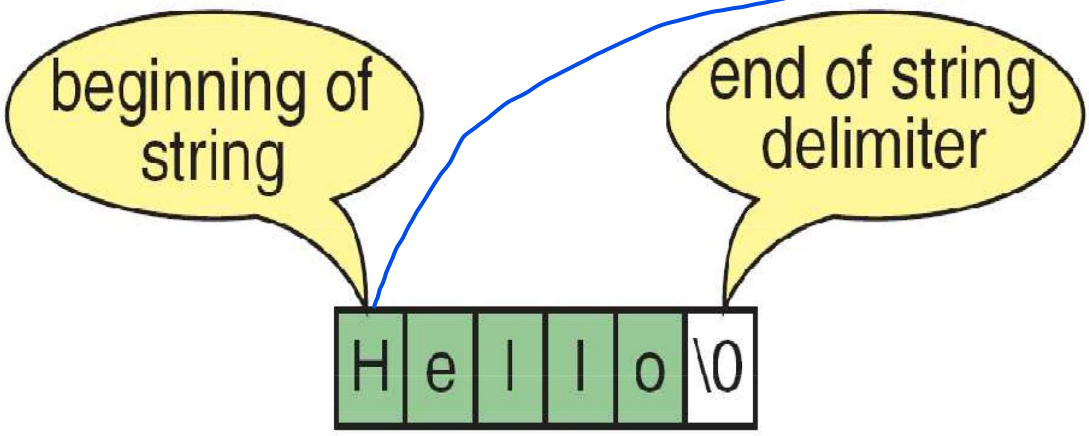
STRING (CHARACTER ARRAY)

SET OF CHARACTERS

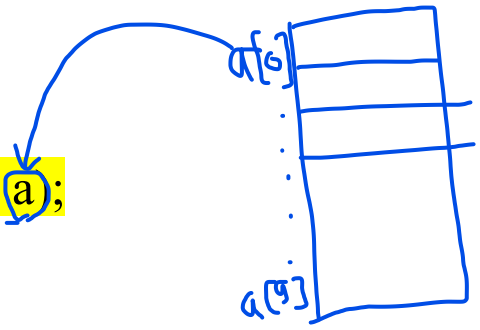
declaration :- char a[10];
format :- %s
initialization :- char a[10] = "Hello";



'\0' :- NULL CHARACTER (for string termination)

INPUT STRING :-

```
char a[10];
scanf( "%s" ,a);
```



base (first) address = a

```
// INPUT AND PRINT NAME
#include<stdio.h>
int main()
{
        char a[10];

       printf(" ENTER NAME \n ");

        scanf("%s" , a);          //  ABC

        printf("  NAME = %s \n" , a ); // ABC
}
```

---

1. int , float , char // copy

```
int  a = 300 , b ;
```

b = a ; // copy

```
b = 300 ;
```

2. string // copy

```
char  a[10] = " ABC " , b[10];
```

b = a ; X

```
strcpy ( b , a );      //     string.h
```

STRING FUNCTIONS // string.h

1. strcpy() :- string copy

Syntax

strcpy (string2 , string1);
< -----

-

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

      int     main()
      {
            char  a[40] , b[40];

           printf(" ENTER NAME \n ");
            scanf("%s" , a);              // ABC
            strcpy ( b , a);

            printf(" a = %s \n" , a);   //  ABC

            printf(" b = %s \n" , b);   //  ABC
       }
```

---

2. strlen() :- STRING LENGTH

syntax :

int strlen(string);

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

    int   main()
{     char  a[10];
          int   l;

          printf(" ENTER NAME \n ");
          scanf("%s", a);              // ABC

          l = strlen( a);

          printf(" LENGTH = %d\n" , l);  //   3
     }
#include<stdio.h> #include<string.h>
```

```
 int      main()   {
char a[10];
int  i , l ;

 printf("  ENTER NAME \n  ");

scanf("%s" , a);     //      ABC

l = strlen( a );

          for(   i  = 0  ;  i <  l ;  i++  )
           {
                    printf(" %s\n", a);
           }
   }
```

```
                l = 3
 for    i   =   0  to   2
           i  =  0
      ABC   i  =  1
      ABC   i  =  2        ABC
```

```
#include<stdio.h> #include<string.h>
  int       main()    {
char a[10];
int  i , l ;

            printf("  ENTER NAME \n  ");

            scanf("%s" , a);      //       ABC

                  l = strlen( a );

                 for(  i = 0 ; i < l; i++ )
                  {
                        printf(" %c \n ", a[i] );

                  }
 }
 TRACE :-      l = 3

               For       i  =  0   to  2

        i  =  0        a[0]   =  'A'
```

i = 1 a[1] = 'B'

i = 2 a[2] = 'C'

-- #include<stdio.h> #include<string.h> int main()

```
{       char a[10];             int  i , l ;
          printf("  ENTER NAME \n  ");
          scanf("%s" , a);      //      ABC
          l = strlen(a);
         printf(" REVERSE ORDER \n" );
         for(  i  = l - 1 ;  i  >=  0  ;  i-- )
          {
                printf(" %c\n " , a[i] );
          }
      }
```

for i = 2 to 0

i = 2 a[2] = 'C'

i = 1 a[1] = 'B'

i = 0 a[0] = 'A'

---

3. strrev() :- // STRING REVERSE

syntax

strrev (string);

4. strlwr() :- // LOWER CASE

syntax

strlwr (string);

5. strupr() :- // UPPER CASE

syntax

strupr (string);

```
#include<stdio.h>
#include<string.h>
int    main()
  {
            char   a[10] , b[10];
printf(" ENTER NAME \n ");
scanf("%s" , a);   //    ABC
strcpy ( b , a );
            strlwr ( b );
            printf(" a = %s \n", a);  // ABC
 printf(" b = %s \n", b); // abc
  }
```

6) strcat() :- string concatenation (add)

syntax

strcat (string1 , string2);

```
#include<stdio.h> #include<string.h>
  int     main()
  {
          char  a[40] , b[10];
 printf(" ENTER TWO NAMES \n ");
scanf("%s%s", a , b);    //   ABC        //    DE
strcat ( a , b);
printf(" a = %s \n" , a );  // ABCDE
printf(" b = %s \n" , b ); //  DE
 }
```