**//WAP to calculate length of string**

#include<stdio.h>

int length(char []);

int main()

{

char array[30];

// Enter a string

fgets(array,30,stdin);

length(array);

return 0;

}

int length(char a[])

{

int i;

for(i=0;a[i];i++);

printf("Length is %d",i);

}

**// 2. Count occurrence of a given character in a string**

#include<stdio.h>

int countOccurrence(char a[], char character)

{

int i,count=0;

for(i=0;a[i];i++)

{

if(a[i] == character)

count++;

}

return count;

}

int main()

{

char search\_str;

int size;

// take size from user

printf("Enter size of an array\n");

scanf("%d",&size);

char array[size];

// creating array with elements

printf("Enter required array\n");

getchar(); // clear buffer

fgets(array,size,stdin);

//enter element to be counted

printf("Enter element to be searched\n");

scanf("%c",&search\_str);

printf("No of occurrence of letter %c is %d\n",search\_str,countOccurrence(array,search\_str));

return 0;

}

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

#include<stdio.h>

int countVowel(char str[])

{

int i,count = 0;

for(i=0;str[i];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')

{

count ++;

}

}

return count;

}

int main()

{

char line[30];

printf("Enter the required string\n");

fgets(line,30+1,stdin);

printf("No of vowels in %s is : %d",line,countVowel(line));

return 0;

}

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

#include<stdio.h>

void printUpper(char str[]);

int main()

{

char str[] = "this is all in upper case";

printUpper(str);

}

void printUpper(char str[])

{

int i;

// calculate length of given string and create a new one.

for(i=0;str[i];i++);

char newString[i+1]; // null character needs to be accommodated.

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

{

// take each character and subtract 32 to its ASCII value and print character format

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

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

else newString[i] = str[i];

}

newString[i] = '\0';

// print each character for the converted string

printf("Uppercase String: %s\n", newString);

}

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

#include<stdio.h>

void printUpper(char str[]);

int main()

{

char str[] = "PRINTING ALL IN LOWER CASE";

printUpper(str);

}

void printUpper(char str[])

{

int i;

// calculate length of given string and create a new one.

for(i=0;str[i];i++);

char newString[i+1]; // null character needs to be accommodated.

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

{

// take each character and add 32 to its ASCII value and print character format

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

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

else newString[i] = str[i];

}

newString[i] = '\0';

// print each character for the converted string

printf("Lowercase String: %s\n", newString);

}

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

#include<stdio.h>

void reverseString(char str[])

{

int i,j=0,len;

for(i=0;str[i];i++);

len = i;

char reverse[len+1]; // to accomodate null size

for(i= len-1 ;i>=0 ;i--) // to avoid taking null doing len-1

{

reverse[j] = str[i];

j++;

}

reverse[len] = '\0';

printf("%s",reverse);

}

int main()

{

char a[] = {"abcd efgh ijkl"};

reverseString(a);

return 0;

}

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

#include<stdio.h>

void countCharacters(char str[]);

int main()

{

char str[] = {"Sh!y$nSapkota"};

countCharacters(str);

return 0;

}

void countCharacters(char str[])

{

int i;

int count=0,count1=0,count2=0;

for(i=0;str[i];i++)

{

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

count++;

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

count1++;

else

count2++;

}

printf("The number of lower case is %d , caps is %d and special character is %d",count,count1,count2);

}

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

#include<stdio.h>

void copy(char s[], int size);

int main()

{

int size;

printf("Enter the required size\n");

scanf("%d",&size);

char str1[size];

printf("Enter elements in a string\n");

getchar();

fgets(str1,size+1,stdin); //one more to accommodate null.

copy(str1,size);

return 0;

}

void copy(char s[], int size)

{

int i;

char str2[size];

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

str2[i] = s[i];

str2[size] = '\0';

printf("string copied is : %s", str2);

}

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

#include<stdio.h>

void sortString(char s[],int size)

{

int i,j;

char temp;

printf("String passed is %s\n",s);

for(i=0;s[i];i++)

{

for(j=i+1;j<size;j++)

{

if (s[i] > s[j])

{

temp = s[i];

s[i] = s[j];

s[j] = temp;

}

}

}

printf("Sorted value is : %s\n",s);

}

int main()

{

char str[] = {"zyxtpecba"};

sortString(str,9);

return 0;

}

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

#include<stdio.h>

void Frequency(char str[] , char c)

{

int i,count=0;

for(i=0;str[i];i++)

{

if(str[i] == c)

count++;

}

printf("No of %c in given string %s is %d\n",c,str,count);

}

int main()

{

char str[30];

char ch;

printf("Enter required string\n");

fgets(str,30,stdin);

printf("Enter required character to be counted\n");

scanf("%c",&ch);

Frequency(str,ch);

return 0;

}