Exp NO 05

Date: 29/09/2025

Strings

1.Read and print a string

```c
#include <stdio.h>

int main() {
    char str[100];
    printf("Enter your name : ");
    scanf("%s", str); // reads until space
    printf("You entered: %s\n", str);
    return 0;
}
```

Output:

Enter your name : Prajyot

You entered: Prajyot

2.Reverse a string

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

int main() {
    char str[100], rev[100];
    int i, len;
    printf("Enter a string: ");
    scanf("%s", str);
```

```c
    len = strlen(str);

    for (i = 0; i < len; i++)

        rev[i] = str[len - i - 1];

    rev[len] = '\0';


    printf("Reversed string: %s\n", rev);

    return 0;

}
```

Output :

Enter a string: Prajyot

Reversed string: toyjarP

3.Count vowels and consonants

```c
#include <stdio.h>

int main() {

    char str[100];

    int i, v=0, c=0;


    printf("Enter a string: ");

    scanf("%s", str);


    for (i = 0; str[i]; i++) {

        char ch = str[i] | 32;  // convert to lowercase (works for letters)

        if (ch >= 'a' && ch <= 'z')
```

```c
        (ch=='a'||ch=='e'||ch=='i'||ch=='o'||ch=='u') ? v++ : c++;
  }
  printf("Vowels=%d Consonants=%d\n", v, c);
  return 0;
}
```

Output:

Enter a string: tarzan

Vowels=2 Consonants=4

4.Check palindrome

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

int main() {
  char str[100];
  int i, len, flag = 0;

  printf("Enter a string: ");
  scanf("%s", str);

  len = strlen(str);
  for (i = 0; i < len / 2; i++)
    if (str[i] != str[len - i - 1]) { flag = 1; break; }

  printf(flag ? "Not Palindrome\n" : "Palindrome\n");
  return 0;
```

}

Output:

Enter a string: 1000001

Palindrome

5.Compare two strings

#include <stdio.h>

#include <string.h>

```c
int main() {
    char a[100], b[100];
    printf("Enter first string: ");
    scanf("%s", a);
    printf("Enter second string: ");
    scanf("%s", b);

    printf(strcmp(a, b) ? "Not Equal\n" : "Equal\n");
    return 0;
}
```

Output:

Enter first string: abcde

Enter second string: vasng

Not Equal

6.Validate email or mobile number format

```c
#include <stdio.h>

#include <string.h>

#include <ctype.h>

int main() {
    char s[100]; int i, digits = 0;
    printf("Enter email or mobile: ");
    scanf("%s", s);

    if (strchr(s, '@') && strchr(s, '.'))
        printf("Valid Email\n");
    else {
        for (i = 0; s[i]; i++) {
        if (isdigit(s[i])) digits++;
        printf(digits == 10 ? "Valid Mobile\n" : "Invalid Input\n");
    }
    return 0;
}
}
```

Output:

Enter email or mobile: apple@gmail.com

Valid Email

Enter email or mobile: 2133467890

Valid Mobile