**Assignment-17 Solution Name: Om Pant**

1. Write a program to calculate the length of the string. (without using builtin method)

Ans-

*// 1. Write a program to calculate the length of the string. (without using builtin method)*

*#include*<stdio.h>

int main(){

    int i,length = 0;

    char string[50];

    printf("Enter any String\n");

    gets(string);

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

        length++;

    }

    printf("Length of String: %d",length);

*return* 0;

}

1. Write a program to count the occurrence of a given character in a given string.

Ans-

*// 2. Write a program to count the occurrence of a given character in a given string.*

*#include*<stdio.h>

int main(){

    char string[500];

    char x;

    int temp=0;

    printf("Enter a string\n");

    gets(string);

    printf("Enter a character to find its occurance in string\n");

    scanf("%c", &x);

*for*(int i=0;string[i] != '\0';i++){

*if*(string[i] == x){

            temp++;

        }

    }

    printf("Occurance : %d Times \n",temp);

*return* 0;

}

1. Write a program to count vowels in a given string

Ans

*// 3. Write a program to count vowels in a given string*

*#include*<stdio.h>

int main(){

    char string[500];

    int temp=0;

    printf("Enter a string\n");

    gets(string);

*for*(int i=0;string[i] != '\0';i++){

*if*(string[i] == 'A' ||string[i] == 'a'){

            temp++;

        }

*else* *if*(string[i] == 'E' ||string[i] == 'e'){

            temp++;

        }

*else* *if*(string[i] == 'I' ||string[i] == 'i'){

            temp++;

        }

*else* *if*(string[i] == 'O' ||string[i] == 'o'){

            temp++;

        }

*else* *if*(string[i] == 'U' ||string[i] == 'u'){

            temp++;

        }

    }

    printf("No of Vowels : %d \n",temp);

*return* 0;

}

1. Write a program to convert a given string into uppercase

Ans-

*// 4. Write a program to convert a given string into uppercase*

*#include*<stdio.h>

int main(){

    char string[100];

    printf("Enter a given string \n");

    gets(string);

*for*(int i=0; string[i] != '\0';i++){

*if*(string[i]>=97 && string[i]<=122)

            string[i] -= 32;

    }

    printf("Converted Uppercase String is: %s",string);

*return* 0;

}

1. Write a program to convert a given string into lowercase

Ans-

*// 5. Write a program to convert a given string into lowercase*

*#include*<stdio.h>

int main(){

    char string[100];

    printf("Enter a given string \n");

    gets(string);

*for*(int i=0; string[i] != '\0';i++){

*if*(string[i]>=65 && string[i]<=90)

            string[i] += 32;

    }

    printf("Converted Lowercase String is: %s",string);

*return* 0;

}

1. Write a program to reverse a string.

Ans-

*// 6. Write a program to reverse a string.*

*#include*<stdio.h>

*#include*<string.h>

int main(){

    char string[100],revStr[100];

    printf("Enter a given string \n");

    fgets(string, 100, stdin);

    string[strlen(string) -1] = '\0';

    int j  = strlen(string)-1;

    int x = strlen(string);

*for*(int i=0; i<=x; i++){

        revStr[i] = string[j];

        j--;

    }

    printf("Reverse String is: %s",revStr);

*return* 0;

}

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

Ans-

*// 7. Write a program in C to count the total number of alphabets, digits and special characters in a string.*

*#include*<stdio.h>

*#include*<string.h>

int main(){

    char string[200];

    int alphabet = 0, digit =0, spchar =0;

    printf("Enter a string\n");

    fgets(string,200,stdin);

    string[strlen(string)-1] = '\0';

*for*(int i=0; string[i] != '\0'; i++){

*if*((string[i]>=65 && string[i]<=90 ) || (string[i]>=97 && string[i]<=122)){

            alphabet++;

        }

*else* *if*(string[i]>=48 && string[i]<=57){

            digit++;

        }

*else*{

            spchar++;

        }

    }

    printf("\n Result:\n Alphabets - %d\n Digits - %d\n Special Characters - %d\n",alphabet,digit,spchar);

*return* 0;

}

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

Ans-

*// 8. Write a program in C to copy one string to another string.*

*#include*<stdio.h>

*#include*<string.h>

int main(){

    int i;

    char string[100], copystring[100];

    printf("Enter a string\n");

    fgets(string,100,stdin);

    string[strlen(string)-1] = '\0';

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

        copystring[i] = string[i];

    }

    copystring[i] = '\0';

    printf("Entered String : %s\nCopied String : %s\nString Copied Successfully\n",string,copystring);

*return* 0;

}

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

Ans-

*// 9. Write a C program to sort a string array in ascending order.*

*#include*<stdio.h>

*#include*<string.h>

int main(){

    int i,j;

    char string[][20] = {"prateek","prashant","vijay","aakash","suman"};

    char temp[20];

*for*(i=0;i<4;i++){

*for*(j=i;j<5;j++){

*if*(strcmp(string[i],string[j])>0){

                strcpy(temp, string[i]);

                strcpy(string[i], string[j]);

                strcpy(string[j],temp);

            }

        }

    }

    printf("Sorted String array is\n");

*for*(i=0;i<5;i++){

        printf("%s ",string[i]);

    }

*return* 0;

}

1. Write a program in C to Find the Frequency of Characters.

Ans-

*// 10. Write a program in C to Find the Frequency of Characters*

*#include*<stdio.h>

*#include*<string.h>

int main(){

    char string[20] , temp[200]={0};

    printf("Enter a String\n");

    fgets(string,20,stdin);

    string[strlen(string)-1] = '\0';

*for*(int i=0; string[i]!=0;i++){

        temp[string[i]]++;

    }

*for*(int j=0;j<=122;j++){

*if*(temp[j] != 0){

            printf("%c - %d Times\n",j,temp[j]);

        }

    }

*return* 0;

}