WORKSHEET 8.1

```c
#include <stdio.h>
#include <string.h>
#include <ctype.h>
int main()
{
    char str[100];
    int i;
    printf("Enter the String :");
    scanf("%s",str);
    for(i=0;i<strlen(str);i++)
    {
        printf("%c\n ",str[i]);
    }
}
```

WORKSHEET 8.2

```c
#include <stdio.h>
#include <string.h>
#include <ctype.h>

int main()
{
    char str[100],vow[100],con[100];
    int i,j=0,k=0;
    printf("Enter the string ");
    scanf("%s",str);
    for(i=0;i<strlen(str);i++)
    {
        if(str[i]=='a'|| str[i]=='A'|| str[i]=='e'|| str[i]=='E'||
str[i]=='i'|| str[i]=='I'|| str[i]=='o'|| str[i]=='O'||
            str[i]=='u'|| str[i]=='U')
            {
                vow[j++]=str[i];
            }
        else
            con[k++]=str[i];
    }
    printf("%s\n",vow);
    printf("%s\n",con);
}
```

WORKSHEET 8.3

```c
#include <stdio.h>
```

```c
#include <stdlib.h>
#include <string.h>
#include <ctype.h>

int main()
{
    char str[100];
    printf("Enter the string ");
    scanf("%s",str);
    int i;
    int upper=0,lower=0;

    for(i=0;i<strlen(str);i++)
    {
        if(isupper(str[i]))
            upper++;
        else if(islower(str[i]))
            lower++;

    }
    int spl=strlen(str)-(upper+lower);
    printf("%d %d %d ",upper,lower,spl);
}
```

WORKSHEET 8.4

```c
#include <stdio.h>
#include <string.h>
#include <ctype.h>

int main()
{
    char str[100],up[100]={0},lo[100]={0};
    printf("Enter a string :");
    scanf("%s",str);
    int i,j=0,k=0;
    for(i=0;i<strlen(str);i++)
    {
        up[j++]=toupper(str[i]);
        lo[k++]=tolower(str[i]);
    }
    printf("%s\n",up);
    printf("%s\n",lo);
}
```

WORKSHEET 8.5

```c
#include <stdio.h>
#include <string.h>
#include <ctype.h>
```

```c
int main()
{
        char Str1[100];
        int i;

        printf("\n Please Enter any String to Toggle : ");
        gets(Str1);

        for (i = 0; Str1[i]!='\0'; i++)
        {
                if(Str1[i] >= 'a' && Str1[i] <= 'z')
                {
                        Str1[i] = Str1[i] - 32;
                }
                else if(Str1[i] >= 'A' && Str1[i] <= 'Z')
                {
                        Str1[i] = Str1[i] + 32;
                }
        }

        printf("\n The Given String after Toggling Case of all
Characters = %s", Str1);

        return 0;
}
```

WORKSHEET 8.6

```c
#include <stdio.h>
#include <string.h>

int main()
{
   char arr[100];

   printf("Enter a string to reverse\n");
   gets(arr);

   strrev(arr);

   printf("Reverse of the string is \n%s\n", arr);

   return 0;
}
```

WORKSHEET 8.7

```c
#include<stdio.h>
#include<conio.h>

int main() {
   char str[20], ch;
   int count = 0, i;
```

```c
    printf("\nEnter a string : ");
    gets(str);

    printf("\nEnter the character to be searched : ");
    scanf("%c", &ch);

    for (i = 0; str[i] != '\0'; i++) {
        if (str[i] == ch)
            count++;
    }

    if (count == 0)
        printf("\nCharacter '%c'is not present", ch);
    else
        printf("\nOccurence of character '%c' : %d", ch, count);

    return (0);
}
```

        WORKSHEET 8.8

```c
#include <stdio.h>
#include <string.h>
#include <ctype.h>

int main()
{
    char str[100];
    printf("Enter a string ");
    scanf("%s",str);
    int i=0;
    for(i=0;i<strlen(str);i++)
    {
        if(str[i]=='a' || str[i]=='A' || str[i]=='e' || str[i]=='E' ||
str[i]=='i' ||str[i]=='I' ||
            str[i]=='o' ||str[i]=='O' || str[i]=='u' ||str[i]=='U' )
            {
                str[i]='*';
            }
        else
        {
            str[i]='#';
        }
    }
    printf(str);
}
```

        WORKSHEET 8.9

```c
#include <stdio.h>
#include <string.h>
#include <ctype.h>
```

```
int main()
{
    char str[]="Hello";
    int i,j,k;
    for(i=0;i<strlen(str);i++)
    {
        for(j=0;j<=i;j++)
        {
            printf("%c",str[j]);
        }
        printf("\n");
    }
}
```

        WORKSHEET 8.10

```
#include <stdio.h>
#include <string.h>
#include <ctype.h>

int main()
{
    char str[]="Hello";
    int i,j;
    for(i=strlen(str);i>=0;i--)
    {
        for(j=0;j<i;j++)
            printf("%c",str[j]);
        printf("\n");
    }
}
```

        WORKSHEET 8.11

```
#include <stdio.h>
#include <string.h>
#include <ctype.h>

int main()
{
    char str[]="12345";
    int i,j,dec=0;
    for( i=0;i<strlen(str);i++)
    {
        dec=dec*10 + (str[i]-'0');
    }
    printf("%d",dec);
}
```

        WORKSHEET 8.12


```
#include <stdio.h>
```

```c
#include <string.h>
#include <ctype.h>

int main()
{
    char str[200],str1[100],str2[100];
    printf("Enter a string ");
    gets(str);
    printf("Enter the first string to compare ");
    gets(str1);
    printf("Enter the second string to compare ");
    gets(str2);
    int len=strlen(str);
    int len1=strlen(str1);
    int len2=strlen(str2);
    if(len>(len1+len2))
    {
        printf("NO!!!>>>>>");
        exit(0);
    }

}
```

WORKSHEET 8.13
```c
#include <stdio.h>



int main()
{
    int MAX_SIZE=100;
    int MAX_CHARS=100;
    char str[MAX_SIZE];
    int freq[MAX_CHARS];
    int i = 0, max;
    int ascii;

    printf("Enter any string: ");
    gets(str);


    for(i=0; i<MAX_CHARS; i++)
    {
        freq[i] = 0;
    }



    i=0;
    while(str[i] != '\0')
    {
        ascii = (int)str[i];
```

```c
        freq[ascii] += 1;

        i++;
    }



    max = 0;
    for(i=0; i<MAX_CHARS; i++)
    {
        if(freq[i] > freq[max])
            max = i;
    }


    printf("Maximum occurring character is '%c' = %d times.", max,
freq[max]);

    return 0;
}
```

   WORKSHEET 8.14

```c
#include <stdio.h>
#include <string.h>
#include <ctype.h>

int main()
{
    char str[100];
    printf("Enter the string ");
    gets(str);
    printf("enter the character to be removed");
    char ch;
    scanf("%c",&ch);
    int i=0;
    while(str[i] != '\0')
    {
        if(str[i]==ch)
        {
            int j;
            for(j=i;j<=strlen(str);j++)
            {
                str[i]=str[i+1];
                i--;
            }
        }
        i++;

    }
    printf("%s",str);
}
```

   WORKSHEET 8.15

```c
#include <stdio.h>
#include <string.h>
int main()
{
    char str[100];
    char sub[100];
    printf("Enter a string :");
    gets(str);
    printf("Enter the substring to compare ");
    gets(sub);
    int i,j=0,k;
    for(i=0;str[i];i++)
    {
        for(k=i,j=0; str[k] && sub[j]; j++,k++)
            if(str[k]!=sub[j])
                break;
        if(!sub[j])
        {
            printf("Substring!!!!");
            return 0;
        }

    }
    printf("Not a substring!!");
}
```

WORKSHEET 8.16

```c
#include<stdio.h>
#include<string.h>
int main()
{
    char str[100],key[100];
    int i=0,j=0,k;
    printf("Enter the string\n");
    gets(str);
    printf("Enter the word\n");
    gets(key);
    for(i=0;i<strlen(str);i++)
    {
        while(str[i]==key[j]&&key[j]!='\0')
        {
            for(k=i;str[k]!='\0';k++)
            {
                str[k]=str[k+1];
                }
            j++;
        }
    }
printf("string after the reverse is\n\n%s",str);
return 0;
}
```

WORKSHEET 8.17

```c
#include<stdio.h>
#include<string.h>
int main()
{
    char str[100],key[100];
    int i=0,j=0,k;
    printf("Enter the string\n");
    gets(str);
    printf("Enter the word\n");
    gets(key);
    for(i=0;i<strlen(str);i++)
    {
        while(str[i]==key[j]&&key[j]!='\0')
        {
            for(k=i;str[k]!='\0';k++)
            {
                str[k]=str[k+1];
            }
            j++;
        }
    }
printf("string after the reverse is\n\n%s",str);
return 0;
}
```

WORKSHEET 8.18

```c
#include <stdio.h>
#include <string.h>
#include <stdlib.h>

int main ()
{
    char str1[100], str2[100], str_rem[100];
    int i = 0, j = 0, k = 0;

    printf ("Enter the First string:\n");
    gets (str1);

    printf ("Enter the Second string:\n");
    gets (str2);

    for (i = 0; str1[i]!= '\0'; i++)
    {
        for (j = 0; str2[j] != '\0'; j++)
        {
            if (str1[i] == str2[j])
            {
                continue;
            }
```

```
            else
            {
                str_rem[k] = str2[j];
                k ++;
            }
        }
        str_rem[k] = '\0';
        strcpy (str2, str_rem);
        k = 0;
    }

    printf (str_rem);

    return 0;
}

    WORKSHEET 8.19

#include <stdio.h>
#include <string.h>
#include <ctype.h>

int main()
{
    char str[100],temp[100];
    printf("Enter the string ");
    gets(str);
    int i=0,j=0;


    while(str[i]!= '\0')
    {
        if(str[i] !=' ')
        {
            temp[j]=str[i];
            j++;
        }
        else
        {
            temp[j]='\0';
            printf("%s",strrev(temp));
            printf(" ");
            j=0;
        }
        i++;
    }
    temp[j]='\0';
    printf("%s",strrev(temp));
}
```