

CS & IT ENGINEERING

Programming in C

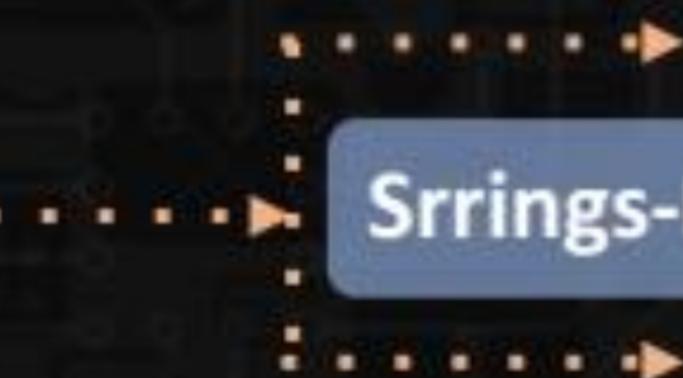


Strings
Lec- 02



By- Pankaj Sharma sir

TOPICS TO BE COVERED



"Hello" → Address of 'H'

"Hello" + 1 → Address of 'e'

$*(\text{"Hello" } + 1) \Rightarrow 'e'$

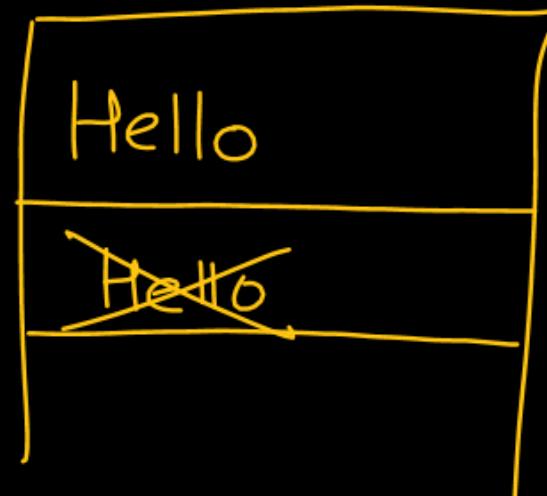
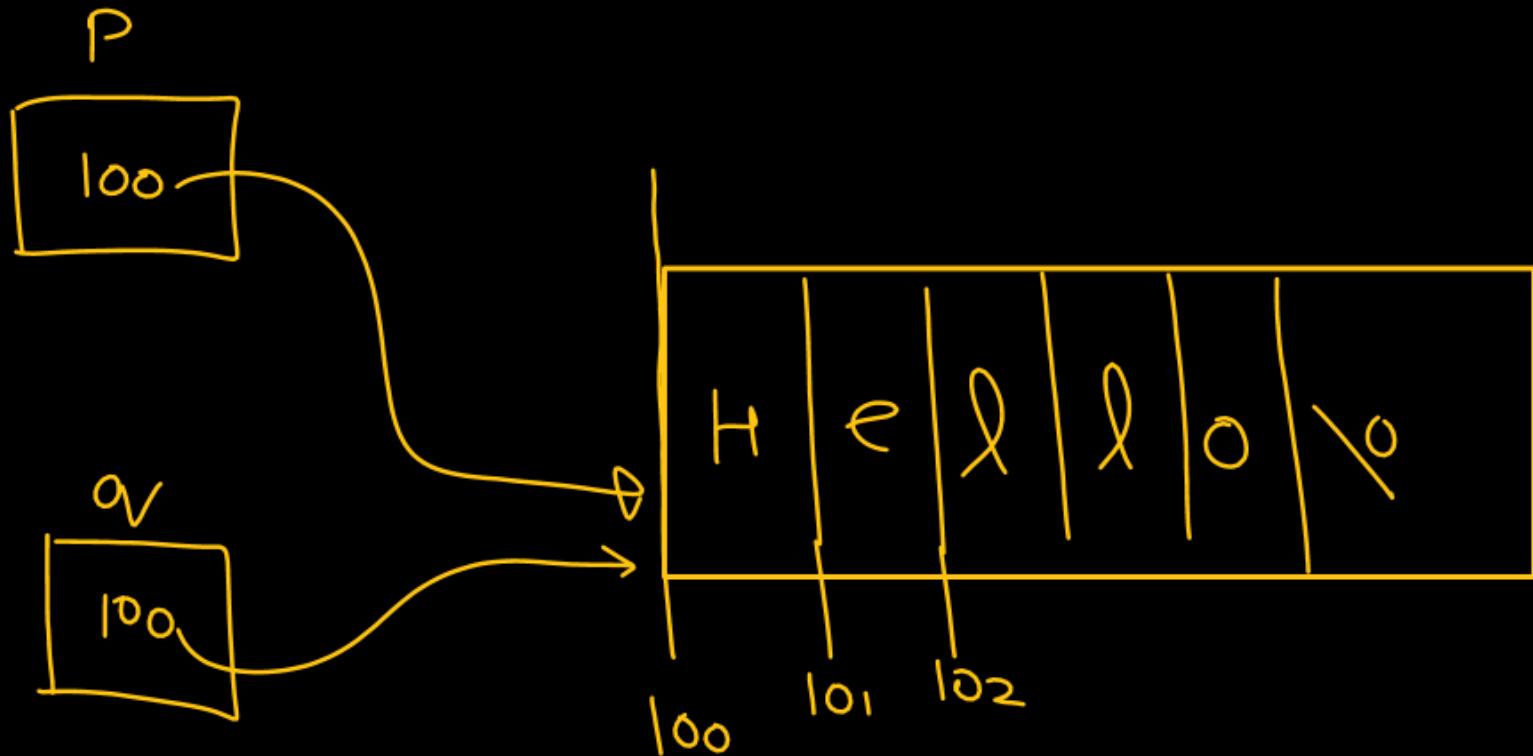
① `printf("./c", *(Hello + 1));`

② `printf("./c", "Hello[1]);`

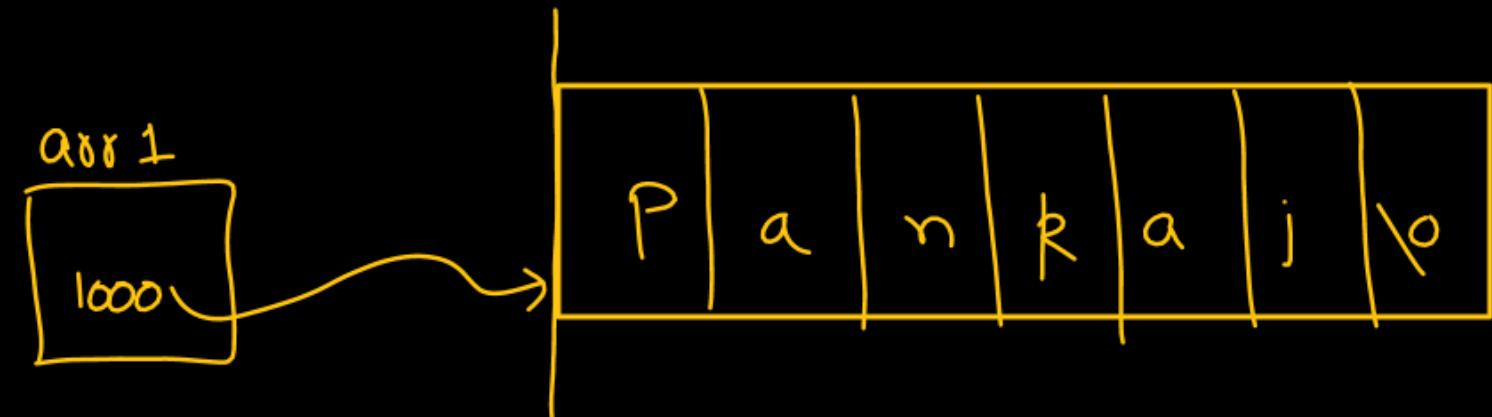
`char *p = "Hello";`

→ ROM Area

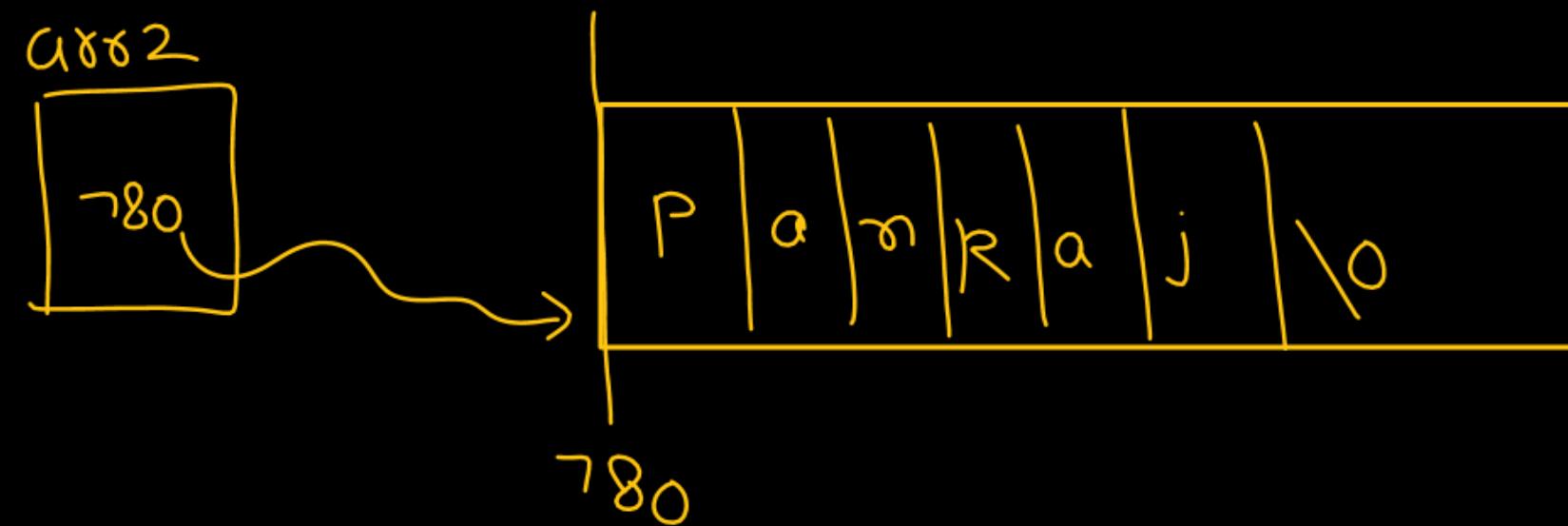
`char *q = "Hello";`

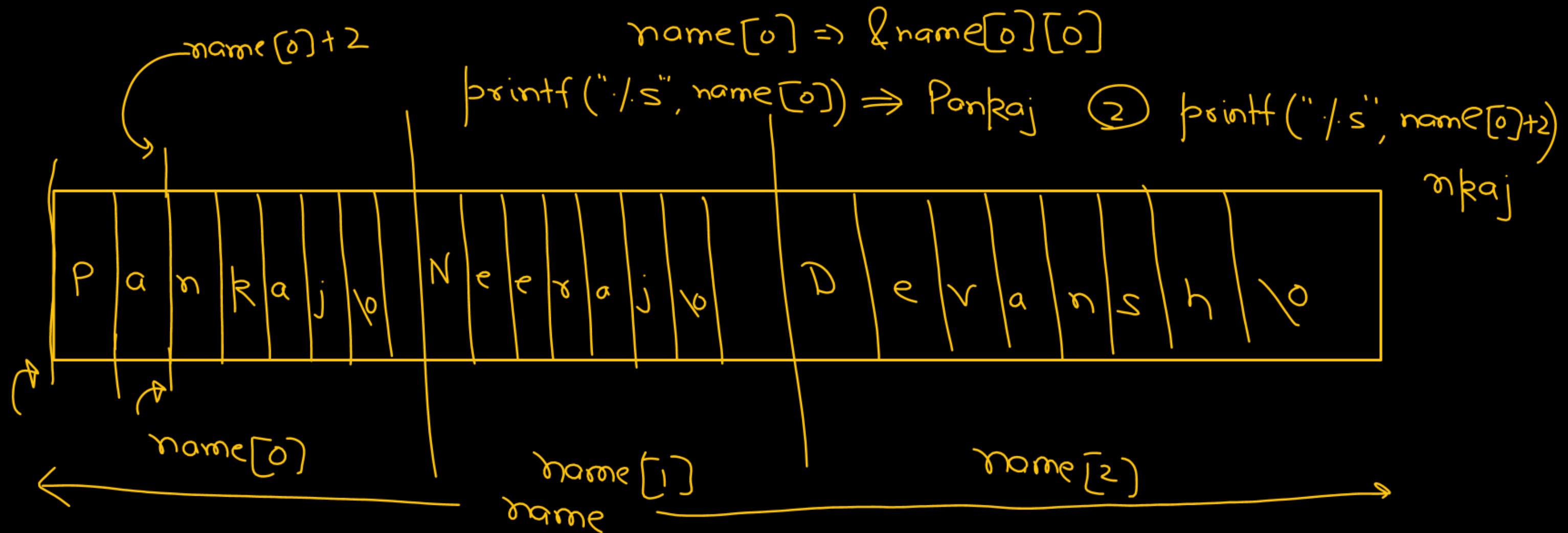


```
char arr1[] = "Pankaj";
```



```
char arr2[] = "Pankaj";
```

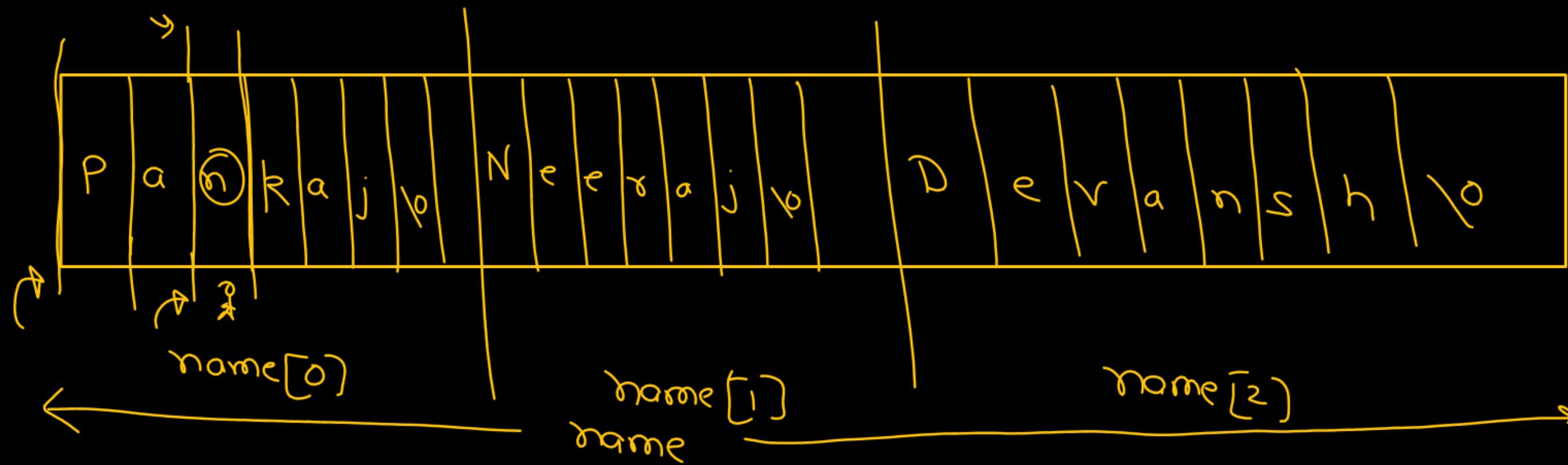




$\text{pf}(\text{"c"}, \star(\underline{\text{name}[0] + 2})) \Rightarrow \text{"n"}$

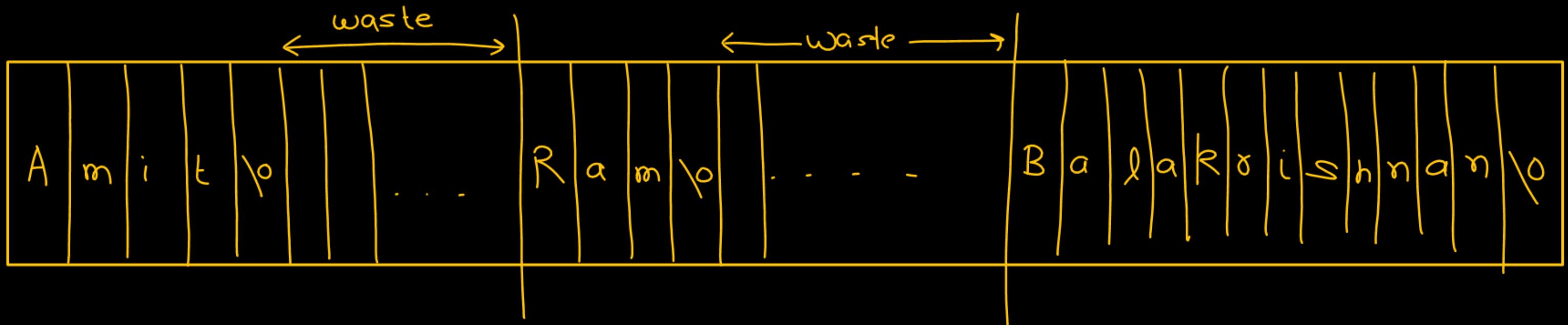
$\xrightarrow{\hspace{1cm}}$

$\text{name}[0][2]$



char name[3][13]

= { "Amit", "Ram", "Balakrishnan" };



```
char *P = "Pankaj";
```

```
char *q = "Neeraj";
```

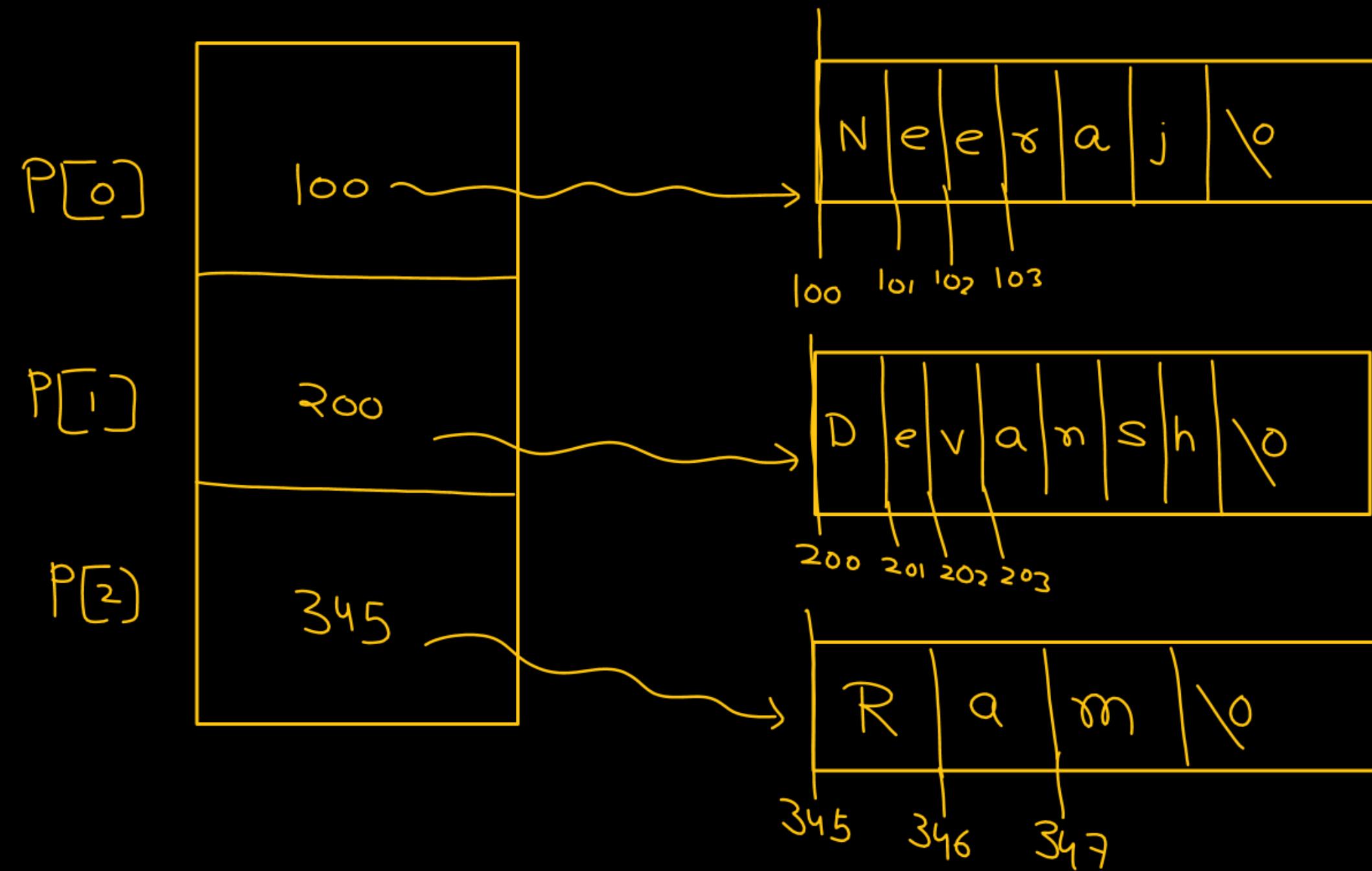
```
char *r = "Devansh";
```



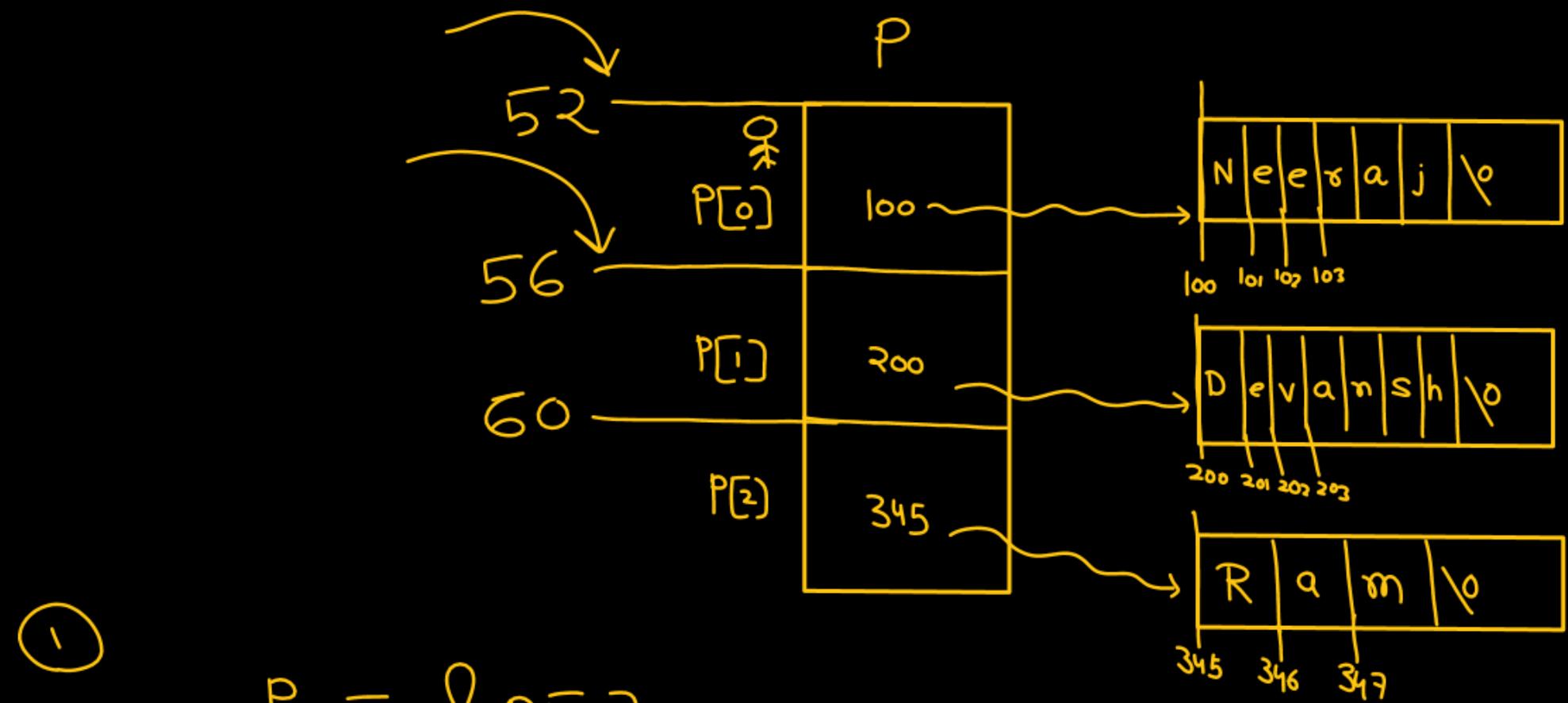
```
char *P[3]
```

```
char *P[3] = { "Pankaj", "Neeraj", "Devansh" },
```

`char *P[3] = { "Neeraj", "Devansh", "Ram" };`



`char *P[3] = { "Neeraj", "Devarsh", "Ram" };`



①

$$P = \&P[0]$$

$*P = \&P[0] = P[0] = 100 \Rightarrow$ address of char. 'N'

②

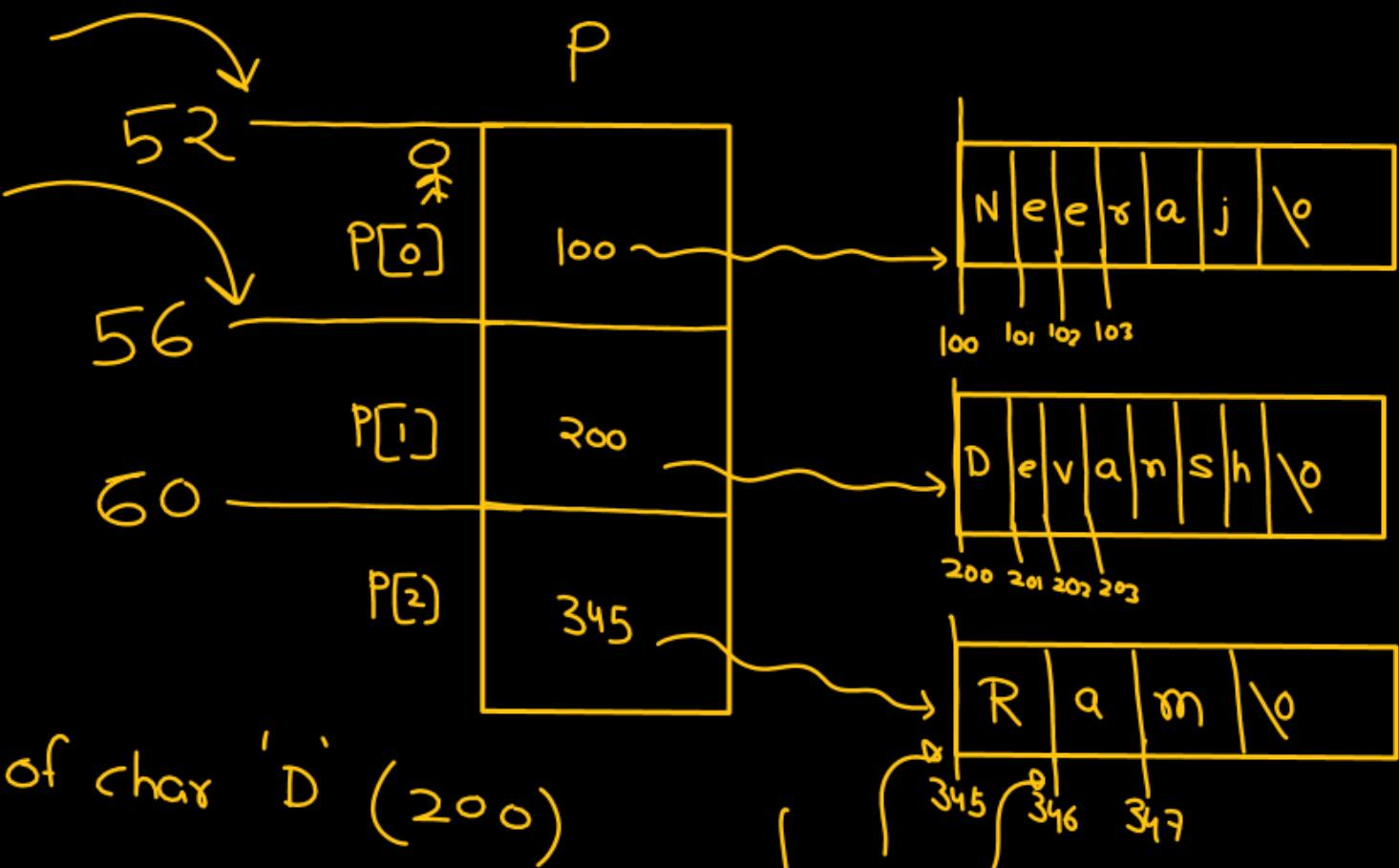
`printf("./s", *P);` \Rightarrow Neeraj

$$P+1 = \&P[0]+1 = \&P[1]$$

$*P = \&P[0] = P[0] =$ Address of char. 'D' (200)
`printf("./s", P[1]);`

Devarsh

`char *P[3] = { "Neeraj", "Devarsh", "Ram" };`



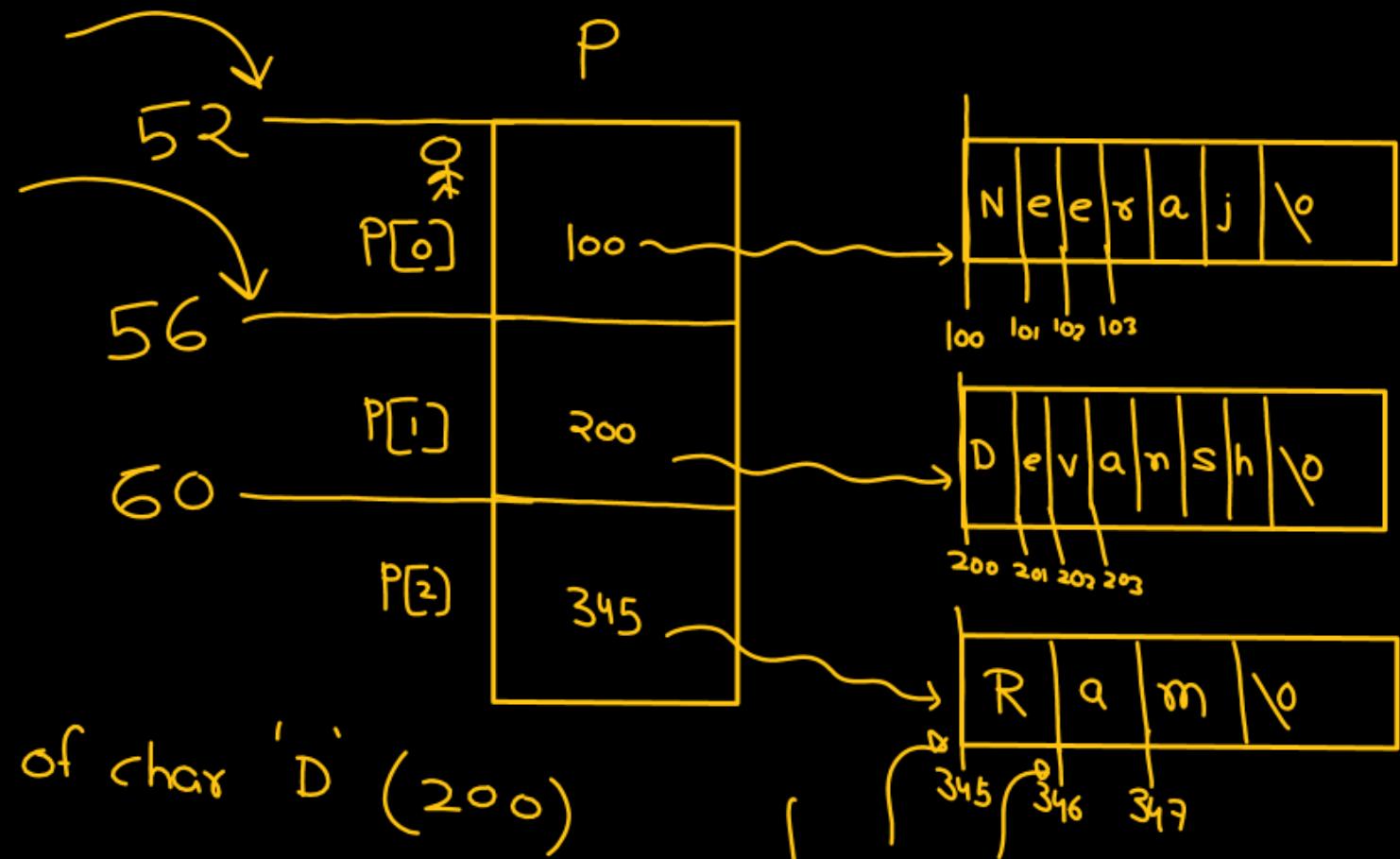
`P[1] → Add. of char 'D' (200)`

`P[1]+2 → Add. of char 'v' (202)`

`printf("./s", P[1]+2); ⇒ vansh`

`printf("./s", P[2]+1); qm`

`char *P[3] = { "Neeraj", "Devarsh", "Ram" };`



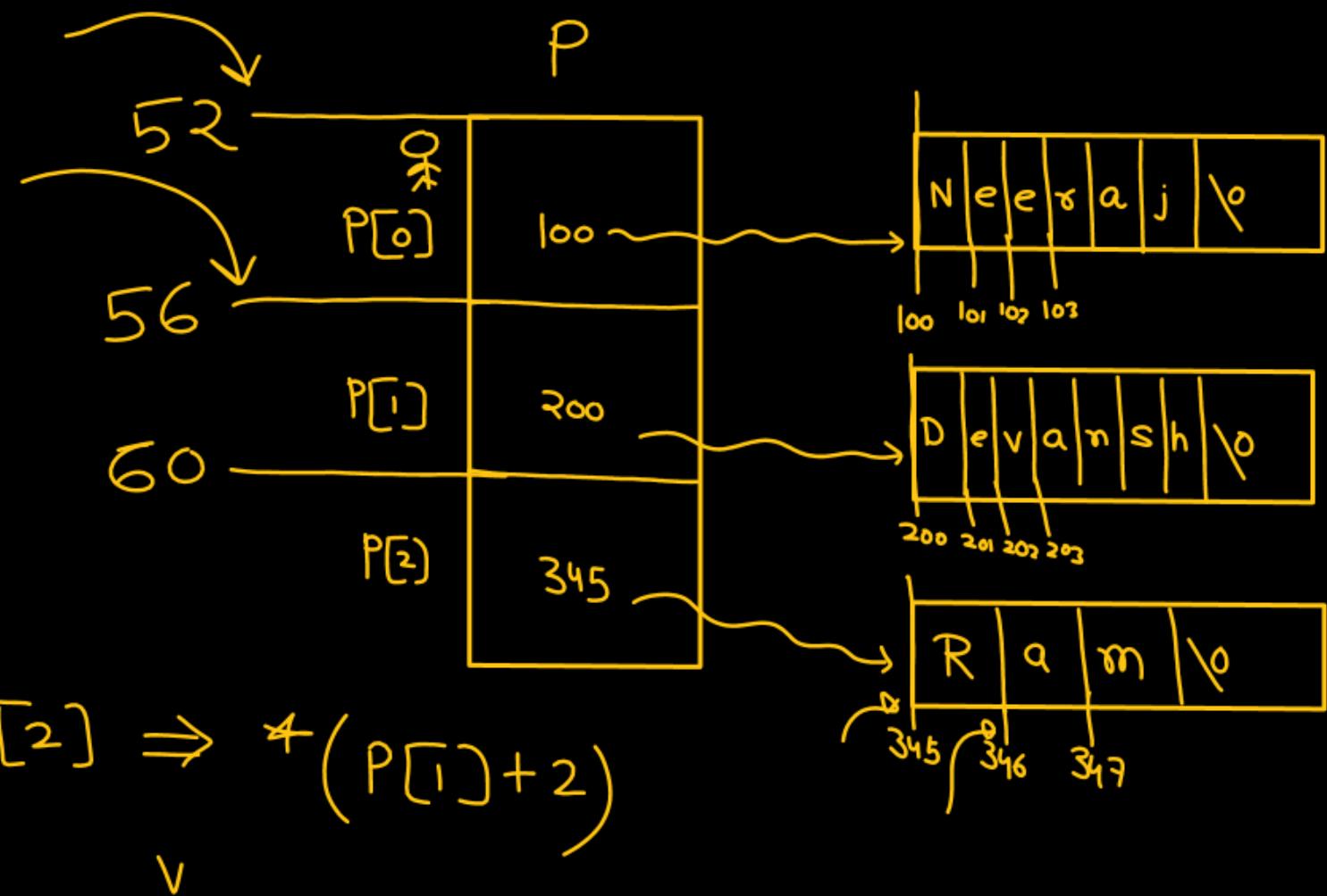
`P[1] ⇒ Add. of char 'D' (200)`

`P[1]+2 ⇒ Add. of char 'v' (202)`

`printf("./s", P[1]+2); ⇒ vansh`

`printf("./s", P[2]+1); qm`

`char *P[3] = { "Neeraj", "Devarsh", "Ram" };`



String.h

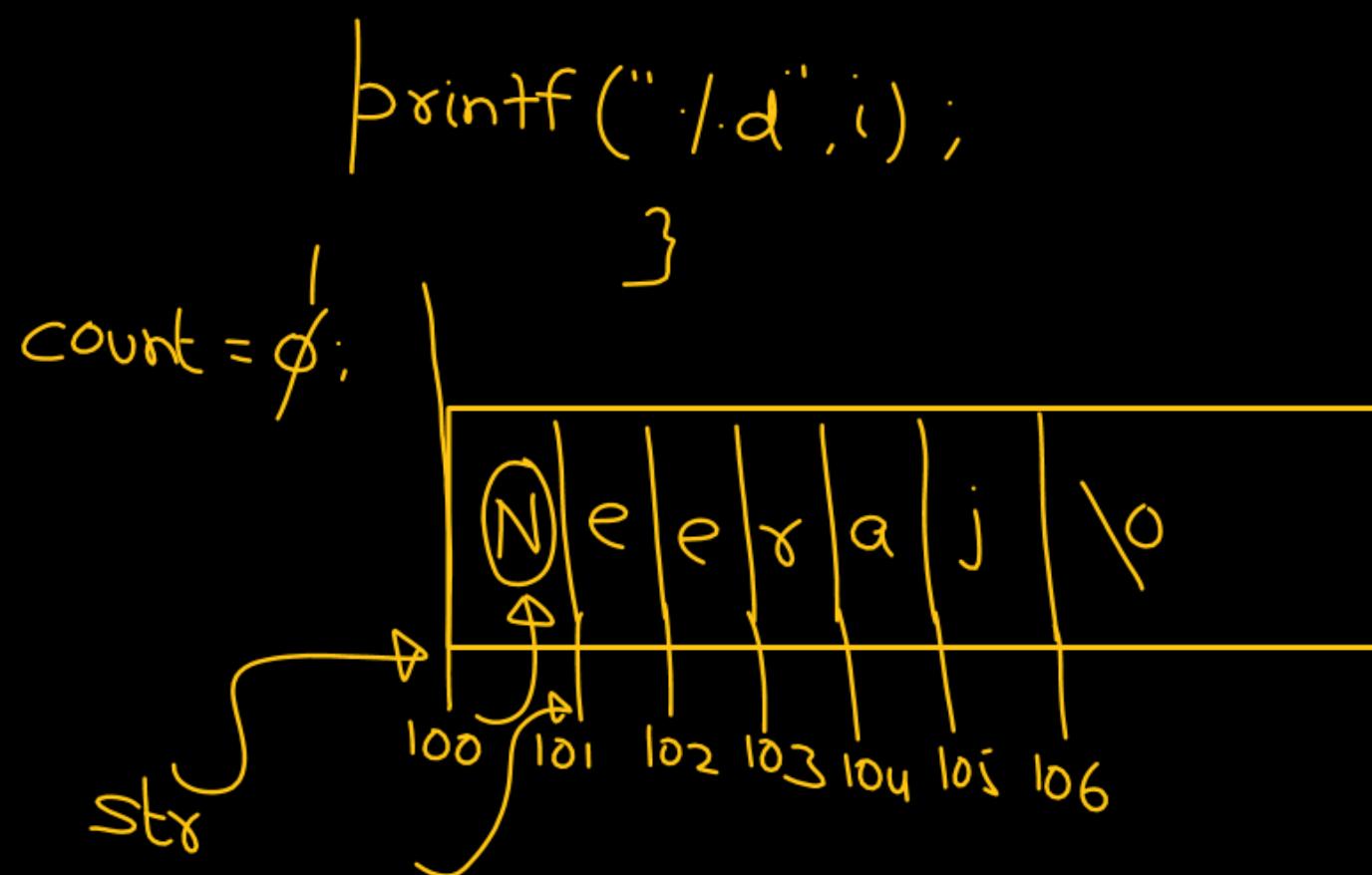
↳ strlen() : \Rightarrow length
↳ It count char.
↳ beginning of the string
till first Null char ('0')
 \Rightarrow '\0' \Rightarrow Not counted

int i;
char *p = "Pankaj";
i = strlen(p);

```

int mystolen(const char * );
void main(){ int i;
    char * pte = "Neeraj";
    i = mystolen(pte)
}

```



```

int mystolen( const char * str )
{
    count = 0;
    while( *str != '\0' )
    {
        count++;
        str++;
    }
    return count;
}

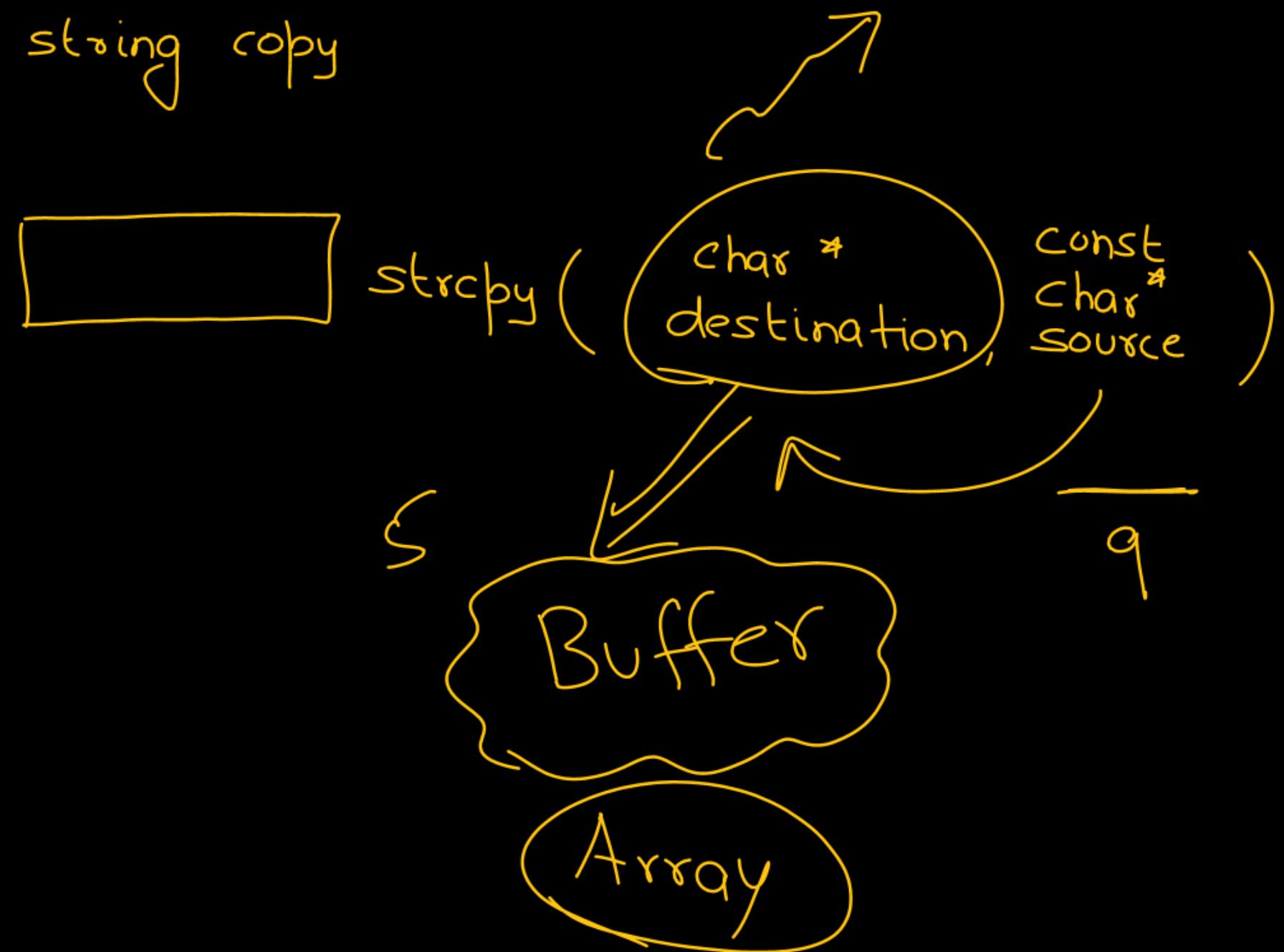
*str = '\0';
'\0' != '\0'

```

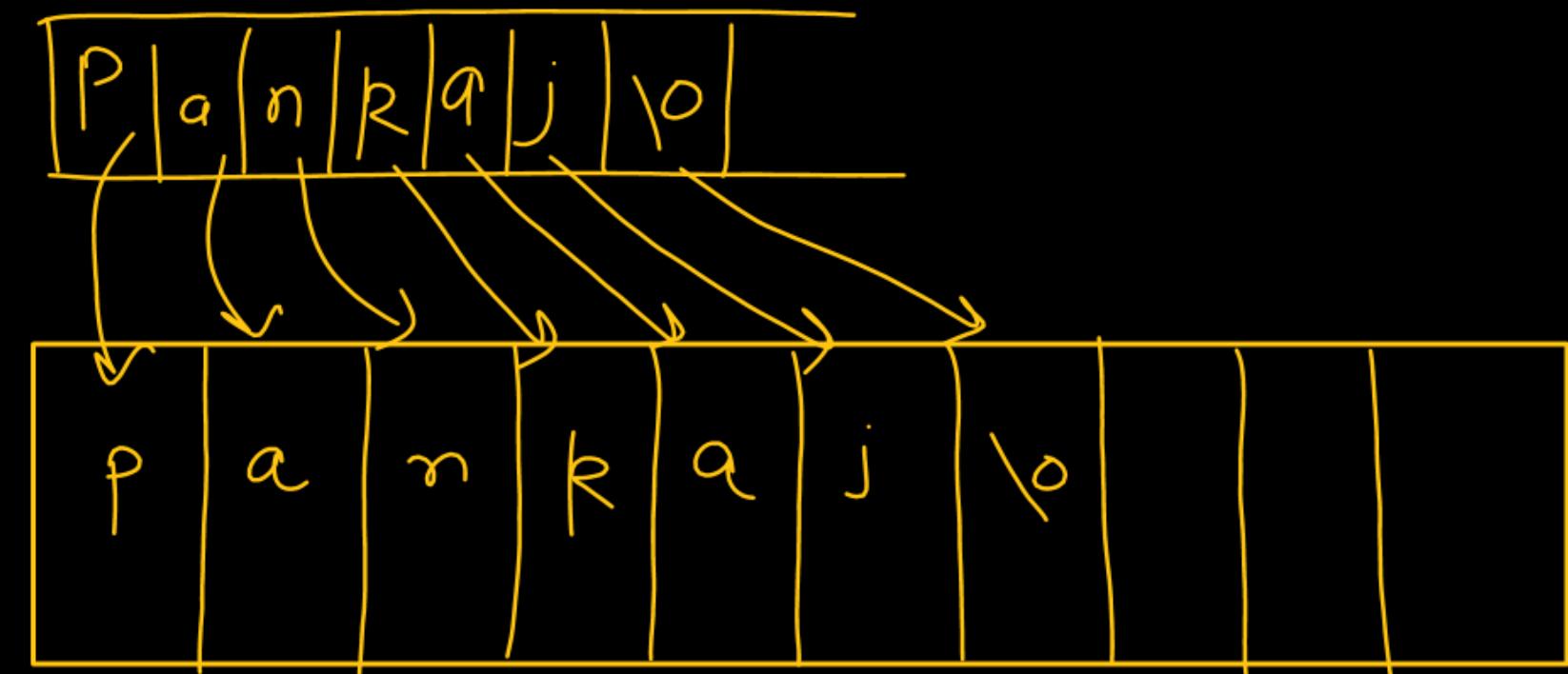
6 842 {
Count = 12 {
① str => 100
② str => 101
str => 102
str => 103
str => 104
str => 105
str => 106 } }

②

strcpy \Rightarrow string copy



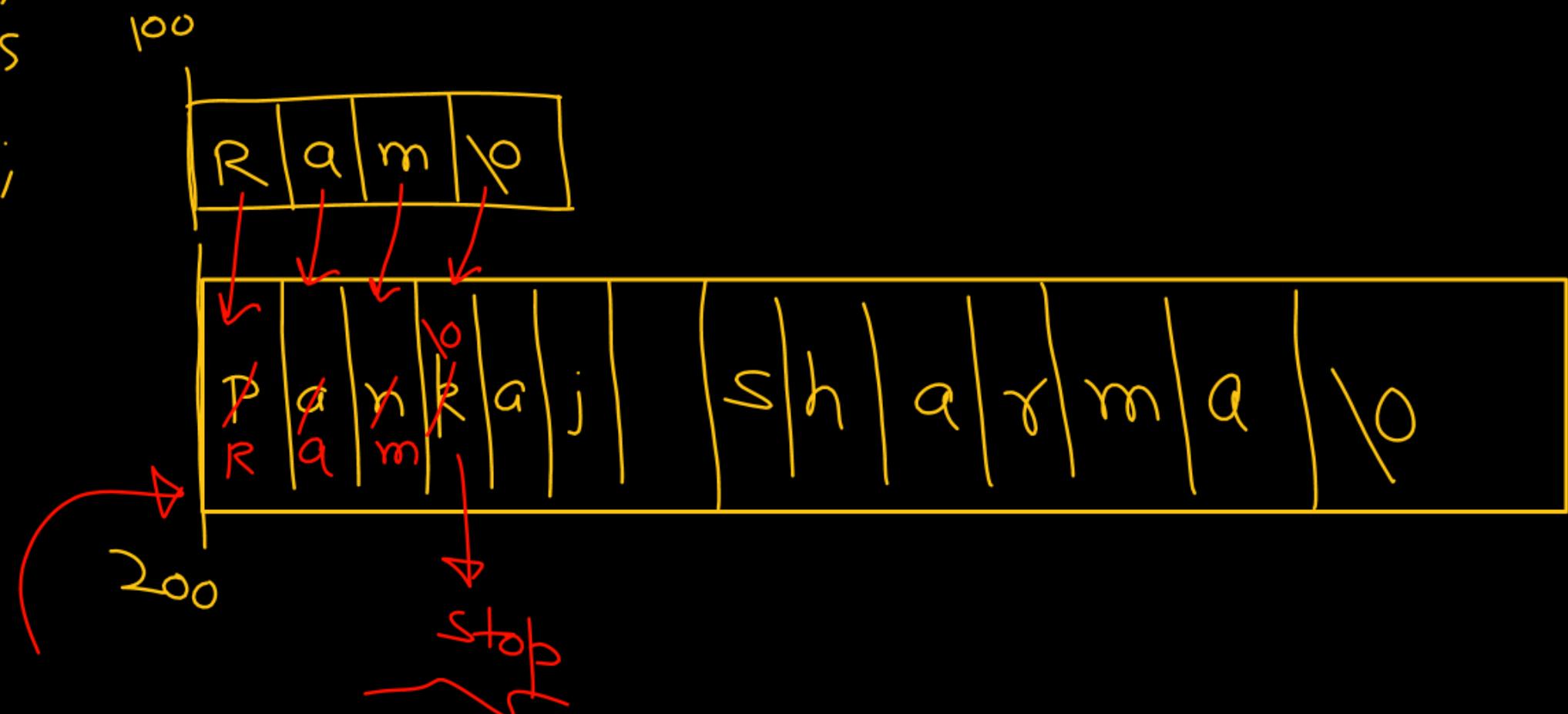
```
char arr[10];  
strcpy(arr, "Pankaj");  
printf("%s", arr);
```



```
char arr[20] = "Pankaj Sharma";
```

```
strcpy(arr, "Ram");  
Address
```

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

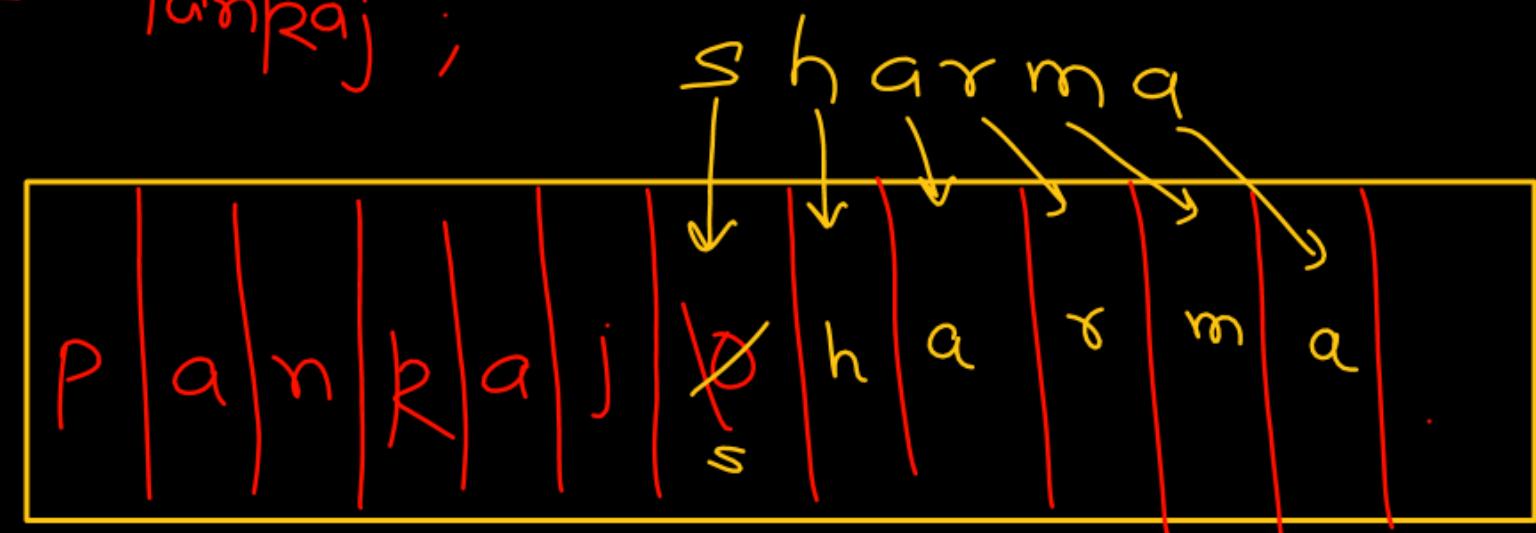


3

strcat (str1, str2)

char arr[20] = "Pankaj";

```
stack(&arr, "sharma");
```



b) $\text{strcmp}(\text{str1}, \text{str2}) \Rightarrow \text{str1}, \text{str2} \Rightarrow \text{exactly same} \Rightarrow 0$ return 0

b) $\text{strcmp}("Neeraj", "Neetu");$

$\text{strcmp}("Pankaj", "Pankaj") \Rightarrow 0$

$\gamma \rightarrow x$
 $s - x + 1$
 $t \rightarrow x + 2$

ASCII

$'N' - 'E'$

$x - (x + 2)$

$= -ve$

$'m' - 'i'$

+ve

```
char arr[20];  
  
printf("Enter name");  
scanf("%s", arr); Pankaj  
printf("%s", arr); Pankaj
```



Pankaj Sharma
Pankaj

char P = "Panraj";



