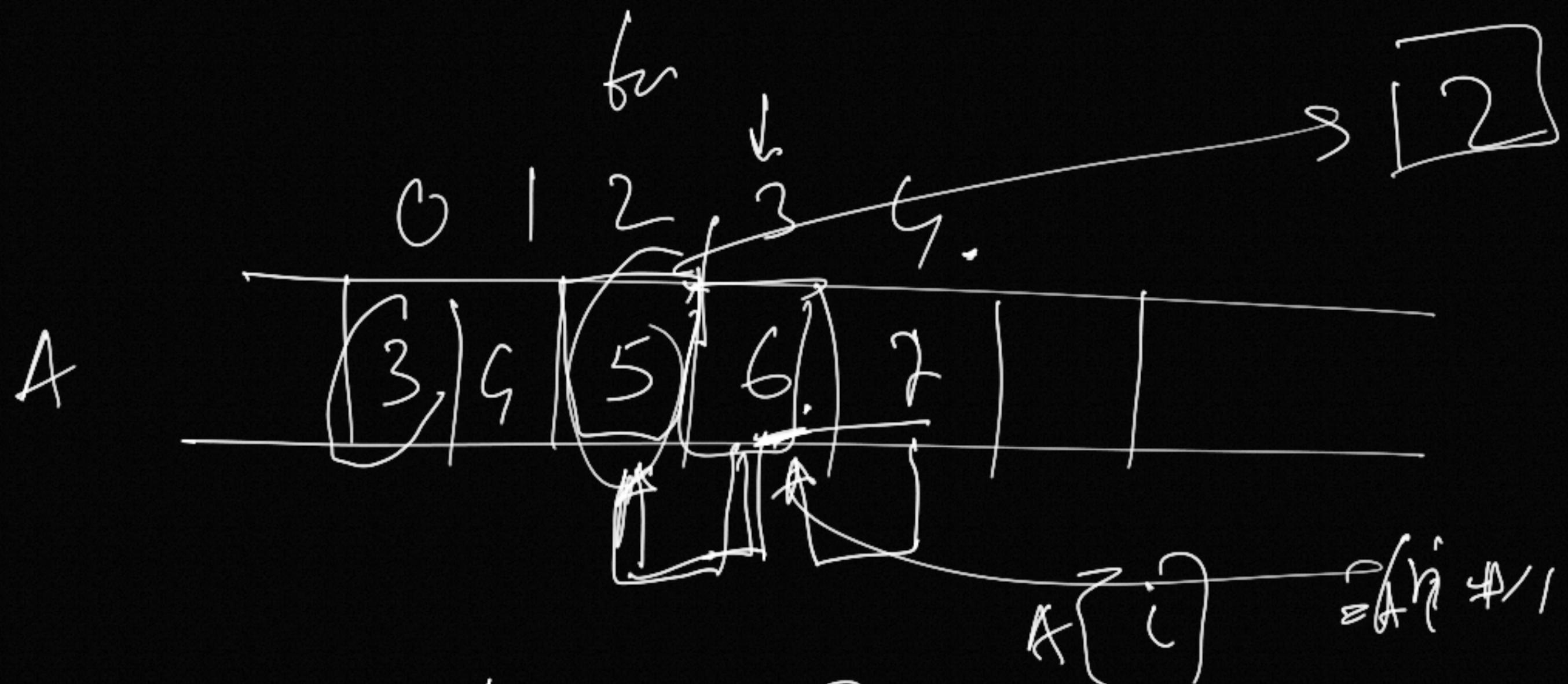
$$\text{interval} = 33$$

$\cancel{A[1]}$

if ($22 > 2$)

$$\min = 2$$

$$A[5] = 33$$



$$AT[n-1] = 5$$

for ($i = n-1$, ($x = pos$, r))

$$AT[i+1] = ?$$

$$AT[i] = 5$$

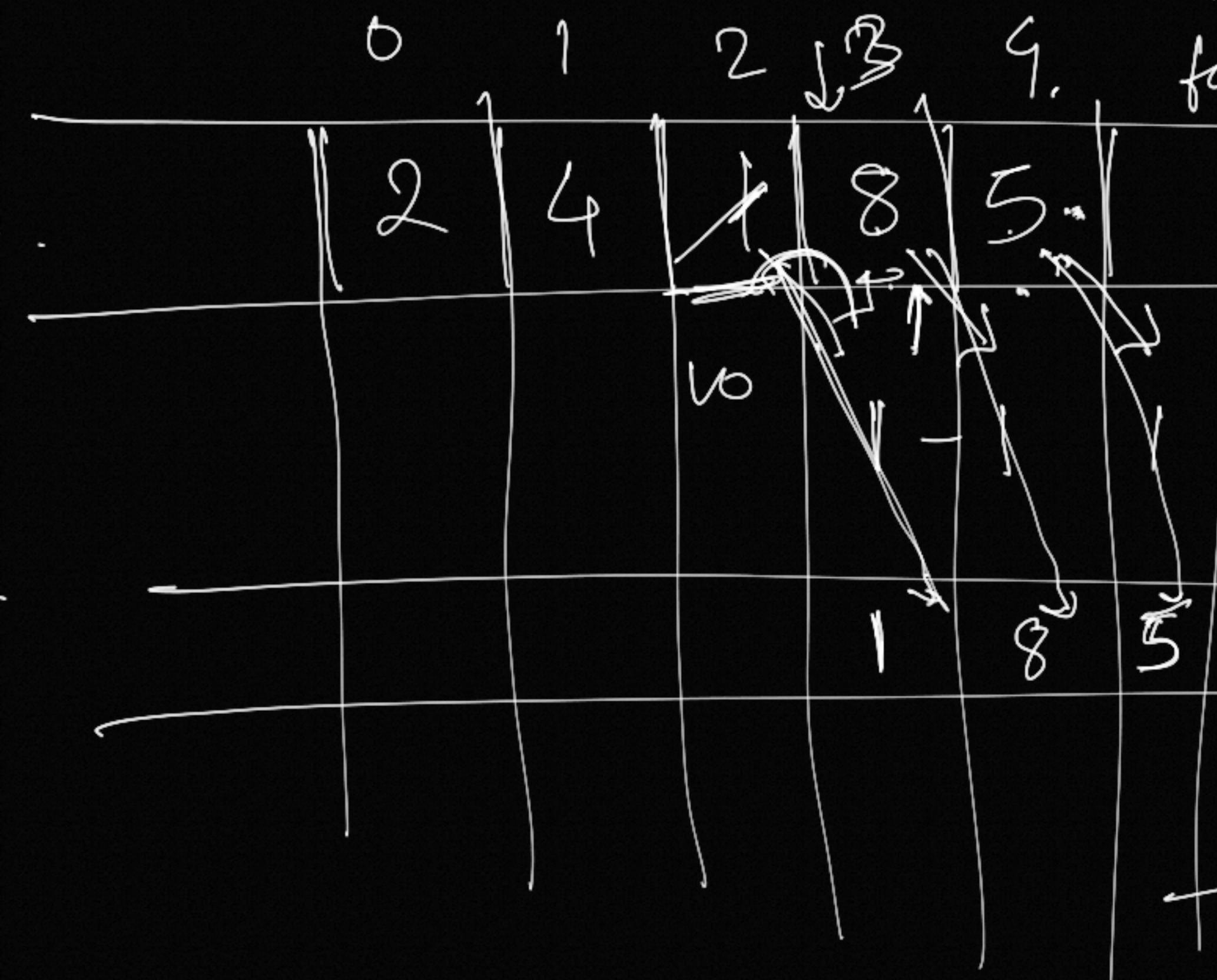
$$AT[3] = AT[4]$$

$$a[pos] = 10$$

$$val = 10$$

$$pos = 2$$

A.



Syntax

{ 5, 3, 2, 1, 8 }

3 2 1 5 | 8

3, 5, 2 1 8

2 3 1 | 5

5 > 2

2 1 3 5 |

Swap

3, 2, 5, 1 8

2 1 3 | 5 8
Stack

Unstack

3 2, 1, 5, 8

3, 2, 1 5, 8 | Sentel

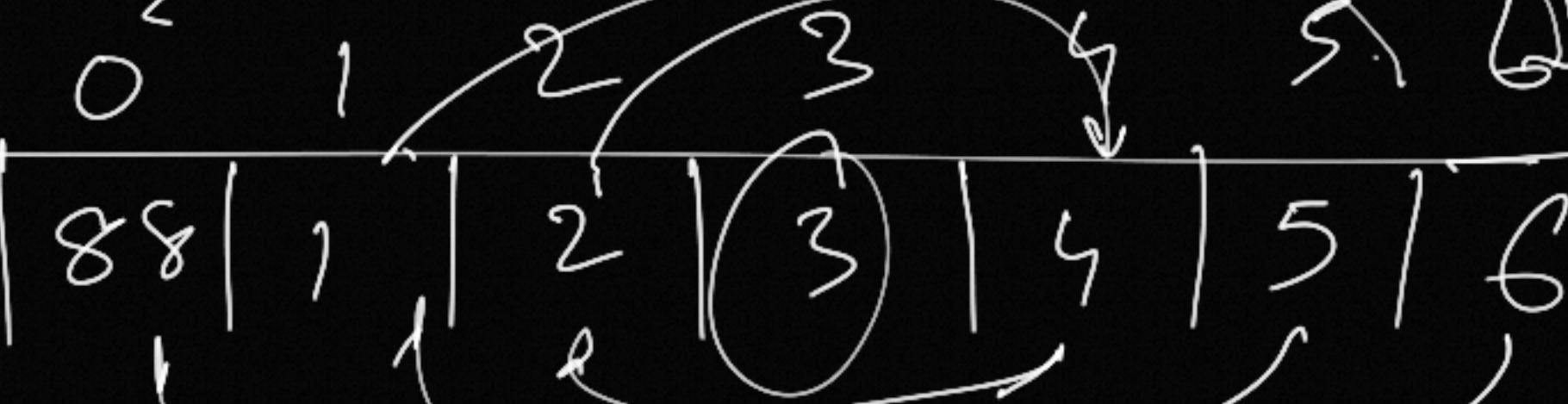
Review an array

Saif-nalband @ Chap

n - 1

1

Br



Swoop (A[6] \rightarrow A[0])

Swoop (A[5] \rightarrow A[1])

Swoop (A[4], A[2])

Swoop (A[3],)A

9322317520

$*(*B + D) = B \rightarrow w \star (2)$

wood

$*B = B[0]$

$*B[0] + 1$

$*B[0][1]$

$\frac{B[0][1]}{B[0][1]} = 3$

wt B [2] [3].

$B[0][0]$

wt (*P) [3] = B;

Print B

$8'B[0]$

4000

4012

$2 | 3 | 6 | 4 | 5 | 8 |$

Trunk $* (B+1) + 2$

$B[1] = 4012$

\downarrow

$B[1][2]$

4020

f84P

wt * P = B

$* (B+1)$

$\frac{8'B[0]}{8'B[1]}$

$8'B[1]$

4012

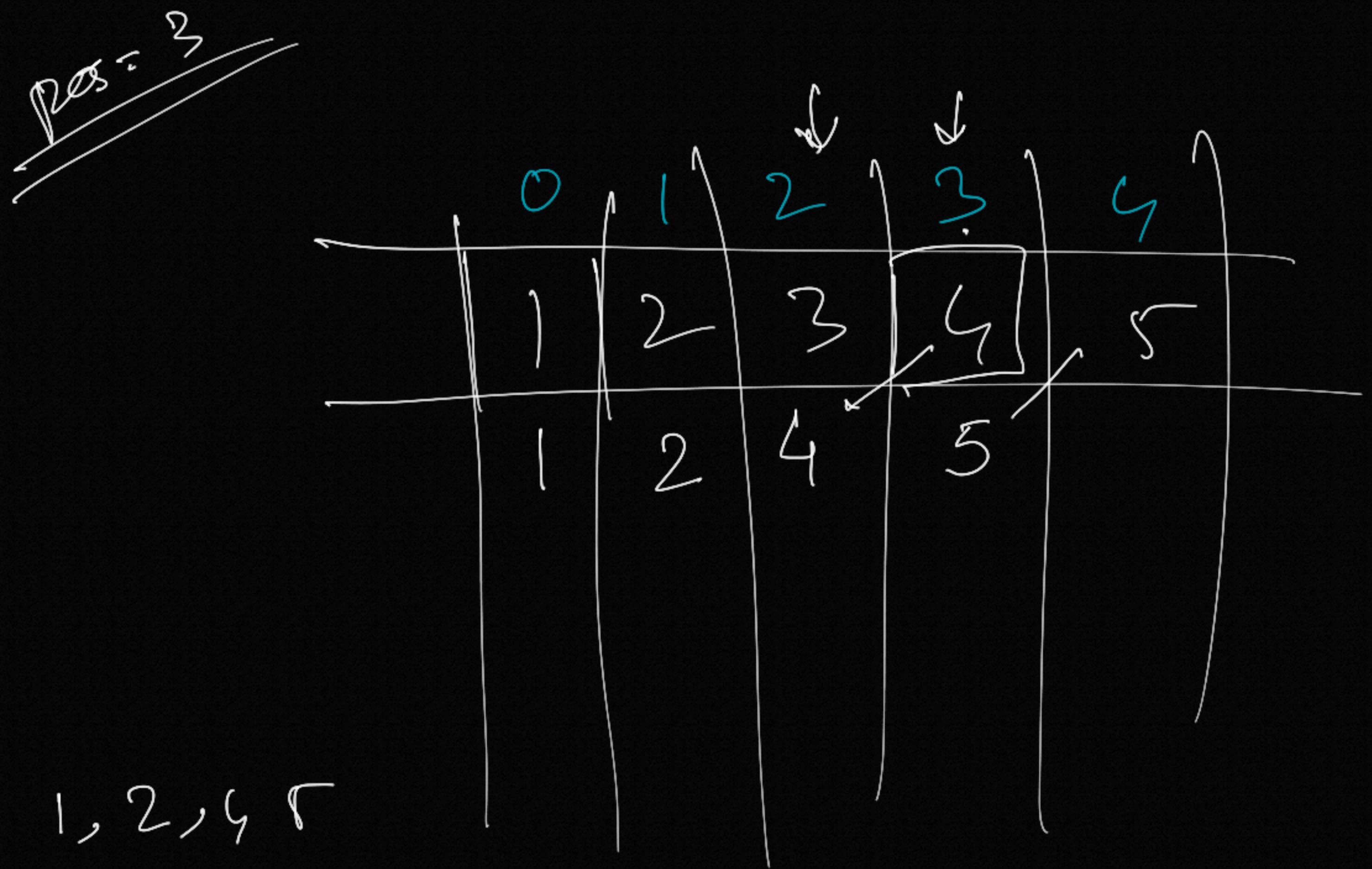
Print * B or B[0] \rightarrow 8'B[0]

$// 4020$

Print B + 1, 4012 wood

$$B[i][j] = \cancel{*} (B[i] + j)$$
$$= \cancel{*} (\cancel{*} (B + i) + j)$$

3D



1, 2, 4 5

Strings in C

↳ set of characters

{ 'J' 'O' 'H' 'N' }

{ 'T' 'H' 'A' 'P' 'R' }

$\text{chr}[0] = \text{'J'}$

$\text{chr}[1] = \text{'O'}$

$\text{chr}[2] = \text{'H'}$ $\text{chr} \rightarrow 2$

$\text{chr}[3] = \text{'N'}$

0 1 2 3 4

J	O	H	N	\0	→
0	1	2	3		

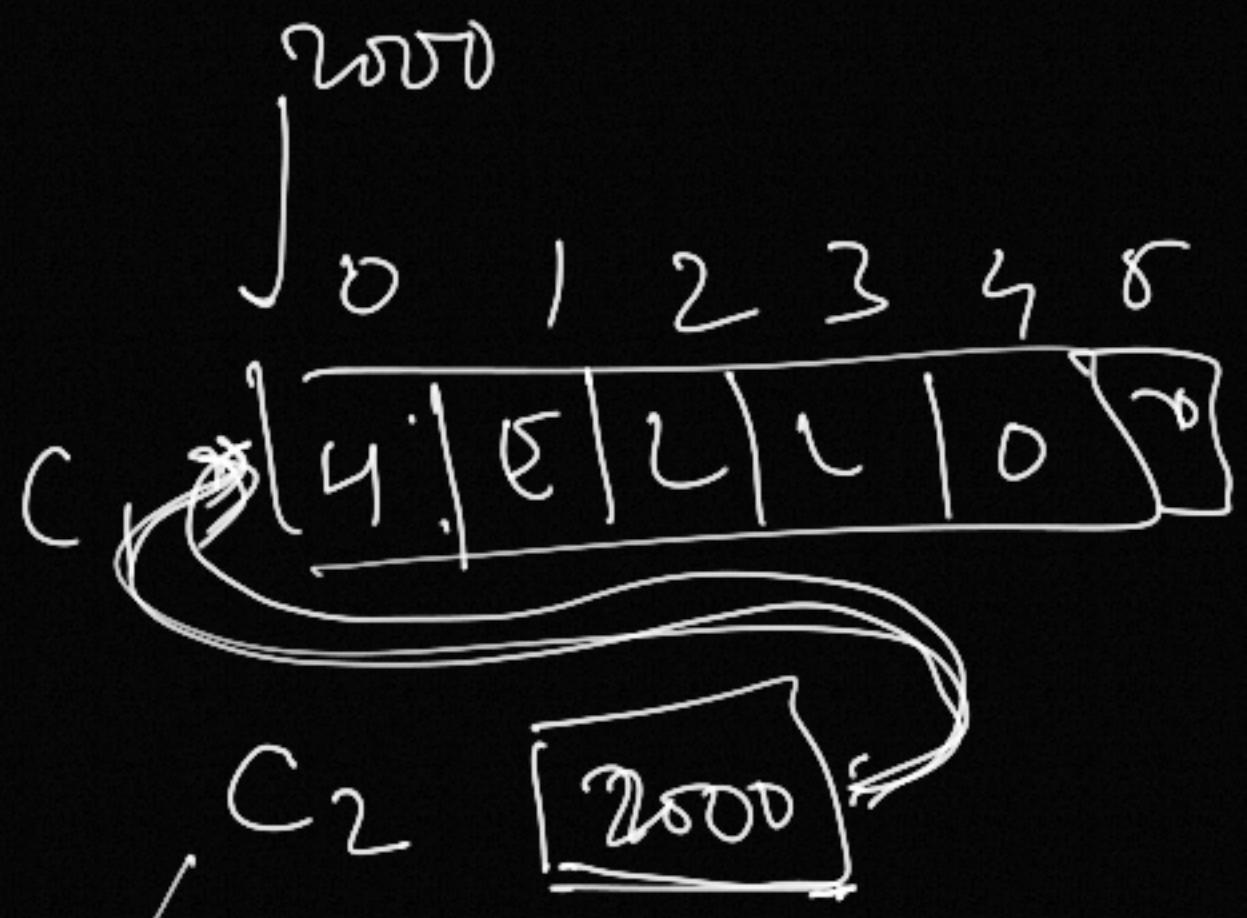
~~char~~ c [20] = "JOHN";

~~char~~ c [] = "JOHN";

→ char[4] = "JOHN"
↳ copy by ~~char~~ c [20]
c = "JOHN"

~~char~~ c [5] = { 'J', 'O', 'H', 'N', '\0' }

char c1[6] = "HELLO";



char * c2

i = 0

c2 = C1[i]

c2 + i;

c[i] =
*(c + i)

c2[i] =
c2[0] = H
c2[3] = L

c2[4] = *(c2 + i)

Not working

c1 = c1[c2 + i]

char c[5] = "Hello";

char * c = "Hello";

↑
Conv

c[0] = 'A';

Conflict

'A' es uó c[0] - H

data

