4GB ⇒ 2^{32} byte

8 GB ⇒ 2^{33} byte

↳ 64 bit O.S

4GB 32-bit

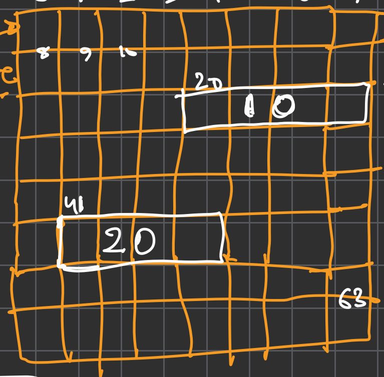
64-Byte ⇒ RAM

RAM ~ 64 byte

Pointer

0 1 2 3 4 5 6 7

1 byte



6 bit

32

64 bit

Byte-addressable

64-address

Address size ⇒ 63

2^6

6-bit OS

2^{32} ⇒ 4GB RAM

32-bit OS

64-bit OS

6 bit ⇒ address

6 bit OS

int a = 10 ⇐ 4 bytes

cout << a; 10

address?

int ~~ptr~~ = &a

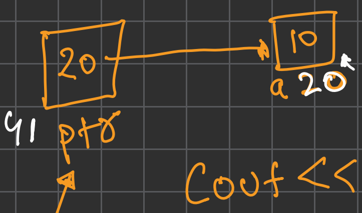
cout << &a;

20

address ko kisi variable ke andar store kara sakte hai

int address = &a; 20 size?

int * ptr = &a;



20

cout << ptr;

cout << *ptr ; 10

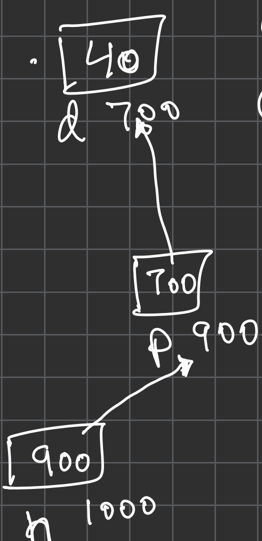
cout << &ptr : ?

(41) ✓

Address ⇒ system dependent

- 4GB RAM ⇒ 32 bit Address, 4 byte
- 8GB RAM ⇒ 64 bit ⇒ 8 byte address

int *p = &d ;



cout << a ;

cout << &a ;

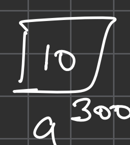
cout << p ; 700

cout << &p ; 900

cout << *p ; 40

a ki value hogi (10)

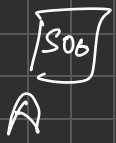
(300)

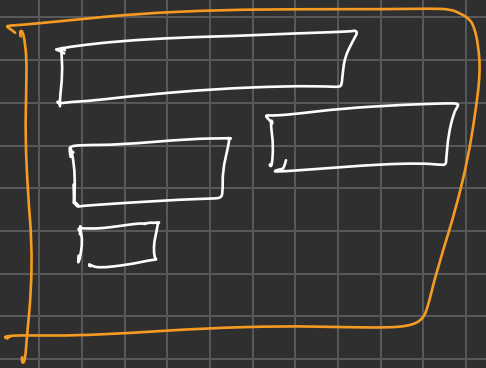


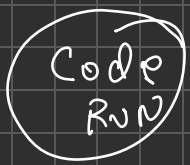
int **h = &p

int b = 10

int *A = &b







int arr[5] = {1, 2, 3, 4, 5};

arr[1]

1	2	3	4	5
1000	1004	1008	1012	1016

arr[0]

1004 arr ⇒ 1000 ⇒ *arr

arr+1 ⇒ 1004 ⇒ *(arr+1) ⇒ 2

arr+2 = 1008 ⇒ *(arr+2) ⇒ 3

arr[1]
arr[2]

a → 108 → 20 → d → 20

int *p = arr

p → 1000

p+1 = 1004

p+2 ⇒ 1008

p+3 ⇒ 1012

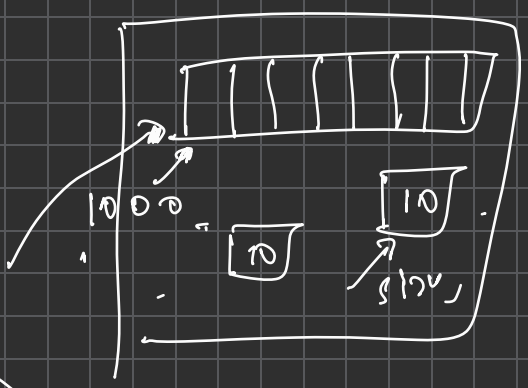
*(p+4) = 5

p[4] → tabhi 5 - var

int *ptr

arr = 1000

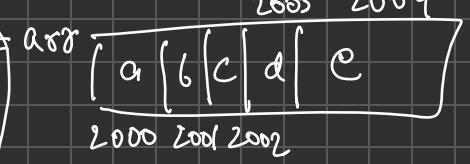
p = 1000



add(arr, 10)

char arr = {'a','b','c','d','e'}

Char *ptr = arr



2000 → void

2000 → char arr = 2000

Cout << arr

ptr = 2000 → char address

(void*) ptr