**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

1. 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 uppercase :: ");

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