**String Basics in C Language**

**Assignment – 17**

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

#include<stdio.h>

#include<string.h>

#define size 100

int main()

{

int count=0;

char str[size]="MOHIT";

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

count++;

printf("LENGTH OF THE STRING IS=%d",count);

return 0;

}

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

#include<stdio.h>

#include<string.h>

#define size 100

int main()

{ char str[size];

int count;

printf("ENTER STRING ELEMENTS=\n");

fgets(str,size,stdin);

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

{

for(int j=i+1;str[j];j++)

{

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

{

count=1;

}

}

}

if(count==1)

{

printf("OCCURANCE FOUND");

}

else

{

printf("OCCURANCE NOT FOUND");

}

return 0;

}

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

#include<stdio.h>

#include<string.h>

#define size 100

int main()

{ char str[size];

int count=0;

printf("ENTER STRING ELEMENTS=\n");

fgets(str,size,stdin);

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

{

if(str[i]=='a' || str[i]=='e' || str[i]=='i' || str[i]=='o' || str[i]=='u')

{

count++;

}

}

printf("NO OF VOWEL PRESENT=%d",count);

return 0;

}

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

#include<stdio.h>

#include<string.h>

#define size 100

int main()

{ char str[size];

int count=0;

printf("ENTER STRING ELEMENTS=\n");

fgets(str,size,stdin);

printf("STRING IN UPPER CASE=%s",strupr(str));

return 0;

}

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

#include<stdio.h>

#include<string.h>

#define size 100

int main()

{ char str[size];

int count=0;

printf("ENTER STRING IN UPPER CASE=\n");

fgets(str,size,stdin);

printf("STRING IN LOWER CASE=%s",strlwr(str));

return 0;

}

6. Write a program to reverse a string.

#include<stdio.h>

#include<string.h>

#define size 100

int main()

{ char str[size];

int count=0;

printf("ENTER STRING=\n");

fgets(str,size,stdin);

printf("STRING IN REVERSE=");

printf("%s",strrev(str));

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>

#include<string.h>

#define size 100

int main()

{ char str[size];

int alph=0,digit=0,spechr=0;

printf("ENTER STRING ELEMENTS=\n");

fgets(str,size,stdin);

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

{

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

{

alph++;

}

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

{

digit++;

}

else

{

spechr++;

}

}

printf("NO.OF ALPHABET PRESENT=%d",alph);

printf("\nNO.OF DIGIT PRESENT=%d",digit);

printf("\nNO.OF SPECIAL PRESENT=%d",spechr);

return 0;

}

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

#include<stdio.h>

#include<string.h>

#define size 100

int main()

{

char str1[size],str2[size];

printf("ENTER STRING =\n");

fgets(str1,size,stdin);

printf("STRING1=%s",str1);

strcpy(str2,str1);

printf("\nSTRING2=%s",str2);

return 0;

}

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

#include<stdio.h>

#include<string.h>

#define size 100

int main()

{ char str[size];

int temp=0,l,i,j;

printf("ENTER STRING ELEMENTS=\n");

fgets(str,size,stdin);

printf("STING IN ASCENDING ORDER=\n");

l=strlen(str);

/\* sorting process \*/

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

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

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

{

temp=str[j];

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

str[j+1]=temp;

}

printf("%s",str);

return 0;

}

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

#include<stdio.h>

#include<string.h>

#define size 100

int main()

{ char str[size],ch;

int count=0;

printf("ENTER STRING ELEMENTS=\n");

fgets(str,size,stdin);

printf("Enter a character to find its frequency: ");

scanf("%c", &ch);

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

if (ch == str[i])

++count;

}

printf("Frequency of %c = %d", ch, count);

return 0;

}