Assignment – 17

String Basics in C Language

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

Solve –

#include<stdio.h>

#include<string.h>

int main(){

char str[]="sagar";

int i=0,count = 0;

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

i++;

count++;

}

printf("%d\n",count);

return 0;

}

Output -5

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

#include<stdio.h>

#include<string.h>

int main(){

char str[10]="saaagar";

char t ='a';

int i,count=0;

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

if(str[i]==t){

count++;

}

}

printf("character '%c' occurs %d times \n ",t,count);

return 0;

}

Output-

character 'a' occurs 4 times

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

Solve -

#include<stdio.h>

#include<string.h>

int main(){

char str[10]= "sagar";

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'){

count++;

}

}

printf("vowels is %d\n",count);

return 0;

}

Output -

vowels is 2

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

Solve -

#include<stdio.h>

#include<string.h>

int main(){

char str[10]= "sagar";

int i=0;

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

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

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

}

i++;

}

printf("uppercase %s",str);

return 0;

}

Output -

uppercase SAGAR

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

Solve -

#include<stdio.h>

#include<string.h>

int main(){

char str[10]= "SAGAR";

int i=0;

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

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

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

}

i++;

}

printf("lowercase %s",str);

return 0;

}

Output –

Lowercase sagar

6. Write a program to reverse a string ?

Solve –

#include<stdio.h>

#include<string.h>

int main(){

char str[10]= "sagar";

int i=0 ,j= strlen(str)-1;

while(i<=j){

int temp =str[i];

str[i]= str[j];

str[j]= temp;

i++;

j--;

}

printf("%s",str);

return 0;

}

Output –

Ragas

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

characters in a string ?

sovle -

#include <stdio.h>

#include <string.h>

int main()

{

char s[1000];

int i,alphabets=0,digits=0,specialcharacters=0;

printf("Enter the string : ");

fgets( s,1000,stdin);

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

{

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

alphabets++;

else if(s[i]>=48 && s[i]<=57)

digits++;

else

specialcharacters++;

}

printf("Alphabets = %d\n",alphabets);

printf("Digits = %d\n",digits);

printf("Special characters = %d", specialcharacters);

return 0;

}

Output-

Enter the string : sgar2312%%

Alphabets = 0

Digits = 4

Special characters = 7

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

Solve-

#include <stdio.h>

int main()

{

char s1[10]="sagar";

char s2[10];

int i;

for(i=0;s1[i]!='\0';i++)

{

s2[i]=s1[i];

}

s2[i]='\0';

printf("original string s1='%s'\n",s1);

printf("copied string s2='%s'",s2);

return 0;

}

Output-

original string s1='sagar'

copied string s2='sagar'

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

Solve -

#include<stdio.h>

#include<string.h>

int main(){

char str[10]= "jagdish";

int i,j;

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

{

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

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

int temp =str[i];

str[i]= str[j];

str[j]= temp;

}

}

}

printf("%s",str);

return 0;

}

Output -

Adghijs