**1.Count total number of words in a string**

#include <stdio.h>

int main() {

char str[100];

int i, words=1;

printf("Enter a string: ");

gets(str);

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

if(str[i]==' ') {

words++;

}

}

printf("Total words = %d", words);

}

**2.Count alphabets, digits and special characters**

#include <stdio.h>

int main() {

char str[100];

int i, alphabets=0, digits=0, special=0;

printf("Enter a string: ");

gets(str);

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

if((str[i]>='a' && str[i]<='z') || (str[i]>='A' && str[i]<='Z'))

alphabets++;

else if(str[i]>='0' && str[i]<='9')

digits++;

else

special++;

}

printf("Alphabets = %d\n", alphabets);

printf("Digits = %d\n", digits);

printf("Special = %d\n", special);

}

**3.Replace lowercase with uppercase and vice versa**

#include <stdio.h>

int main() {

char str[100];

int i;

printf("Enter a string: ");

gets(str);

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

if(str[i]>='a' && str[i]<='z')

str[i] = str[i] - 32;

else if(str[i]>='A' && str[i]<='Z')

str[i] = str[i] + 32;

}

printf("Converted string: %s", str);

}

**4.Sum of rows and columns of 3x3 matrix**

#include <stdio.h>

int main() {

int a[3][3], i, j, sum;

printf("Enter elements of 3x3 matrix:\n");

for(i=0; i<3; i++) {

for(j=0; j<3; j++) {

scanf("%d", &a[i][j]);

}

}

printf("Sum of rows:\n");

for(i=0; i<3; i++) {

sum = 0;

for(j=0; j<3; j++) {

sum = sum + a[i][j];

}

printf("Row %d = %d\n", i+1, sum);

}

printf("Sum of columns:\n");

for(j=0; j<3; j++) {

sum = 0;

for(i=0; i<3; i++) {

sum = sum + a[i][j];

}

printf("Column %d = %d\n", j+1, sum);

}

}

**5.Check if string is palindrome**

#include <stdio.h>

int main() {

char str[100];

int i, j, length=0;

printf("Enter a string: ");

gets(str);

while(str[length] != '\0') {

length++;

}

i = 0;

j = length - 1;

while(i < j) {

if(str[i] != str[j]) {

printf("Not Palindrome");

return;

}

i++;

j--;

}

printf("Palindrome");

}

**6.Count total words in a string (without arguments)**

#include <stdio.h>

void countWords() {

char str[100];

int i, words = 1;

printf("Enter a string: ");

gets(str);

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

if(str[i] == ' ' && str[i+1] != ' ') {

words++;

}

}

printf("Total words: %d\n", words);

}

int main() {

countWords();

}

**7.Count alphabets, digits, and special characters (without arguments)**

#include <stdio.h>

void countCharacters() {

char str[100];

int i, alphabets = 0, digits = 0, special = 0;

printf("Enter a string: ");

gets(str);

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

if((str[i] >= 'a' && str[i] <= 'z') || (str[i] >= 'A' && str[i] <= 'Z'))

alphabets++;

else if(str[i] >= '0' && str[i] <= '9')

digits++;

else

special++;

}

printf("Alphabets: %d\nDigits: %d\nSpecial characters: %d\n", alphabets, digits, special);

}

int main() {

countCharacters();

}