01)

```
#include <stdio.h>
int main(){

char str[100];
int i=0;
printf("Enter the string : ");
gets(str);
while(str[i]!='\0'){
 i++;
}
printf("Length of the string is : %d\n", i);
return 0;
}
```

02)

```
#include <stdio.h>
#include <string.h>
int main(){
char str[100];
int length,i;
printf("Enter the string : ");
gets(str);
length=strlen(str);
printf("The characters of the string in reverse order : \n");
for(i=length-1; i>=0; i--){
 printf("%c ", str[i]);
}
printf("\n");
return 0;
}
```

03)

```
#include <stdio.h>
int main(){
char str[100];
int i=0, word_count=1;
printf("Enter the string : ");
gets(str);
while(str[i]!='\0'){
 if(str[i]==' ' || str[i]=='\n' || str[i]=='\t'){
 word_count++;
 }
i++;
}
printf("Word count of the string : %d\n", word_count);
return 0;
}
```

04)

```
#include <stdio.h>
#include <string.h>
int main(){
char str[100];
int i, len, vowel_count=0, const_count=0;
printf("Enter the string : ");
gets(str);
len = strlen(str);
for(i=0; i<len; 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'){
 vowel_count++;
 }
 else if((str[i]>='a' && str[i]<='z') || (str[i]>='A' &&
str[i]<='Z')){
 const_count++;
 }
}
printf("Vowel count : %d\n", vowel_count);
printf("Consonant count : %d\n", const_count);
return 0;
}
```

05)

```
#include <stdio.h>
#include <string.h>
int main(){
char str[100], without_vowels[100];
int i, j=0, k;
printf("Enter the string : ");
gets(str);
for(i=0; i<strlen(str); i++){
switch(str[i]){
 case 'a': case 'e': case 'i': case 'o': case 'u': case 'A': case
'E': case 'I': case 'O': case 'U':
 break;

 default:
 without_vowels[j] = str[i];
 j++;
 }
}
printf("The new string without vowels : ");
for(k=0; k<strlen(without_vowels); k++){
 printf("%c", without_vowels[k]);
}
return 0;
}
```

06)

```
#include <stdio.h>
#include <string.h>
int main(){
char str[100], ch;
int i, location;
printf("Enter the string : ");
gets(str);
printf("Enter the character to find the location : ");
scanf("%c", &ch);
for(i=0; i<strlen(str); i++){
 if(str[i]==ch)
 location = i;
}
printf("Index of %c in the string is : %d\n", ch, location);
return 0;
}
```

07)

```
#include <stdio.h>
#include <string.h>
int main(){
char str[100], ch;
int i, frequency=0;
printf("Enter the string : ");
gets(str);
printf("Enter the character to find the frequency : ");
scanf("%c", &ch);
for(i=0; i<strlen(str); i++){
 if(str[i]==ch)
 frequency++;
}
printf("Frequency of %c in the string is : %d\n", ch,
frequency);
return 0;
}
```

08)

```
#include<stdio.h>
int main(){
int i=0;
char c;
char str[100];
printf("Enter a string in UPPERCASE : ");
gets(str);
printf("The entered string in lowercase : ");
while(str[i]!='\0'){
 c=str[i];
 putchar(c+32);
 i++;
}
return 0;
}
```

09)

```
#include <stdio.h>
#include <string.h>
int main(){
char str[100];
char wordArrray[10][10];
int i,j=0,count=0;
printf("Enter the string : ");
gets(str);
for(i=0;i<=strlen(str);i++){
 if(str[i]==' ' || str[i]=='\n'){
 j=0;
 count++;
 }
 else{
 wordArrray[count][j]=str[i];
 j++;
 }
}
printf("Words of the string are :\n");
for(i=0; i<=count; i++)
 printf("%s\n",wordArrray[i]);
return 0;
}
```

10)

```
#include <stdio.h>
#include <string.h>
int main(){
char a[50], b[20], c[20], d[20];
int i, j=0;
printf("Enter a string : \n");
gets(a);
int max=0, min=strlen(a);
for(i=0; i<=strlen(a); i++){
 if(a[i]!=32 && a[i]!='\0')
 b[j++]=a[i];
 else{
 b[j]='\0';
 if(strlen(b)>max){
 strcpy(c,b);
 max=strlen(b);
 }
 if(strlen(b)<min){
 strcpy(d,b);
 min=strlen(d);
 }
 j=0;
 }
}
printf("The longest word is : ");
puts(c);
printf("The smallest word is : ");
puts(d);
return 0;
}
```