Write a program in C to count the total number of alphabets, digits and special characters in a string.

#include <stdio.h>

main()

{

char str[100];

int alp, digit, splch, i;

alp = digit = splch = i = 0;

printf("\nCount total number of alphabets, digits, and special characters :\n");

printf("--------------------------------------------------------------------\n");

printf("Input the string : ");

gets(str)

while (str[i] != '\0')

{

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

alp++;

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

digit++;

else

splch++;

i++;

}

printf("Number of Alphabets in the string is : %d\n", alp);

printf("Number of Digits in the string is : %d\n", digit);

printf("Number of Special characters in the string is : %d\n\n", splch);

}

**Write a program in C to copy one string to another string.**

#include <stdio.h>

main()

{

char str1[100], str2[100];

int i;

printf("\n\nCopy one string into another string :\n");

printf("-----------------------------------------\n");

printf("Input the string : ");

gets(str1);

i = 0;

while (str1[i] != '\0')

{

str2[i] = str1[i];

i++;

}

str2[i] = '\0';

printf("\nThe First string is : %s\n", str1);

printf("The Second string is : %s\n", str2);

printf("Number of characters copied : %d\n\n", i);

}

Write a program in C to count the total number of vowels or consonants in a string.

#include <stdio.h>

# include <string.h>

main()

{

char str[str\_size];

int i, len, vowel, cons;

printf("\n\nCount total number of vowel or consonant :\n");

printf("----------------------------------------------\n");

printf("Input the string : ");

gets(str);

vowel = 0; // Initialize vowel count to zero

cons = 0; // Initialize consonant count to zero

len = strlen(str); // Get the length of the input string

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

{

if (str[i] == 'a' || str[i] == 'e' || str[i] == 'i' || str[i] == 'o' || str[i] == 'u' || str[i] == 'A' || str[i] == 'E' || str[i] == 'I' || str[i] == 'O' || str[i] == 'U')

vowel++;

else

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

cons++;

}

printf("\nThe total number of vowel in the string is : %d\n", vowel);

printf("The total number of consonant in the string is : %d\n\n", cons);

}

**Write a C program to sort a string array in ascending order.**

#include <stdio.h>

#include <string.h>

main()

{

char str[100], ch;

int i, j, l;

printf("\n\nSort a string array in ascending order :\n");

printf("--------------------------------------------\n");

printf("Input the string : ");

gets(str);

l = strlen(str);

for (i = 1; i < l; i++)

{

for (j = 0; j < l - i; j++)

{

if (str[j] > str[j + 1])

{

ch = str[j];

str[j] = str[j + 1];

str[j + 1] = ch;

}

}

}

printf("After sorting the string appears like : \n");

printf("%s\n\n", str);

}

**Write a program in C to extract a substring from a given string.**

#include <stdio.h>

main()

{

char str[100], sstr[100];

int pos, l, c = 0;

printf("\n\nExtract a substring from a given string:\n");

printf("--------------------------------------------\n");

printf("Input the string : ");

gets(str);

printf("Input the position to start extraction :");

scanf("%d", &pos);

printf("Input the length of substring :");

scanf("%d", &l);

while (c < l)

{

sstr[c] = str[pos + c - 1];

c++;

}

sstr[c] = '\0';

printf("The substring retrieved from the string is : \" %s\" \n\n", sstr

}