

C Language

Strings



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Agenda

- ① string functions
- ② Function call by passing string
- ③
- ④ Handling multiple strings.

Memory Concept

RAM

```
int i;
```

```
char str[20] = "My Sir G";
```

option 1

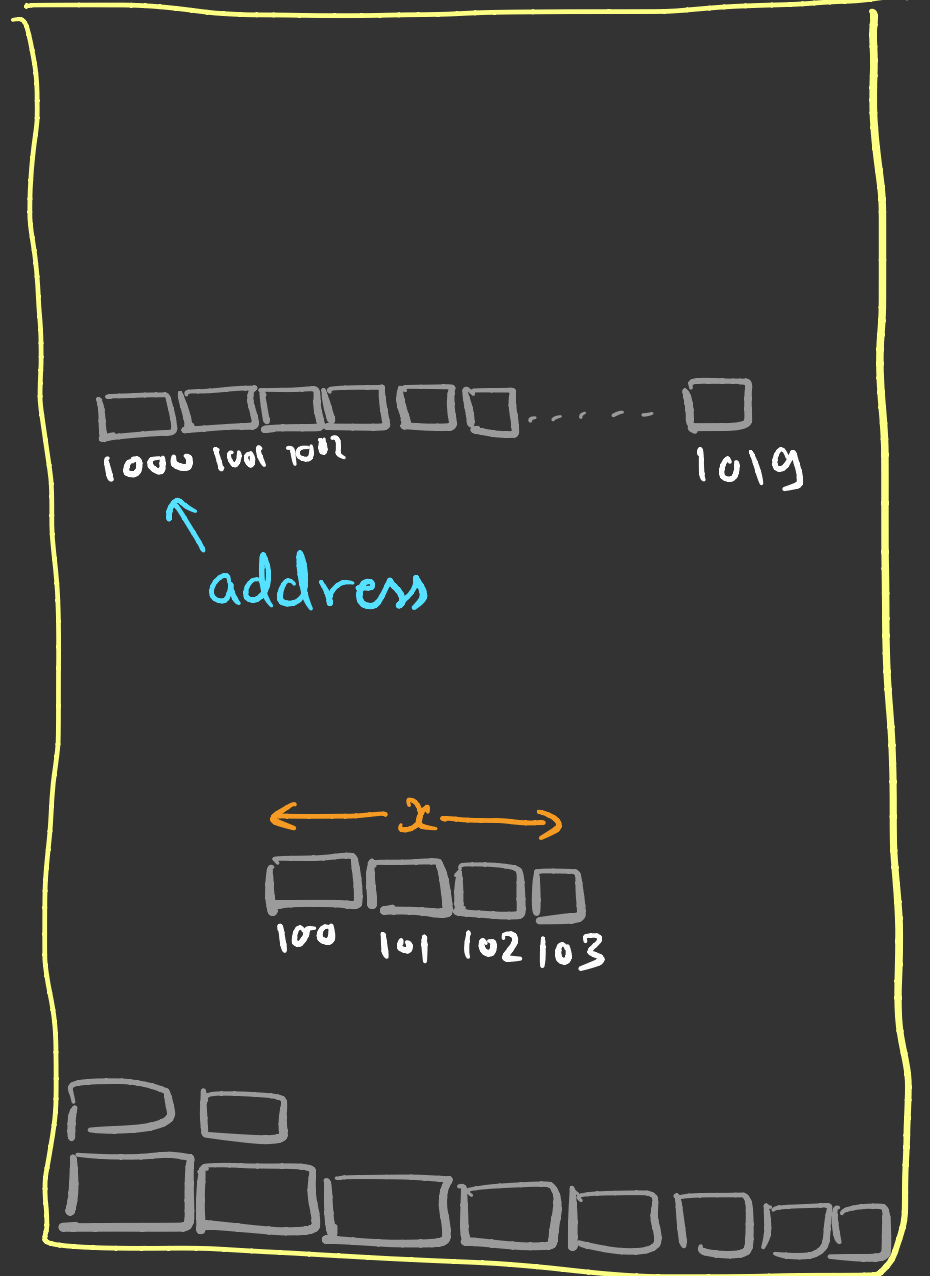
```
for (i=0; str[i]; i++)  
    printf("%c", str[i]);
```

option 2

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

$str \approx \&str[0] \approx 1000$

```
int x;
```



String Functions

```
#include <string.h>
```

```
int strlen(char*);
```

```
char* strcpy(char*, char*);
```

```
char* strcat(char*, char*);
```

```
int strcmp(char*, char*);
```

```
char str[20] = "MySirG";  
int l;  
l = strlen(str);
```

```
char s1[30];  
s1 = "Hello";
```

Error

```
char s1[30] = "Hello";  
char s2[30] = "Students";  
strcat(s1, s2);
```

```
char s1[30] = "Hello";  
char s2[30] = "Students";  
strcpy(s1, s2);
```

s1 = s2;

s1

HelloStudents\0

s1

Students\0

s2

Students\0

S1 → "Rahul"

S2 → "Rajesh"

-1
0
+1

↖
←
↘

strcmp(S1, S2)

-1 S1 comes before S2 in dictionary

0 Same

+1 S1 comes after S2 in dictionary

Function call by passing String

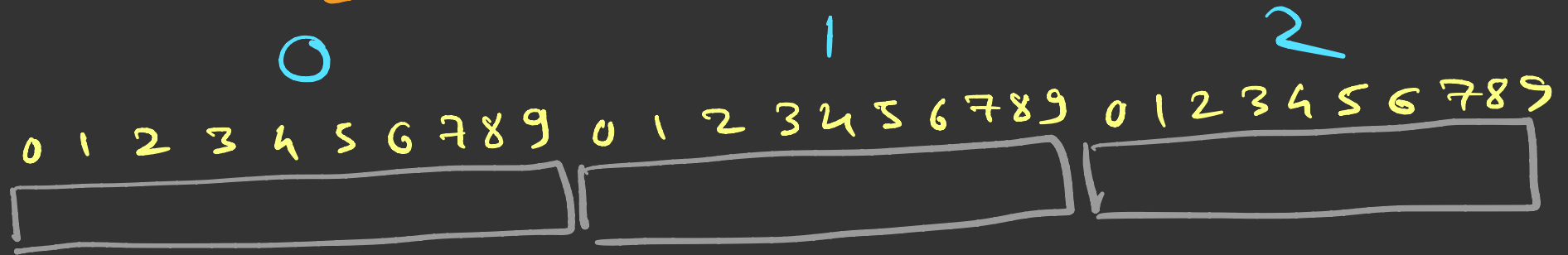
```
f1("Bhopal");  
f1(st);
```

```
void f1(char s[])  
{  
  
}
```

Handling Multiple Strings

```
int i;
```

```
char str[3][10];
```

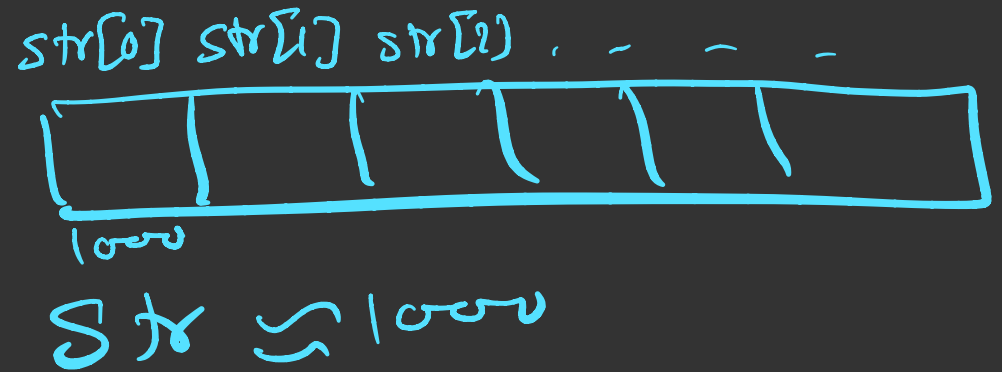


```
for (i=0; i<=2; i++)
```

```
    fgets(str[i], 10, stdin);
```

```
char str[3][10] = { "Bhopal", "Pune", "Ratlam" };
```

char str[10];



char s[3][10]

s[0] s[1] s[2]



s[0][0] s[0][1] s[0][2]

Three blue arrows point from the text 's[0][0]', 's[0][1]', and 's[0][2]' to the first, second, and third cells of the first row of the 2D array diagram respectively.