strcmp( ) function compares two strings to find whether they are similar. If the two strings are similar, this function returns 0.

If the two strings are not similar, the function returns the difference between the ASCII values of the first non- similar characters.

```
#include<stdio.h>
#include<string.h>
void main()
{
char a[]="MONKEY";
char b[]="DONKEY";
char c[]="MoNEY";
int i, j, k, l;
i=strcmp(a,b); //M-D = 77-68 = 9
j=strcmp(a,c); //O-o   = 79-111 = -32
k=strcmp(b,a); //D-M = 68-77  = -9
l=strcmp(c,a); //o-O    = 111-79 = 32
printf("%d %d %d %d",i,j,k,l);
}
```

Exercise Programs:

1. Find whether the given string is a palindrome without using strrev. Sample Input: LIRIL Sample output: 1 Sample input: MAYHEM Sample output: 0

```
#include <stdio.h>
#include<string.h>
int main() {
    char str1[20];
   scanf("%s",str1);
   int len=strlen(str1);
   int flag=0;
    for(int i=0;i<=len/2;i++){
        if(str1[i]!=str1[len-i-1]){
            flag=1;
            break;
    }
    }
    if(flag==0)
```

```
        printf("1");
    else
        printf("0");
    return 0;
}
```

2. Convert all the uppercase letters of a string to lower case without using strlwr or strupr.
Sample input: Channel B.Tech
Sample output: channel b.tech

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

int main() {

  char s[] = "Code_in_C_@0123";

  for(int i=0;i<strlen(s);i++)
  {
     s[i]=tolower(s[i]);
  }

  // Printing the output
  printf("%s", s);

  return 0;
}

#include <stdio.h>
#define MAX_SIZE 100 // Maximum string size

int main()
{
    char str[MAX_SIZE];
    int i;

    /* Input string from user */
    printf("Enter any string: ");
    scanf("%s",str);
```

```
    // Iterate loop till last character of string
    for(i=0; str[i]!='\0'; i++)
    {
        if(str[i]>='A' && str[i]<='Z')
        {
            str[i] = str[i] + 32;
        }
    }

    printf("Lower case string: %s", str);

    return 0;
}
```

3. Remove the whitespaces in the given string
Sample Input: Channel B.Tech
Sample output: ChannelB.Tech

Sample Input: Ch an nel B.Tech
Sample output: ChannelB.Tech

step 1: Run a for loop
step 2: if s[i]==‘ ‘
step 3: s[i]=s[i+1]

```
#include <stdio.h>
int main()
{
    int i, len = 0,j;
    char str[20];
    scanf("%[^\n]s",str);

    //Calculating length of the array
    len = sizeof(str)/sizeof(str[0]);

    for(i = 0; i < len; i++){
        if(str[i] == ' '){
            for(j=i;j<len;j++)
        {
```

```
            str[j]=str[j+1];
        }
        len--;
        }
    }
    printf("%s", str);
    return 0;
}
```

4. Write a program to print only the first and last letters of each word in a sentence.
Sample input: The President ordered the release of a prisoner
Sample output: TePtodtereofapr

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

void FirstAndLast(char *str)
{
    int i;

    for (i = 0; i < strlen(str); i++)
    {
        if (i == 0)
            printf("%c",str[i]);

        if (i == strlen(str) - 1)
            printf("%c",str[i]);

        if (str[i] == ' ')
        {
            printf("%c%c",str[i-1],str[i+1]);
        }
    }
}

// Driver code
int main()
{
    char str[100];
```

```
    scanf("%[^\n]s",str);
    FirstAndLast(str);
}
```

5. Write a program to count the number of occurrences of a given character in a sentence. Ignore case sensitivity.
   Sample input:
   Which character do you want me to count? g
   Enter the sentence: Gods gave reason for people to be good to giraffes. Sample output: 4

```
#include <stdio.h>
#include<string.h>
#include<ctype.h>
int main() {
    char str[1000], ch;
    int count = 0;

    printf("Enter a string: ");
    fgets(str, sizeof(str), stdin);

    printf("Enter a character to find its frequency: ");
    scanf("%c", &ch);

    for (int i = 0; str[i] != '\0'; ++i) {
        if (ch == tolower(str[i]))
            ++count;
    }

    printf("Frequency of %c = %d", ch, count);
    return 0;
}
```