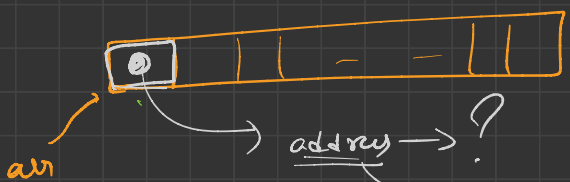
Pointers (Part-2)

→ int arr[10]; → 4 * 10 = 40b



arr → arr or &arr[0]

arr → array name

→ & operator →

Address of

arr array

↳ first location address

↓

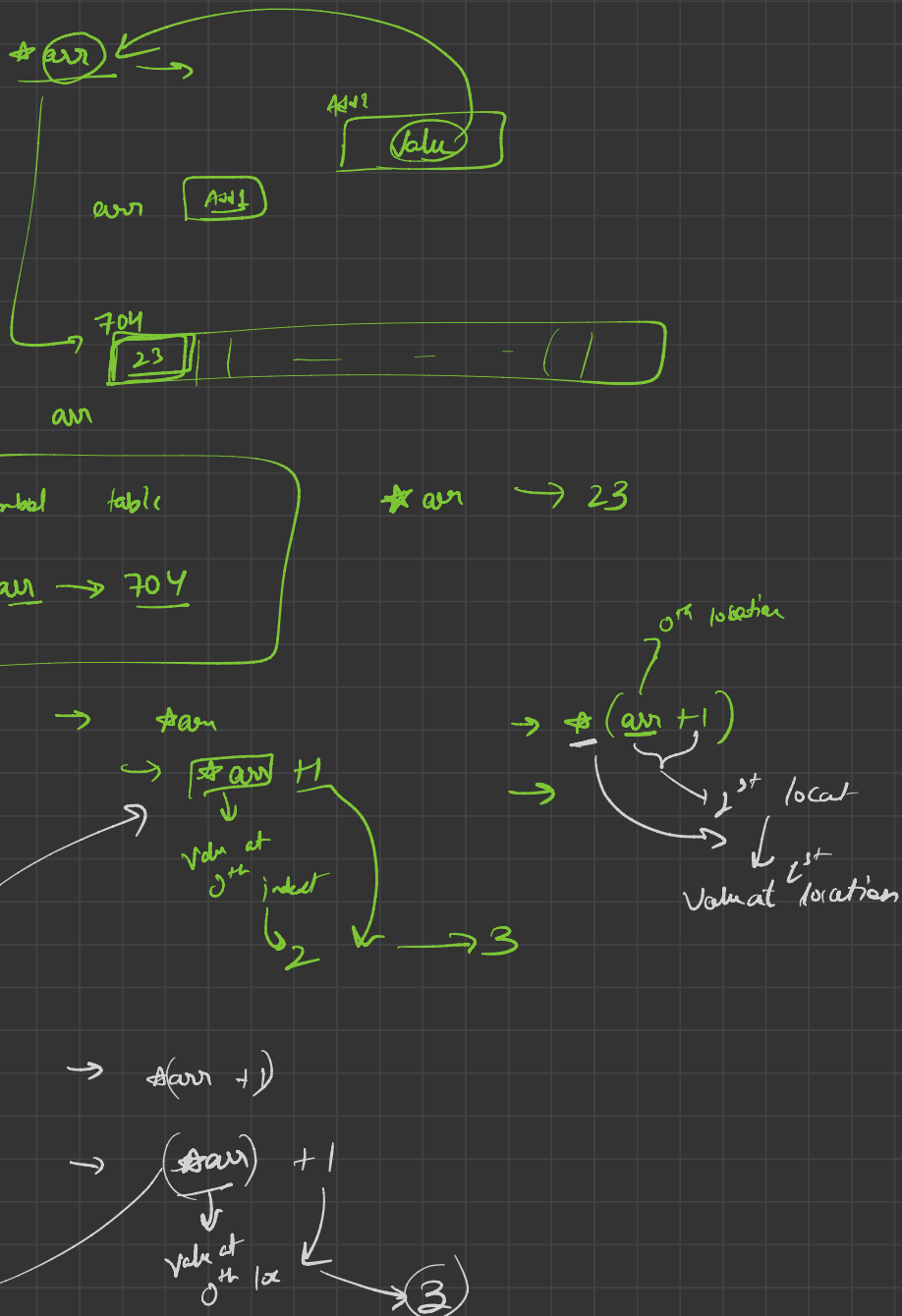
&arr[0]

arr[10] → arr → first loc Address

↳ arr[0] → value at 0th index

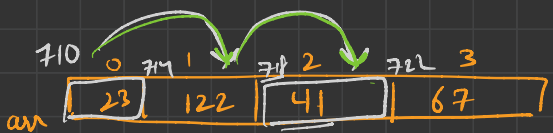
↳ &arr[0] →

↳ *arr


*arr
Add1
value
arr
Add1
704
23
arr
Symbol table
arr → 704
*arr → 23
→ *arr
→ *arr +1
Value at 0th index
2
→ 3
→ *(arr +1)
→ (*arr) +1
Value at 0th loc
3
0th location
→ *(arr +1)
1st local
Value at 1st location

arr[i] → *(arr + i)

address → Value



arr[2] → *(arr + 2)

→ *(710 + 2)

→ *(718)

→ 41

*p = &a[0]

p++ → addr/next memory block

arr[i] = *(arr + i)

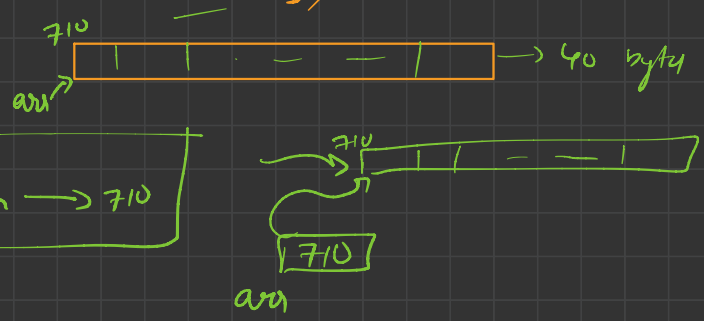
OR

i[arr] = *(i + arr) → Error

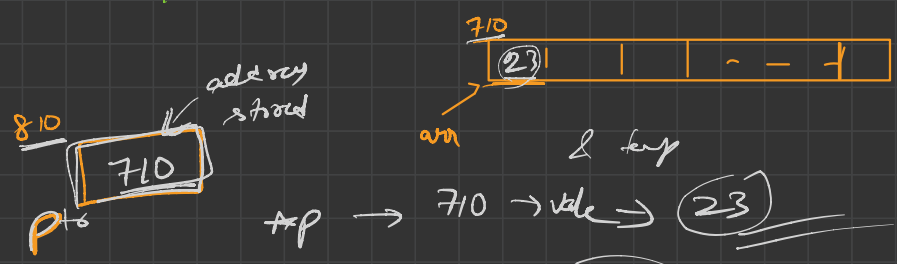
Differences Pointer / Arrays:-

1. BTS:-

int arr[10]; → 40 bytes



int *p = &arr[0]; → 8 bytes

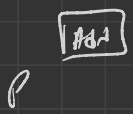


→ sizeof() → arr → (size × 4) — print

→ pointer → 8 bytes

① Size → arr → No. of Block × 4 → print

↳ ptr → 8 bytes



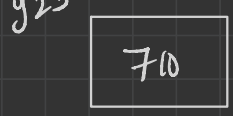
② &arr →

```
int arr[10] = {0};
```

&arr[0] → address of block at 0th index

↳ 710

```
int * p = &a[0]
```

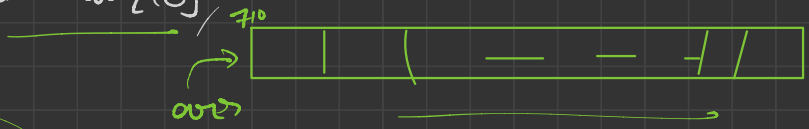


&p → address of / value block

↳ 923

③ Symbol table ka content → Cannot be changed

```
int arr[10];
```




```
cout << arr[1];
```

S.T

arr → 710

Cannot be changed

int arr[10];

arr = arr + 1 → Error

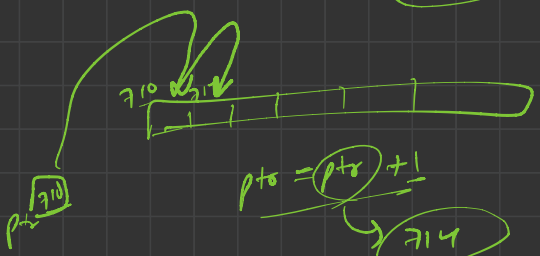
int *p = &arr[0]

923

710

p

p = p + 1



arr → 710

p → 923

ptr = ptr + 1

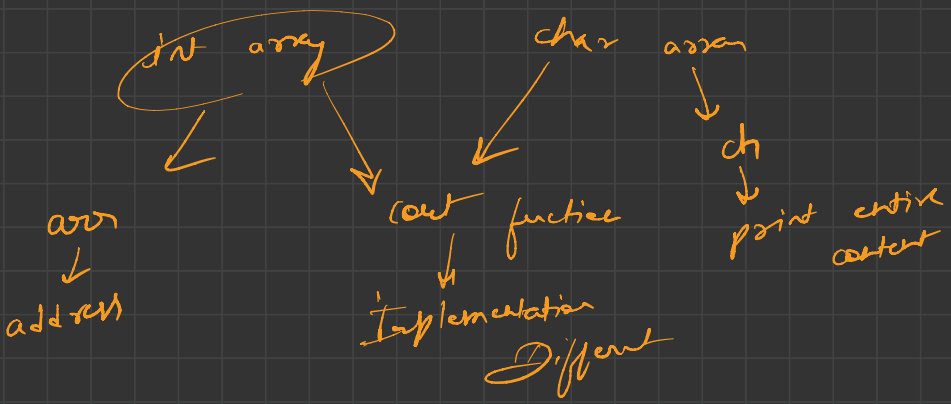
= 710 + 1

= 714

Int array

→ char arrays

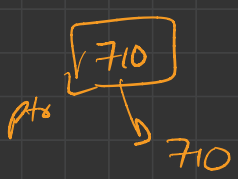
Character Arrays



arr[10] = {1, 2, 3 ... } (710 addr)

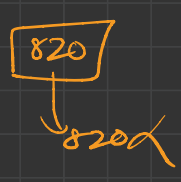
int *ptr = &arr[0]

cout << ptr << endl → 710

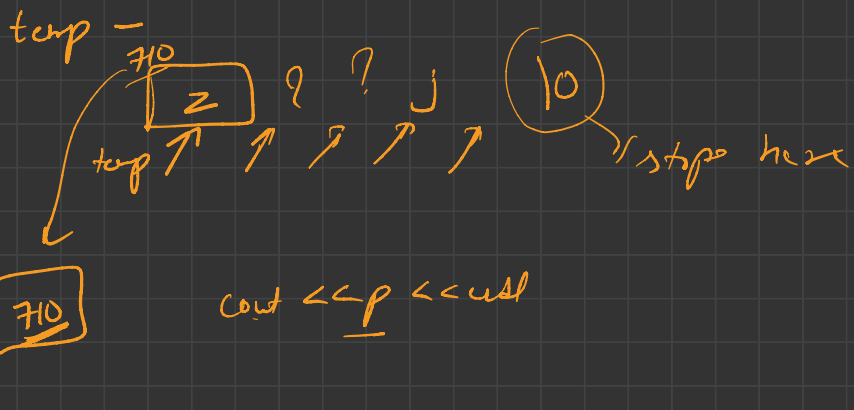


ch[] = "abcde" (820)

char *cha = &ch[0];



cout << c << endl → entire string



Diff

char ch[6] = "abcdf"

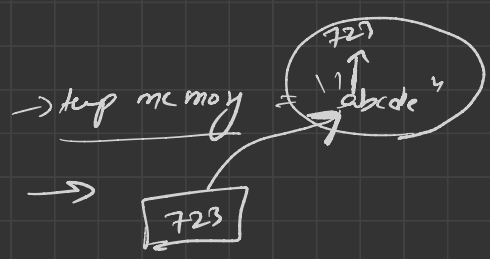
char *c = "abcde";

→ RISKY → WAHI KARNA

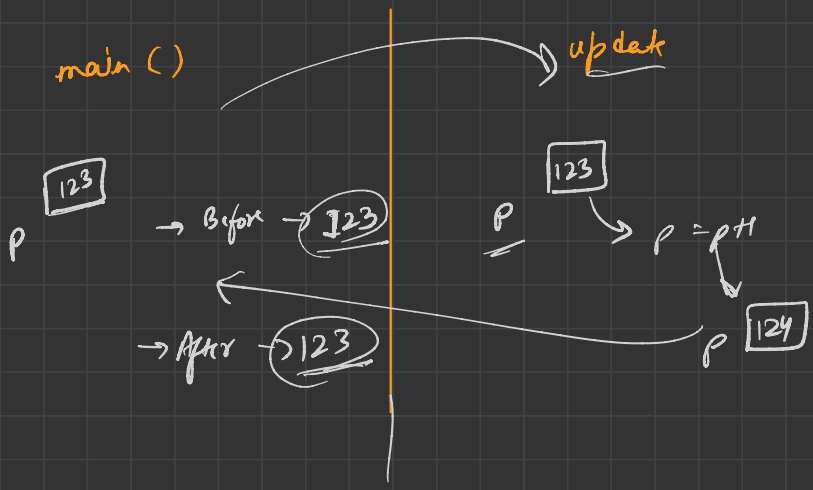
→ BTS:-

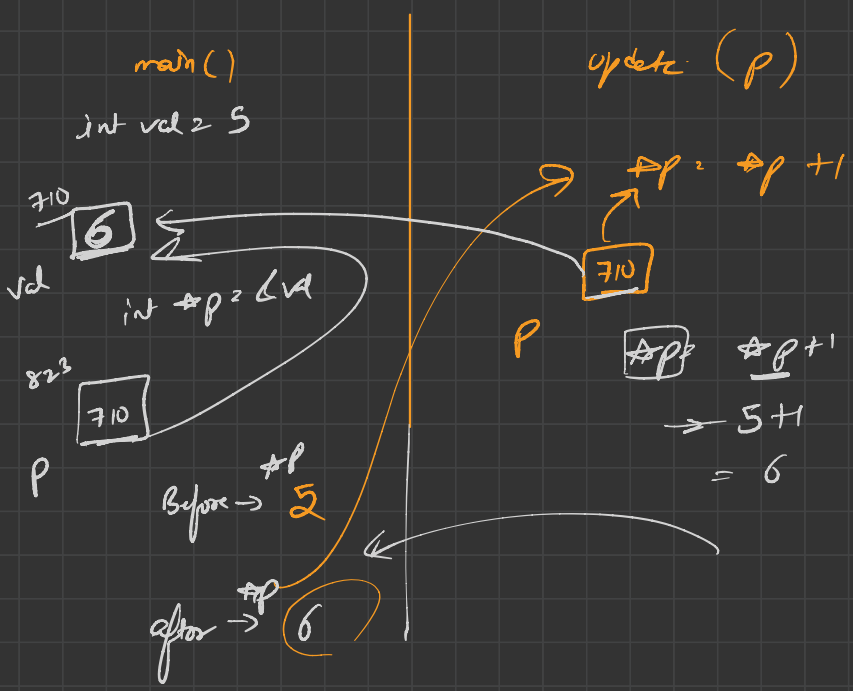
→ temp memory ← abcde \0

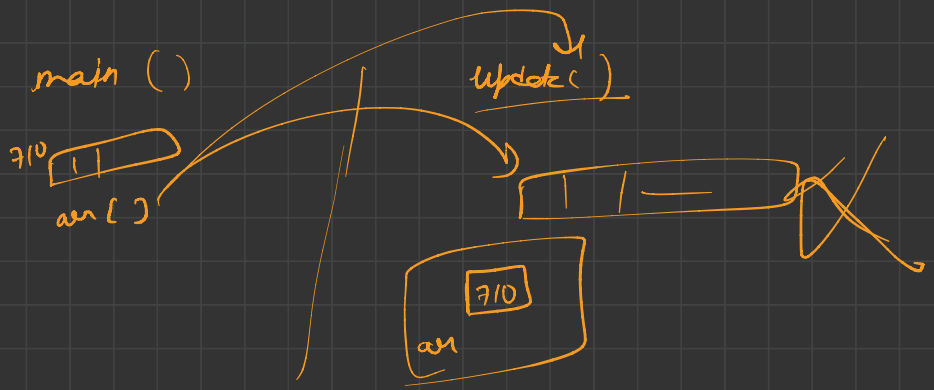
→ memory ch → copy



Functions


main ()
update
123
p
→ Before → 123
123
p
p = p+1
p
124
→ After → 123


main ()
int val = 5
710
6
val
int *p = &val
823
710
p
Before → *p
5
update (p)
*p = *p +1
710
p
*p
*p+1
→ 5+1
= 6
*p
After → 6

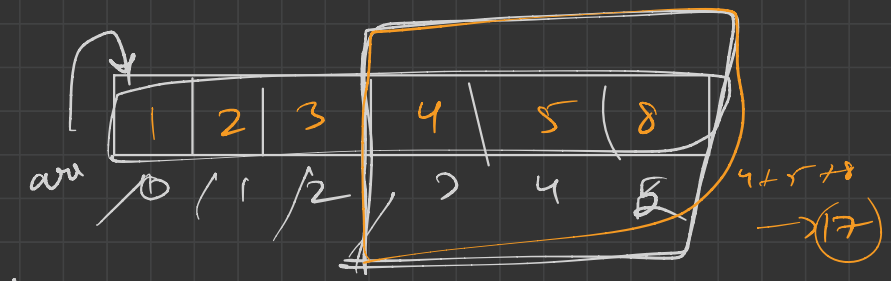


arr[i] = *(arr+i)

Benefit → ?

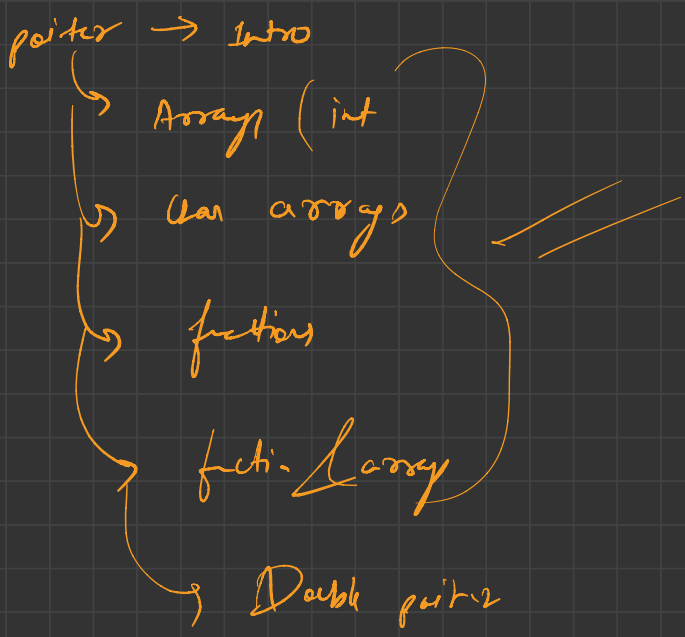
function → array → pointer

↳ part of Array send/pass kr skte ho



Update
getSum (arr+3

getSum (arr


pointer → Intro
Array (int
Char arrays
function
functi. Array
Double point