**Evaluation 4**

**STRINGS- Lab 7**

1. *Count the number of words in a sentence.*

**Program:**

#include <stdio.h>

int main()

{

printf("My name is Lajith Puthuchery and registration number is 200905106\n");

char str[100];

int word=0;

printf("Enter the string\n");

gets(str);

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

{

if(str[i]==' ' && str[i+1]!=' ')

{

word++;

}

}

printf("The number of words in the entered sentence are %d",word+1);

return 0;

}

**Output:**

**Text

Description automatically generated**

1. *Input a string and toggle the case of every character in the input string. Ex: INPUT : aBcDe OUTPUT : AbCdE*

**Program:**

#include <stdio.h>

int main()

{

printf("My name is Lajith Puthuchery and registration number is 200905106\n");

char str[100];

printf("Enter the string\n");

gets(str);

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

{

if(str[i]>=65 && str[i]<=90)

{

str[i]+=32;

}

else if(str[i]>=97 && str[i]<=122)

{

str[i]-=32;

}

}

printf("The string after toggling the case is \n%s",str);

return 0;

}

**Output:**

**Text

Description automatically generated**

1. Arrange ‘n’ names in alphabetical order (hint: use string handling function-strcpy)

**Program:**

#include <stdio.h>

#include <string.h>

int main()

{

char name[100][100],word[100];

int n;

printf("Enter the number of names to be sorted\n");

scanf("%d",&n);

printf("Enter the names to be arranged in alphabetic order\n");

for(int i=0; i<n; i++)

{

scanf("%s",name[i]);

}

for(int i=0; i<n-1; i++)

{

for(int j=i+1; j<n; j++)

{

if(strcmp(name[i],name[j])>0)

{

strcpy(word,name[i]);

strcpy(name[i],name[j]);

strcpy(name[j],word);

}

}

}

printf("The names in alphabetic order are as follows :\n");

for(int i=0; i<n; i++)

{

printf("%s",name[i]);

printf("\n");

}

return 0;

}

**Output:**

**Text

Description automatically generated**

**MODULAR PROGRAMMING -FUNCTIONS- Lab 8**

1. Write a function Largest to find the maximum of a given list of numbers. Also write a main program to read N numbers and find the largest among them using this function.

**Program:**

#include <stdio.h>

int largest(int num, int big)

{

if(num>big)

{

big=num;

}

return big;

}

int main()

{

int n,num,big;

printf("My name is Lajith Puthuchery and registartion number iss 200905106\n");

printf("Enter the number of numbers 'n'\n");

scanf("%d",&n);

printf("Enter the %d numbers\n",n);

scanf("%d",&big);

for(int i=2; i<=n; i++)

{

scanf("%d",&num);

big = largest(num,big);

}

printf("The largest number out of the %d numbers is %d\n",n,big);

return 0;

}

**Output:**

**Text

Description automatically generated**

1. Write a function CornerSum which takes as a parameter, no. of rows and no. of columns of a matrix and returns the sum of the elements in the four corners of the matrix. Write a main function to test the function.

**Program:**

#include <stdio.h>

int CornerSum(int a[20][20], int m, int n)

{

int sum=0;

sum = a[0][0]+a[0][n-1]+a[m-1][0]+a[m-1][n-1];

return sum;

}

int main()

{

int a[20][20];

int m,n,sum;

printf("My name is Lajith Puthuchery and registration number is 200905106\n");

printf("Enter the dimensions of the matrix\n");

scanf("%d %d",&m,&n);

printf("Enter the %d matrix elements\n",m\*n);

for(int i=0; i<m; i++)

{

for(int j=0; j<n; j++)

{

scanf("%d",&a[i][j]);

}

}

printf("The entered matrix is\n");

for(int i=0; i<m; i++)

{

for(int j=0; j<n; j++)

{

printf("%d ",a[i][j]);

}

printf("\n");

}

if(m==1||n==1)

{

printf("The matrix does not have 4 corner elements");

exit(0);

}

sum=CornerSum(a,m,n);

printf("The sum of the corner elements of the matrix is %d",sum);

return 0;

}

**Output:**

**Text

Description automatically generated**