

CS & IT ENGINEERING

Programming in C



Strings
Lec- 01



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TOPICS TO BE
COVERED



Srrings-l

String

Sequence of characters terminated by Null character (' $\backslash 0$ ')

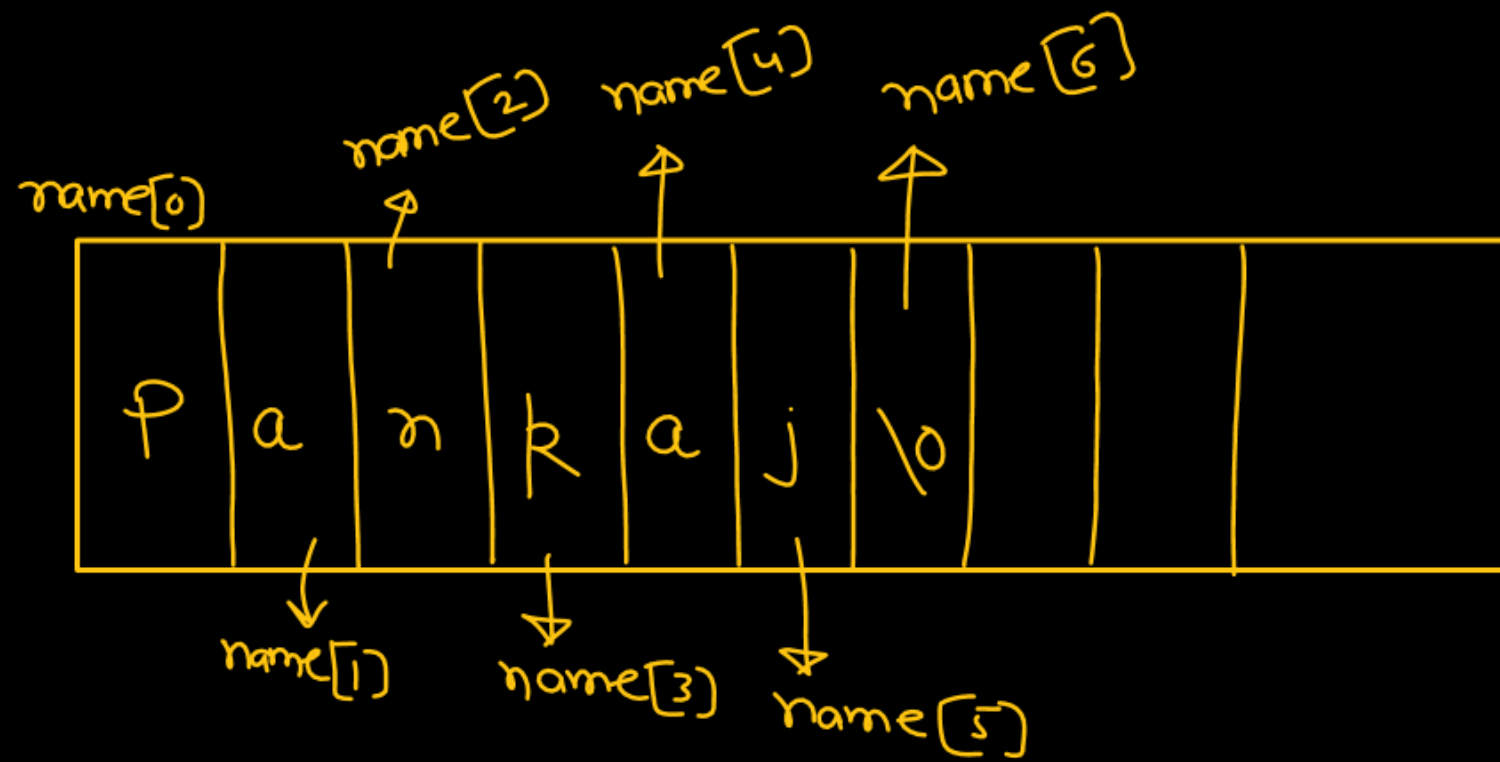
Ascii code $\rightarrow 0$

"Pankaj"

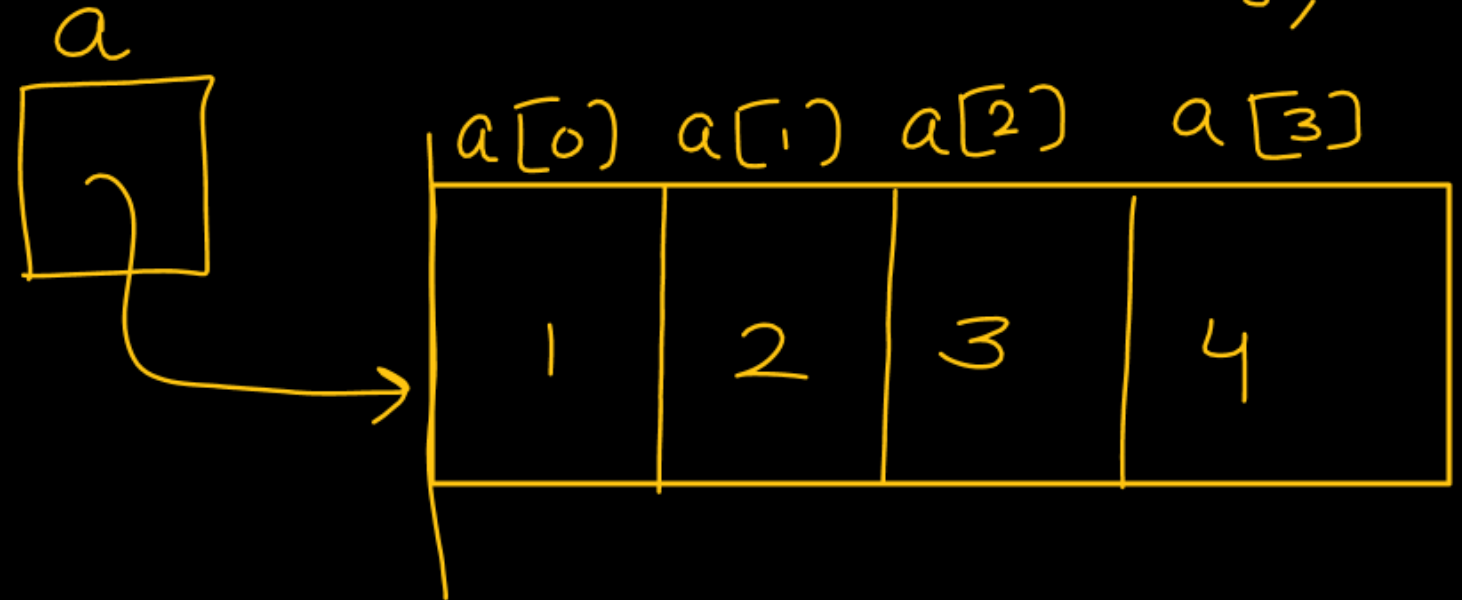


p	a	n	k	a	j	$\backslash 0$
---	---	---	---	---	---	----------------

1. `char name[10] = "Pankaj";`



`int a[4] = {1, 2, 3, 4};`



```
char name[10] = "Pankaj";
```



```
printf("%s", name);
```

int a[4] = {10};

int a = {10}; Valid ✓

int a = 10; ✓

char name[10] = {"Pankaj"};

OR

char name[10] = "Pankaj";

printf("%c", name[0]); 'P' ✓

int a[4] = {10, 20, 30, 40};

a[0]	a[1]	a[2]	a[3]
100 10	20	700 30	40

a[0] = 101;

a[2] = 700;

char name[10] = "Pankaj";

name[1] = 'u';

name[0] name[1] name[2]

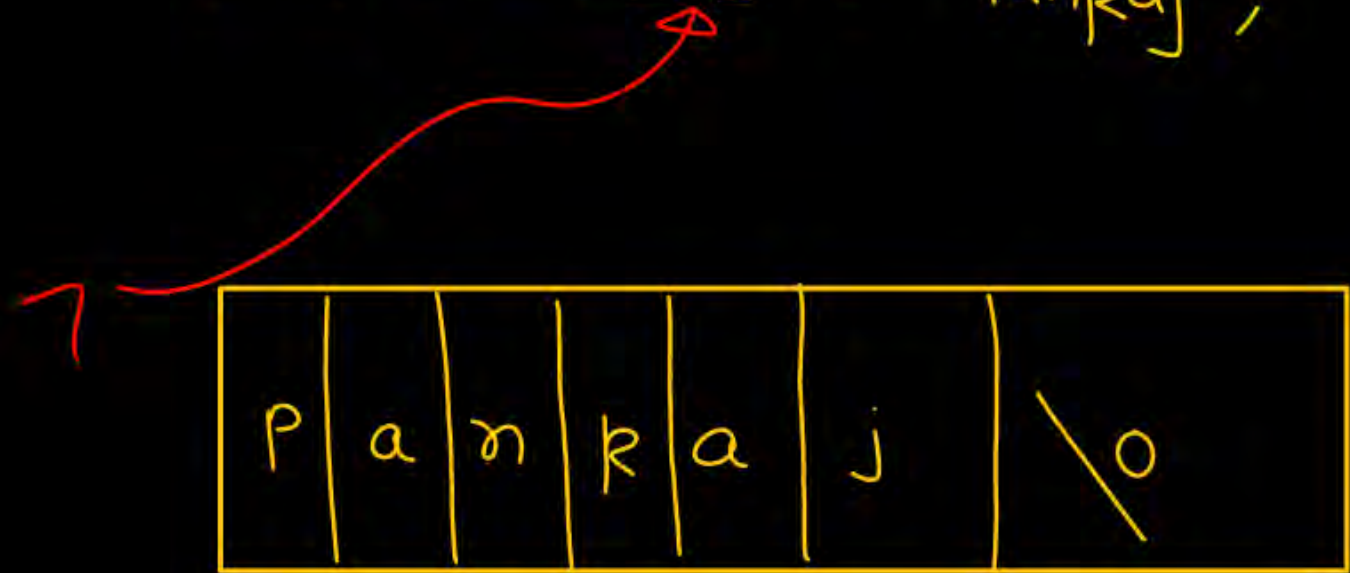
P	a u	n	k	a	j	\0	...
---	-------------------	---	---	---	---	----	-----

printf("%s", name);

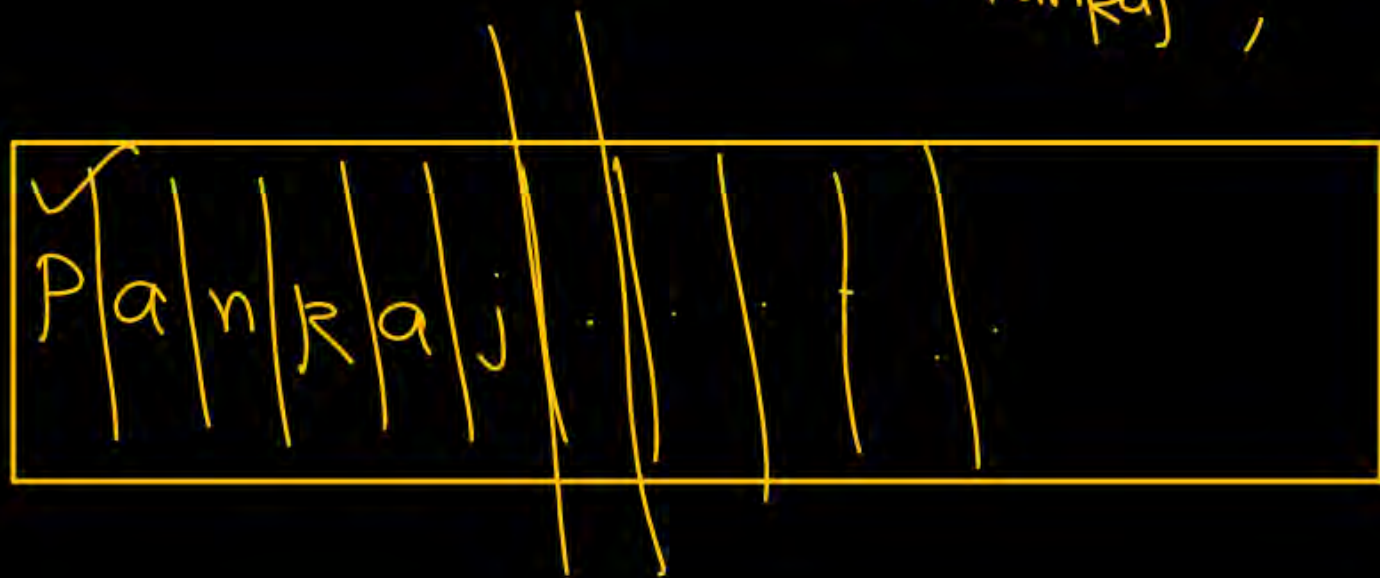
→ Pankaj

int a[] = {1, 2, 3}; ✓

char name[] = "Pankaj";



Char name[10]
= "Pankaj";



char name[7] = "Pankaj";

char name[6] = "Pankaj";

Char name[] = {'P', 'a', 'n', 'k', 'a', 'j'};

6

P	a	n	k	a	j
---	---	---	---	---	---

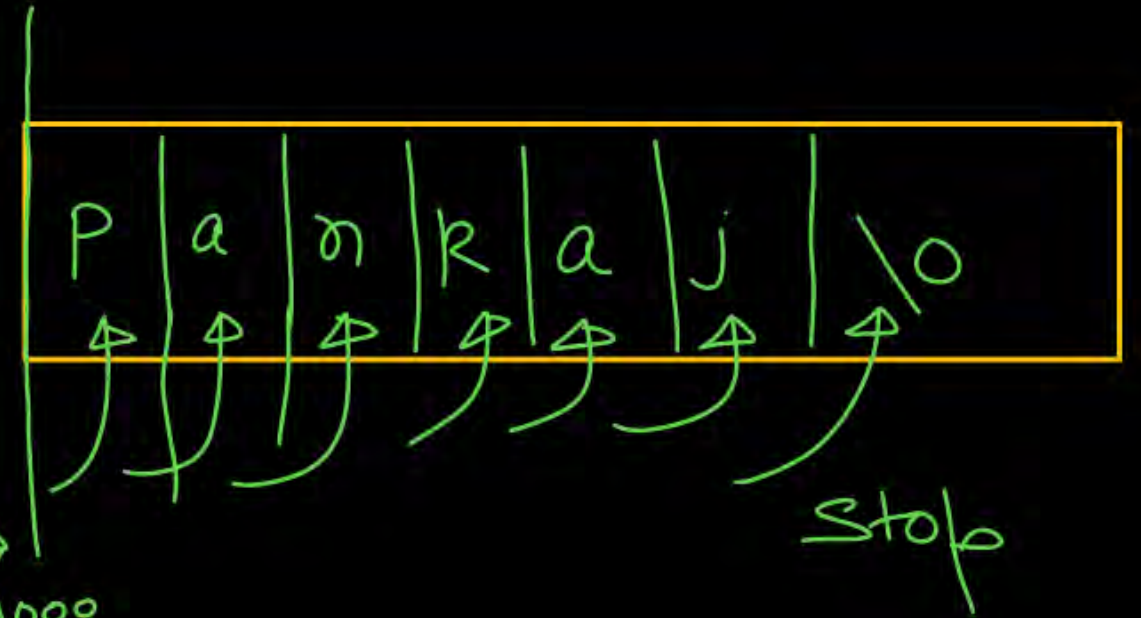
Char name[] = {'P', 'a', 'n', 'k', 'a', 'j', '\0'}; ✓

P	a	n	k	a	j	\0
---	---	---	---	---	---	----

```
#include <stdio.h>
void main() {
    char name[] = "Pankaj";
    printf("%s", name);
}
```

O/P : Pankaj

&name[0] → 1000



Pankaj
Address →

#in _____

```
void main(){
```

```
    char name[] = "Ponkaj";
```

```
    printf("/s", name+2);
```

```
}
```

O/p

nkaj

$name + 2 \Rightarrow \underbrace{\&name[0]}_{1 \text{ byte}} + 2$

$\Rightarrow \&name[2]$

3rd char on add

P	a	n	k	a	j	\0
---	---	---	---	---	---	----

(name+2)


```
void main(){
```

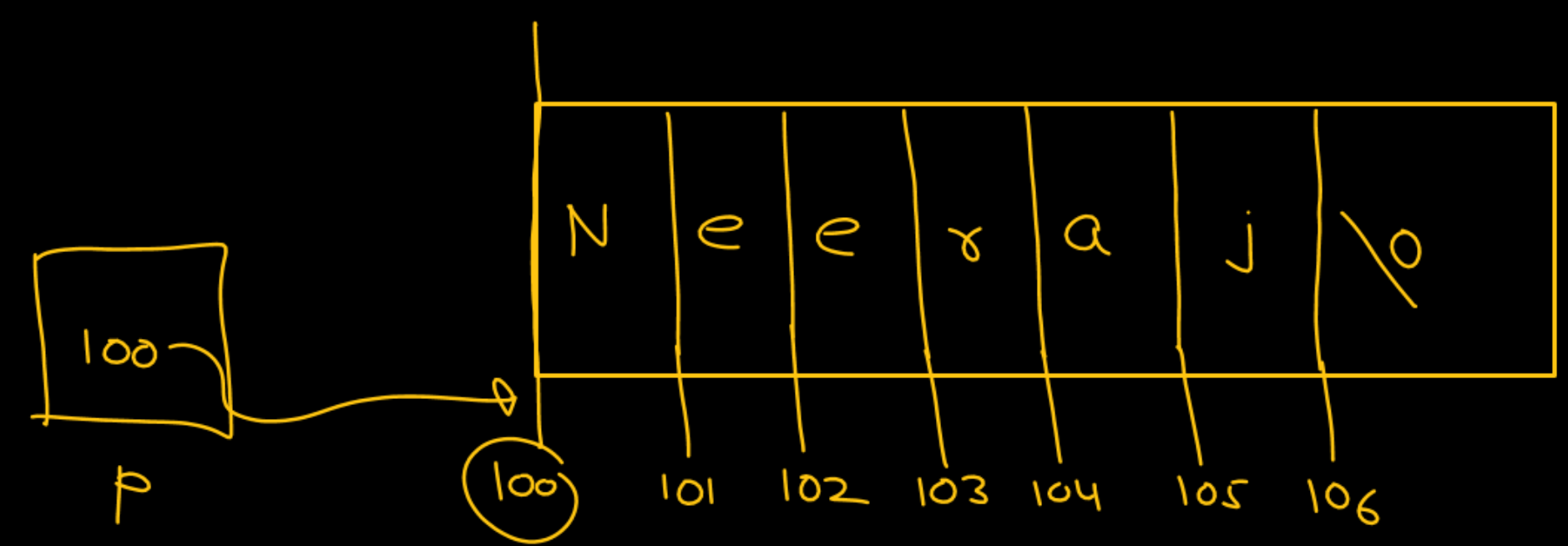
```
char name[] = "Pankaj";
```



Is there any
way to store address
of a char.

2nd way

①
char *p = "Neeraj";



```
char name[] = "Pankaj";
```

```
name[1] = 'u';
```

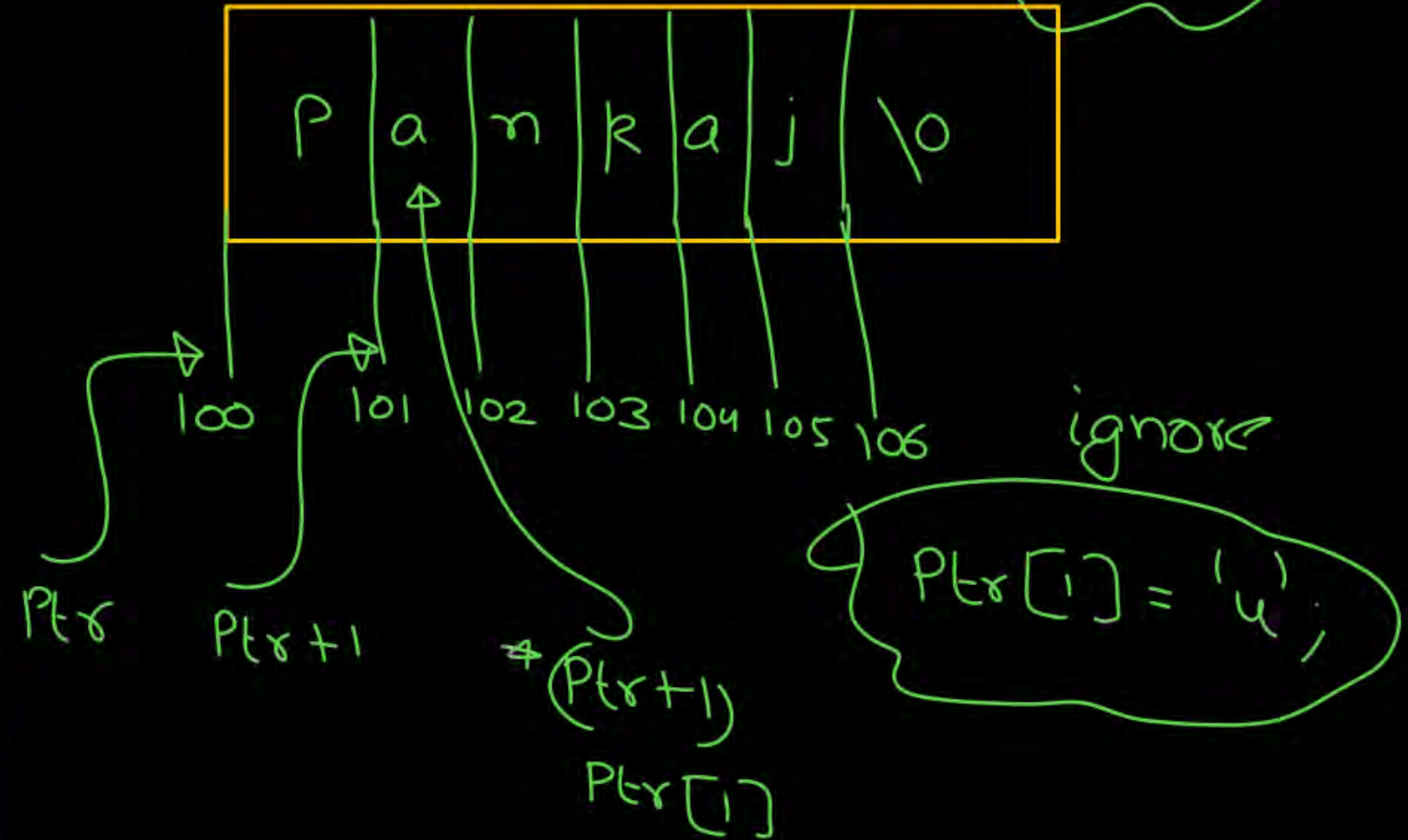
```
printf("%s", name);
```

Pankaj

we can change
content
of an array

```
char *ptr = "Pankaj";
```

Read only
Area



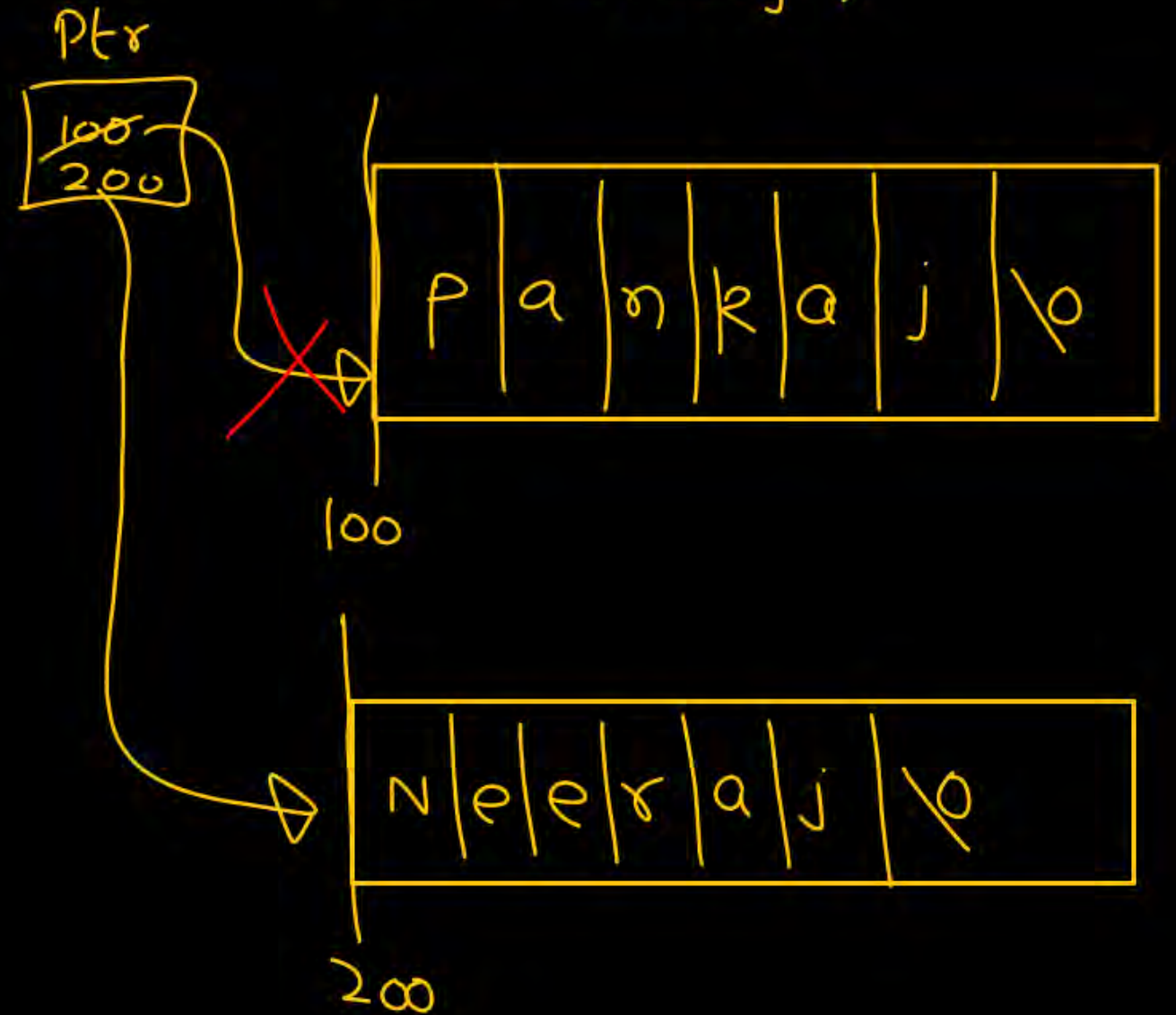
char name[] = "Pankaj";

name = "Neeraj"; Invalid

Lvalue
X

char *ptr = "Pankaj";

ptr = "Neeraj";



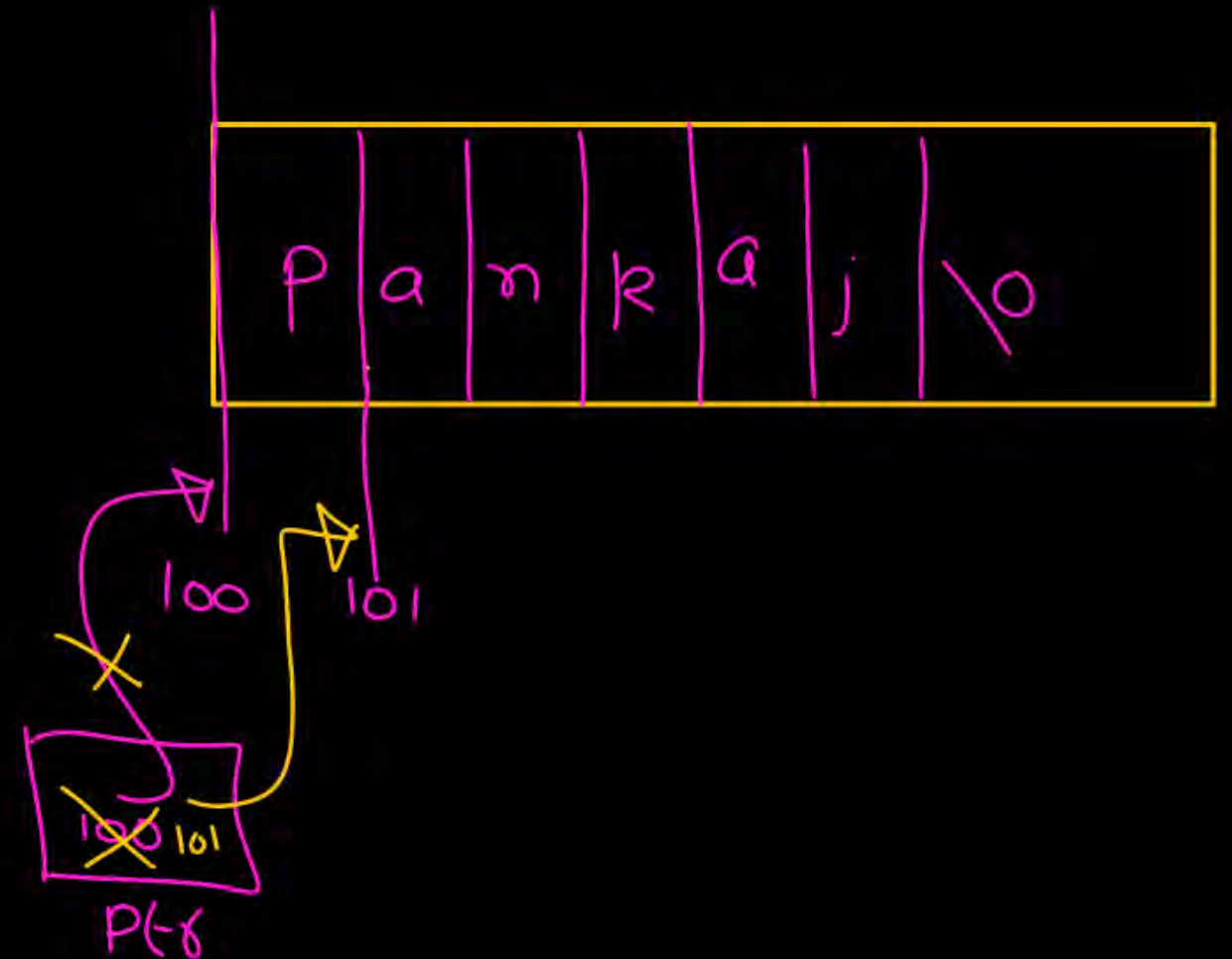
char name[] = "Pankaj";

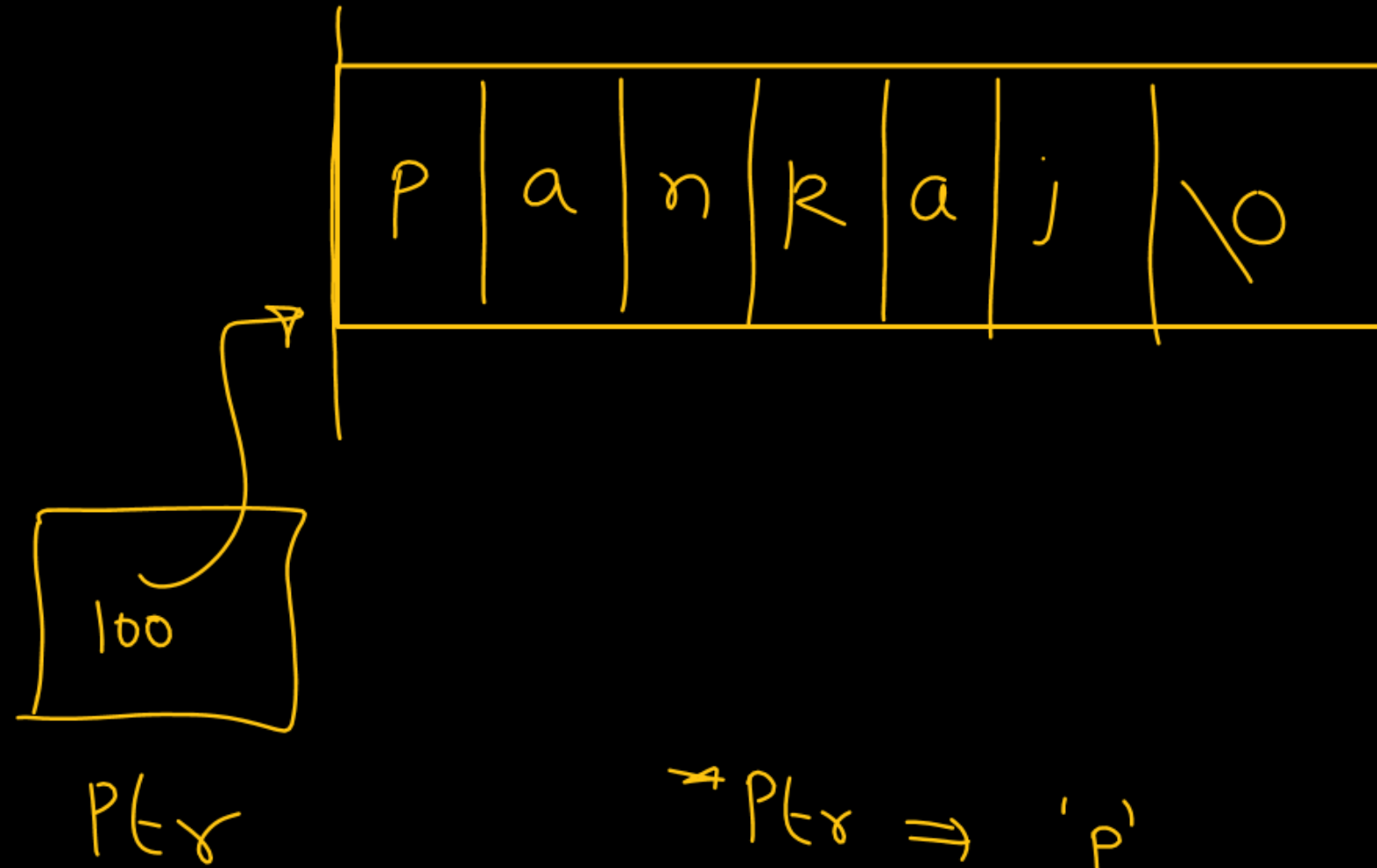
name++; X

name = name + 1; X

char *ptr = "Pankaj";

ptr++; ✓





`char *Ptr = "Pankaj";`

`printf("/s", Ptr);` ✓

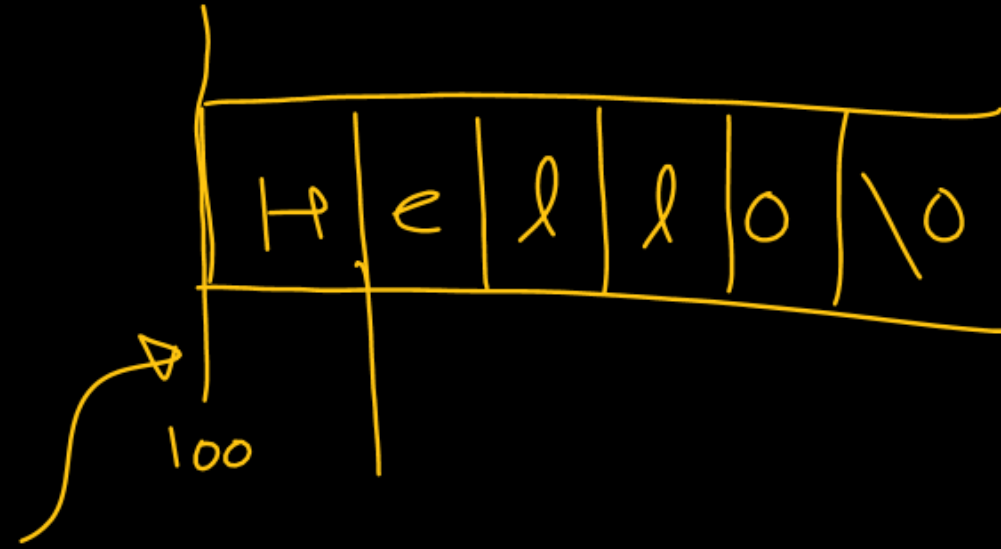
Address

`Ptr = Ptr + 2;`

`printf("/s", Ptr);`

Address of
3rd Character ('n')

printf("Hello");



"Hello" \Rightarrow Add. of 'H'

"Hello" + 1 \Rightarrow Add. of 'e'

printf("Hello" + 1)

ello

