Assignment - 18

String and Functions in C Language

1. Write a function to calculate length of the string

Code

#include<stdio.h>

int length\_og\_string (char []) ;

int main()

{

    char str[100];

    printf("Enter a String : \n ");

    fgets(str,100,stdin);

     // including \0

    printf("The Length of a string : %d ", length\_og\_string(str)); // excluding \0

    return 0;

}

int length\_og\_string (char str1[])

{

    int i;

    for(i=0; str1[i] ; i++);

     return i;

}

Output

Enter a String :

dhruv

The Length of a string : 5

1. Write a function to reverse a string.

Code

#include<stdio.h>

void reverse\_a\_string (char []);

int main()

{

    char str[100];

    printf("Enter a String : \n ");

    fgets(str,100,stdin);

    reverse\_a\_string(str);

    return 0;

}

void reverse\_a\_string (char str1[])

 {

    int i,j;

      for(i=0; str1[i] ; i++);

   for(j=i-2; j>=0 ; j--)

    printf("%c",str1[j]);

 }

Output

Enter a String :

dhruv

vurhd

1. Write a function to compare two strings.

Code

#include<stdio.h>

void compare\_two\_string (char [] ,char []);

int main()

{

    char str[100],ctr[100];

    printf("Enter a String : \n ");

    fgets(str,100,stdin);

    printf("Enter a String : \n ");

    fgets(ctr,100,stdin);

    compare\_two\_string(str,ctr);

    return 0;

}

void compare\_two\_string (char str1[] , char ctr1[])

 {

    int i,j,k, count=0;

      for(i=0; str1[i] ; i++);

      for(k=0; ctr1[k] ; k++);

   for(j=0; j<=(i>=k?i-2:k-2) ; j++)

       if (str1[j] !=ctr1[j])

       {

            count++;

           // printf("%d\n",j);

            break;

       }

       if(count==1)

    printf("These Two Given Strings are not Equal at %dth position",j+1);

        else

    printf("These Two Given Strings are Equal");

 }

Output

Enter a String :

dhruvrastogi

Enter a String :

dhruv1rastogi

These Two Given Strings are not Equal at 6th position

1. Write a function to transform string into uppercase

Code

#include<stdio.h>

void transform\_string\_to\_uppercase(char []);

int main()

{

    char str[100];

    printf("Enter a String : \n ");

    fgets(str,100,stdin);

    transform\_string\_to\_uppercase(str);

    return 0;

}

void transform\_string\_to\_uppercase(char str1[])

{

    int i;

    for(i=0; str1[i] ; i++)

    if(str1[i]>='a' && str1[i]<='z')

        str1[i] = str1[i]-32;

    printf("%s",str1);

}

Output

Enter a String :

dhruv

DHRUV

1. Write a function to transform a string into lowercase

Code

#include<stdio.h>

void transform\_string\_to\_lowercase(char []);

int main()

{

    char str[100];

    printf("Enter a String : \n ");

    fgets(str,100,stdin);

    transform\_string\_to\_lowercase(str);

    return 0;

}

void transform\_string\_to\_lowercase(char str1[])

{

    int i;

    for(i=0; str1[i] ; i++)

    if(str1[i]>='A' && str1[i]<='Z')

        str1[i] = str1[i]+32;

    printf("%s",str1);

}

Output

Enter a String :

DHRUV

dhruv

1. Write a function to check whether a given string is an alphanumeric string or not.

(Alphanumeric string must contain at least one alphabet and one digit)

Code

#include<stdio.h>

int main()

{

    char str[100],a=0,b=0;

    int i;

    printf("Enter a String : \n ");

    fgets(str,100,stdin);

    for(i=0; str[i] ; i++)

    {

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

      {

        a++;

      }

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

      {

        b++;

      }

    }

      if(a>0 && b>0)

    printf("The Given string is an Alphanumeric string ");

    else

    printf("The Given string is not an Alphanumeric string ");

    return 0;

}

Output

Enter a String :

dhruv1

The Given string is an Alphanumeric string

1. Write a function to check whether a given string is palindrome or not.

Code

#include<stdio.h>

void check\_palindrome\_or\_not (char[]);

int main()

{

    char str[100];

    printf("Enter a String : \n ");

    fgets(str,100,stdin);

   check\_palindrome\_or\_not(str);

    return 0;

}

void check\_palindrome\_or\_not (char str1[])

{

    char cpr1[100];

     int i,j,count=0;

  for(i=0; str1[i] ; i++);

   for(j=0 ; j<=(i-2) ; j++)

    cpr1[j] = str1[(i-2)-j];

     for(j=0 ; j<=(i-2) ; j++)

     {

       if (str1[j] !=cpr1[j])

       {

            count++;

            break;

       }

     }

     if(count==1)

    printf("The Given String is not Palindrome");

        else

     printf("The Given String is Palindrome");

}

Output

Enter a String :

aadaa

The Given String is Palindrome

1. Write a function to count words in a given string

Code

#include<stdio.h>

int length\_og\_string (char []) ;

int main()

{

    char str[100];

    printf("Enter a String : \n ");

    fgets(str,100,stdin);

     // including \0

    printf("number of words in a string : %d ", length\_og\_string(str));

    return 0;

}

int length\_og\_string (char str1[])

{

    int i,j,count=0;

    for(i=0; str1[i] ; i++);

  for(j=0 ; j<=(i-2) ; j++)

     {

       if (str1[j]==' ')

           count++;

     }

     return count+1;

}

output

Enter a String :

my sir ji

number of words in a string : 3

9. Write a function to reverse a string word wise. (For example if the given string is

“Mysirg Education Services” then the resulting string should be “Services Education

Mysirg” )

Code

#include<stdio.h>

void reverse\_a\_string (char []);

int main()

{

    char str[100];

    printf("Enter a String : \n ");

    fgets(str,100,stdin);

    reverse\_a\_string(str);

    return 0;

}

void reverse\_a\_string (char str1[])

 {

    char cpr[100][100];

    int i ,j =0,count=0;

    for(i=0; str1[i];i++)

    {

        if(str1[i]==' ')

        {

            count++;

          // cpr[count-1][j]='\0';

           j=0;

        }

        else

        {

            cpr[count][j] = str1[i];

            j++;

        }

    }

     for(i=count;i>=0;i--)

     {

       for(j=0;cpr[i][j];j++)

       printf("%c",cpr[i][j]);

       printf(" ");

    }

 }

Output

Enter a String :

my sir ji

ji sir my

1. Write a function to find the repeated character in a given string.

Code

#include<stdio.h>

void length\_og\_string (char []) ;

int main()

{

    char str[100];

    printf("Enter a String : \n ");

    fgets(str,100,stdin);

    length\_og\_string(str);

    return 0;

}

void length\_og\_string (char str1[])

{

    int i,j,k,count=0;

    for(i=0; str1[i] ; i++);

  for(j=0 ; j<=(i-2) ; j++)

  {

       if(str1[j]==str1[j+1])

        printf(" %c ",str1[j]);

  }

}

output

Enter a String :

myssirr

s r