

ASSIGNMENT-8

1. Read from a terminal using scanf function and print using printf function.

PROGRAM:

```
#include<stdio.h>

int main()
{
    char arr[20];
    printf("Enter a word :: ");
    scanf("%s",arr);
    printf("Enter word :: %s",arr);
    return 0;
}
```

OUTPUT:

Enter a word :: SOURAV

Enter word :: SOURAV

2. Read a lines of text from a terminal using fgets function and print using puts function.

PROGRAM:

```
#include<stdio.h>

int main()
{
    char arr[20];
    printf("Enter your name :: ");
    fgets(arr,20,stdin);
    puts(arr);
    return 0;
}
```

```
}
```

OUTPUT:

Enter your name :: SOURAV DUTTA

SOURAV DUTTA

3. Convert

- a. Upper case to Lower case
- b. Lower case to Upper case
- c. Toggle case
- d. Sentence case

a. **Upper case to Lower case:**

PROGRAM:

```
#include<stdio.h>

int main()
{
    char arr[20];
    int i=0;
    printf("enter a string in upppercase :: ");
    scanf("%s",arr);
    while(arr[i] != '\0')
    {
        printf("%c",arr[i]+32);
        i++;
    }

    return 0;
}
```

OUTPUT:

enter a string in uppercase :: MANGO

mango

b. Lower case to Upper case:**PROGRAM:**

```
#include<stdio.h>

int main()
{
    char arr[20];
    int i=0;
    printf("enter a string in lowercase :: ");
    scanf("%s",arr);
    while(arr[i] != '\0'){
        printf("%c",arr[i]-32);
        i++;
    }

    return 0;
}
```

OUTPUT:

enter a string in lowercase :: mango

MANGO

c. Toggle case:**PROGRAM:**

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

```

int main()
{
    char arr[20];
    int i=0;

    printf("enter a string :: ");
    scanf("%s",arr);
    while(arr[i] != '\0')
    {
        if(arr[i] >= 65 && arr[i] <=90 ){
            printf("%c",arr[i]+32);
        }
        else
        {
            printf("%c",arr[i]-32);
        }
        i++;
    }
    return 0;
}

```

OUTPUT:

enter a string :: hELLO

Hello

d. Sentence case:

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

```
int main()
```

```
{
```

```
    char arr[20];
```

```

int i=0;
printf("enter a string :: ");
gets(arr);
while(arr[i] != '\0')
{
    if(i==0 && arr[i] >= 97 && arr[i] <=122 )
    {
        printf("%c",arr[i]-32);
    }
    else if(i==0 && arr[i] >= 65 && arr[i] <=90 )
    {
        printf("%c",arr[i]);
    }
    if(arr[i]== ' ')
    {
        if(arr[i+1] >= 97 && arr[i+1] <=122 )
        {
            printf("%c",arr[i+1]-32);
        }
        else if(arr[i+1] >= 65 && arr[i+1] <=90 )
        {
            printf("%c",arr[i+1]);
        }
    }
    i++;
}

```

```

    i++;
    if(arr[i]>=65 && arr[i]<=90)
    {
        printf("%c",arr[i]+32);
    }
    else
    {
        printf("%c",arr[i]);
    }
}
return 0;
}

```

OUTPUT:

enter a string :: sourav dutta

Sourav Dutta

enter a string :: SOURAV DUTTA

Sourav Dutta

enter a string :: Sourav Dutta

Sourav Dutta

4.Perform String Concatenation (With and Without String Handling Functions).

PROGRAM: (WITHOUT USING STRING HANDLING FUNCTION)

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

```
int main()
```

```
{
```

```

char str1[20], str2[20], i, j;
printf("\nEnter first string: ");
scanf("%s",str1);
printf("\nEnter second string: ");
scanf("%s",str2);
for(i=0; str1[i]!='\0'; ++i);
for(j=0; str2[j]!='\0'; ++j, ++i)
{
    str1[i]=str2[j];
}
str1[i]='\0';
printf("\nOutput: %s",str1);
return 0;
}

```

OUTPUT:

Enter first string: SOURAV

Enter second string: DUTTA

Output: SOURAVDUTTA

PROGRAM: (USING STRING HANDLING FUNCTION)

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

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

```
int main()
```

```
{
```

```

char str1[20], str2[20];
printf("Enter the first string\n");
gets(str1);
printf("Enter the second string\n");
gets(str2);
strcat(str1,str2);
printf("String obtained on concatenation is %s\n",a);
return 0;
}

```

OUTPUT:

Enter the first string

SOURAV

Enter the second string

DUTTA

String obtained on concatenation is SOURAVDUTTA

5. Perform String Reversal (With and Without String Handling Functions).

PROGRAM: (WITHOUT USING STRING HANDLING FUNCTION)

```

#include<stdio.h>
#include<string.h>
int main()
{
    char str[20], temp;
    int i, j = 0;
    printf("\nEnter the string :");
    gets(str);
    i = 0;

```



```

j = strlen(str) - 1;

while (i < j)
{
    temp = str[i];
    str[i] = str[j];
    str[j] = temp;
    i++;
    j--;
}

printf("\nReverse string is :%s", str);
return 0;
}

```

OUTPUT:

Enter the string :BATISTA

Reverse string is :ATSITAB

PROGRAM: (USING STRING HANDLING FUNCTION)

```

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

int main()
{
    char str[20];

    printf("Enter a string to reverse\n");
    gets(str);
    strrev(str);
}

```

```
    printf("Reverse of the string: %s\n", str);  
    return 0;  
}
```

OUTPUT:

Enter a string to reverse

BATISTA

Reverse of the string: ATSITAB

7. Copy one string into another and count the no of elements copied. (With and Without String Handling Functions).

PROGRAM: (WITHOUT USING STRING HANDLING FUNCTION)

```
#include<stdio.h>  
  
int main()  
{  
    char str1[20], str2[20];  
    int i;  
    printf("Input a string: ");  
    scanf("%s", str2);  
    for(i=0; str2[i]!='\0'; i++)  
        str1[i]=str2[i];  
    str1[i]='\0';  
    printf("\n");  
    printf("Original string: %s", str1);  
    printf("\n");  
    printf("\nNumber of elements copied = %d\n", i);  
    return 0;  
}
```

OUTPUT:

Input a string: SOURAV

Original string: SOURAV

Number of elements copied = 6

PROGRAM: (USING STRING HANDLING FUNCTION)

```
#include<stdio.h>
#include<string.h>
int main()
{
    char str1[20];
    char str2[20];
    printf("\nEnter the String 1 : ");
    gets(str1);
    strcpy(str2, str1);
    printf("\nCopied String : %s", str2);
    return (0);
}
```

OUTPUT:

Enter the String 1 : SOURAV

Copied String : SOURAV

8. Read a string and prints if it is a palindrome or not.

PROGRAM:

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

```

int main()
{
    char arr[30],rev[30];
    int i=0,j=0,c=0,s=0;
    printf("enter a string :: ");
    fgets(arr,30,stdin);
    while(arr[i] != '\0')
    {
        c++;
        i++;
    }
    i=0;
    j=c-2;
    while(i<c-1)
    {
        if(arr[i] != arr[j]){
            s++;
            break;
        }
        j--;
        i++;
    }
    if(s==1)
        printf("%s is not a palindrom string.",arr);
    else
        printf("%s is a palindrom string.",arr);
}

```

```
return 0;
}
```

Output:

enter a string :: katak

katak is a palindrom string.

10. Read a string and rewrite it in the alphabetical order.

PROGRAM:

```
#include<stdio.h>

int main()
{
    int arr[30],i=0,j=0,c=0,temp=0;
    char arr2[30];
    printf("Enter a string either upper case or lower case :: ");
    fgets(arr2,30,stdin);
    while(arr2[i] != '\0')
    {
        arr[i] = arr2[i];
        c++;
        i++;
    }
    for(i=0;i<c-1;i++)
    {
        for(j=0;j<c-1;j++)
        {
            if(arr[i] < arr[j]){
                temp = arr[i];
```

```

        arr[i] = arr[j];
        arr[j] = temp;

    }
}
}
printf("String in alphabetical order :: ");
for(i=0;i<c-1;i++)
{
    printf("%c",arr[i]);
}
return 0;
}

```

OUTPUT:

Enter a string either upper case or lower case :: mango
String in alphabetical order :: agmno

11. Print the Words Ending with Letter S

PROGRAM:

```

#include<stdio.h>

int main()
{
    int i=0,j=0,c=0,k=0;
    char arr[30],store[30];
    printf("Enter a string :: ");
    fgets(arr,30,stdin);
    printf("\nwords ending with letter 's' :: ");
}

```

```

while(arr[i] != '\0')
{
    if(arr[i] == ' ')
    {
        c = i;
        if(arr[i-1] == 's')
        {
            for(;k<c;k++)
            {
                printf("%c",arr[k]);
            }
            k=c;
        }
    }
    i++;
}
if(arr[i]=='\0')
{
    if(arr[i-2]=='s')
    {
        i=c;
        while(arr[i] != '\0')
        {
            printf("%c",arr[i]);
            i++;
        }
    }
}

```

```
else
{
    printf("\nhere no words ending with letter 's'");
}
}
return 0;
}
```

OUTPUT:

Enter a string :: yes this is not a bus

words ending with letter 's' :: yes this is bus