STRINGS :- It is a collection of characters. It always enclosed in double quotes " ". If we want to store n-characters it needs 'n+1' locations.

```
-> main ()
{
  char a[20] = "abcd";
  printf ("%s", a);
}
```

```
-> main()
{
  char a[20];
  printf ("enter a string");
  scanf ("%s", a);
  printf ("%s", a);
}
```

EX:-

```
-> main()
{
  char name[20];
  printf ("enter name:");
  scanf ("%s", name);
  printf ("your name is %s", name);
  return 0;
}
```

2. 
```
int main()
{
char ch[11]={'a','b','c','d','e','f','\0'};
char ch2[11]="abcdef";
printf("char array value is: %s\n",ch);
printf("string value is: %s\n",ch2);
return 0;
}
```
O/P:-
char array: abcdef
String value: abcdef

3. 
```
int main()
{
  char name[20];
  printf("enter your name: ");
  scanf("%s",name);
  printf("Hello %s how are you",name);
}
```

4. 
```
int main()
{
  char str[]="Hello";
  printf("%s\n",str);
}
```
O/P:- Hello

5. To print characters in a string:-

```
int main()
{
  char str[200];
  int i=0;
  printf("Enter any string: ");
  scanf("%s",str);
  while(str[i]!='\0')
  {
    printf("the character at %d index position = %c\n",i,str[i]);
    i++;
  }
return 0;
}
```

O/P:- Enter any string: a b c d
the char at 0 index position = a
the char at 1 index position = b
the char at 2 index position = c
the char at 3 index position = d

27-05-24

Q:- WAP to count no of characters in a given string :-

```
-> main ()
{ char a[20], b[20];
  int i;
  printf ("enter a string ");
  scanf ("%s", a);
  i=0;
  while (a[i] != '\0')
  { i++;
  }
  printf ("%d", i);
}
```

merging of 2 arrays

Q:- WAP to copy a string :-

```
-> main ()
{
  char a[20], b[20];
  int i;
  printf ("enter a string ");
  scanf ("%s", a);
  for (i=0; a[i] != '\0'; i++)
    b[i] = a[i];
    b[i] = a[i];
      printf ("%s", b);
}
```

Q:- WAP to concat 2 strings:-

→
```
main ( )
{
  char a[40], b[20];
  int i, j;
  printf ("enter 2 strings: ");
  scanf ("%s %s", a, b);
    i=0;
    while (a[i] != '\0')
    i++;
  for (j=0; b[j] != '\0'; i++, j++)
  {
    a[i] = b[j];
  }
  a[i] = b[j];
  printf ("%s", a);
}
```

CONCATINATION

Adding of 2 strings

Q:- WAP to reverse a given string:-

→
```
main ( )
{
  char a[20], b[20];
  int i, j;
  printf ("enter a string: ");
  scanf ("%s", a);
    i=0;
    while (a[i] != '\0')
    i++;
    for (i=i-1, j=0; i>=0; i--, j++)
    b[j] = a[i];
    b[j] = '\0';
    printf ("%s", b);
}
```

MOM
DAD
SIS
ROTOR
MADAM
LEVEL
NOON
RADAR
RACECAR
REFER
ROTATOR
NUN
TENET

WAS IT A CAT I SAW

BORROW OR ROB

Q:- WAP to compare 2 strings :-

→
```
main()
{ char a[20], b[20];
  int i, j;
  printf("enter 2 strings: ");
  scanf("%s %s", a, b);
  i=0;
  while(a[i]==b[i] && a[i]!='\0' && b[i]!='\0')
    i++;
    if(a[i]==b[i])
    printf("equal");
    else
    printf("Not equal");
}
```

Q:- WAP to check given string is Palindrome or not :-

→
```
main()
{   str[20]
  char a[20], b[20];
  int i, length, flag=0;
  printf("enter a string: ");
  scanf("%s", str);
length=0;
  while(str[i]!='\0')
length++;
  for(i=0; i<length; i++)
  {
    if(str[i]!=str[length-i-1])
    {
      flag=1;
      break;
    }
  }
  if(flag)
  { printf("\n %s is not a Palindrome", str);
  } else { printf ; }
```

```
a b
  a 2 a
  i=0;
while(a[i]!='\0')
for(i=0; i<n; i++)
scanf("%d", &a[i])
for(i=0; i<n; i++)
{ x=n;
  while(n!='0')
  {
```

-> int main()

```
{
    char str[20];
    int i, length=0, flag=0;
    printf("Enter a string: ");
    scanf("%s", str);
    while(str[length]!='\0')    // Calculate length of string
    length++;
    for(i=0; i<length; i++)
    if(str[i]!=str[length-i-1])  // Compare characters
    {
        flag=1;          // if charaiters don't match
        break;
    }
    if(flag)
    printf("%s is not a palindrome", str);
    else
    printf("%s is a palindrome", str);
}
```

[OR]

-> int main()

```
{
    char str[20], choice;
    int i, length=0, flag=0;
    do{
        printf("Enter a string: ");
        scanf("%s", str);
        while(str[length]!='\0')
            length++;
```

```
for (i=0; i<length; i++)
if (str[i] != str[length-i-1])
  {
    flag = 1;
    break;
  }
if (flag)
printf ("%s is not a palindrome", str);
else
printf ("%s is a palindrome", str);

printf ("\n\n Do you want to check another string? (y/n): ");
scanf (" %c", &choice);
}
while (choice == 'y' || choice == 'Y');
}
```