

Program 1 :

Write a C program to read 10 values from a text file and perform mathematical operations including addition, subtraction, multiplication and Division. And store the output in a seperate text file.

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

```
#include <stdlib.h>
```

```
void sort(int arr[],int n,int ascending)
```

```
{
```

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

```
    {
```

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

```
        if (ascending && arr[j]>arr[j+1])
```

```
        {
```

```
            int temp=arr[j];
```

```
            arr[j]=arr[j+1];
```

```
            arr[j+1]=temp;
```

```
        }
```

```
        else if(!ascending && arr[j]<arr[j+1])
```

```
        {
```

```
            int temp=arr[j];
```

```
            arr[j]=arr[j+1];
```

```
            arr[j+1]=temp;
```

```
        }
```

```
    }
```

```
}
```

```
int main()
```

```
{
```

```
    FILE *inputFile;
```

```
    int values[10];
```

```
inputFile=fopen("input.csv","r+");
if(inputFile==NULL)
{
    printf("File not found\n");
    return 0;
}
for (int i=0;i<10;i++)
    fscanf(inputFile,"%d",&values[i]);

sort(values,10,1);
fseek(inputFile,0,SEEK_END);
fprintf(inputFile,"\nAscending: ");

for (int i=0;i<10;i++)
    fprintf(inputFile,"%d",values[i]);

sort(values,10,0);
fprintf(inputFile,"\nDescending: ");

for (int i=0;i<10;i++)
    fprintf(inputFile,"%d",values[i]);

fclose(inputFile);
return 0;
}
```

```
1 10,20,69,09,78,67,43,27,05,89
2
3 Ascending: 5,9,10,20,27,43,67,69,78,89,
4 Descending: 89,78,69,67,43,27,20,10,9,5,
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL ...

* History restored

Microsoft Windows [Version 10.0.26100.3194]
(c) Microsoft Corporation. All rights reserved.

C:\E\4th sem\DSA>read_from_excel.c

C:\E\4th sem\DSA>

C:\E\4th sem\DSA>read_from_excel.exe

Write a C program to Search an element values in a excel file. Display whether the element is present or absent on the console window.

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

```
int main()
```

```
{
```

```

FILE *inputFile;

int values[10];

int searchValue,is_found=0;

inputFile=fopen("input.csv","r");

if (inputFile==NULL)
{
    printf("404:file not found\n");
    return 1;
}

printf("Value to find: ");
scanf("%d", &searchValue);
for (int i=0;i<10;i++)
{
    fscanf(inputFile,"%d",&values[i]);
    if(values[i]==searchValue)
    {
        is_found=1;
        break;
    }
}

if(is_found)
    printf("Element is present.\n");





else
    printf("Element is absent.\n");

fclose(inputFile);

return 0;
}

```

```
1 10,20,69,09,78,67,43,27,05,89
2
3 Ascending: 5,9,10,20,27,43,67,69,78,89,
4 Descending: 89,78,69,67,43,27,20,10,9,5,|
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL ...  cmd  + -   ... ^ x

```
C:\E\4th sem\DSA>
C:\E\4th sem\DSA>read_from_excel.exe
C:\E\4th sem\DSA>gcc search_excel.c -o search_excel.exe
C:\E\4th sem\DSA>search_excel.exe
Value to find: 10
Element is present.
```

Write a c program to read 10 values from an excel file, Sort and store ascending values in the next column of excel file, store descending values in the next column of excel file.

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

```
#include <stdlib.h>
```

```

void sort(int arr[],int n,int ascending)
{
    for(int i=0;i<n-1;i++)
    {
        for(int j=0;j<n-i-1;j++)
        if (ascending && arr[j]>arr[j+1])
        {
            int temp=arr[j];
            arr[j]=arr[j+1];
            arr[j+1]=temp;
        }
        else if(!ascending && arr[j]<arr[j+1])
        {
            int temp=arr[j];
            arr[j]=arr[j+1];
            arr[j+1]=temp;
        }
    }
}

```

```

int main()
{
    FILE *inputFile;
    int values[10];

    inputFile=fopen("input.csv","r+");
    if(inputFile==NULL)
    {
        printf("File not found\n");
        return 0;
    }
}

```

```
    for (int i=0;i<10;i++)
        fscanf(inputFile,"%d",&values[i]);

    sort(values,10,1);
    fseek(inputFile,0,SEEK_END);
    fprintf(inputFile,"\nAscending: ");

    for (int i=0;i<10;i++)
        fprintf(inputFile,"%d",values[i]);

    sort(values,10,0);
    fprintf(inputFile,"\nDescending: ");

    for (int i=0;i<10;i++)
        fprintf(inputFile,"%d",values[i]);

    fclose(inputFile);
    return 0;
}
```

```
1 10,20,69,09,78,67,43,27,05,89
2
3 Ascending: 5,9,10,20,27,43,67,69,78,89,
4 Descending: 89,78,69,67,43,27,20,10,9,5,
```

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL ... cmd ⚠ + ▢ 🗑 ... ^ ×

C:\E\4th sem\DSA>read_from_excel.exe

C:\E\4th sem\DSA>gcc search_excel.c -o search_excel.exe

C:\E\4th sem\DSA>search_excel.exe
value to find: 10
Element is present.

C:\E\4th sem\DSA>read_from_excel.exe

C:\E\4th sem\DSA>
```

//N random numbers between (P,Q)

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

```
#include <stdlib.h>
```

```
#include <time.h>
```



```

int main()
{
    FILE *inputFile;
    inputFile=fopen("input.txt", "w");
    if (inputFile == NULL)
    {
        printf("File not found\n");
        return 1;
    }
    int r,p,q,n;
    printf("enter the value of P, Q and N\n");
    scanf("%d%d%d",&p,&q,&n);
    srand(time(0));
    printf("%d random numbers between %d and %d are:\n",n,p,q);
    for(int i=0;i<n;i++)
    {
        r= p+rand()%(q-p+1);
        printf("%d\n",r);
        fprintf(inputFile, "%d ", r);
    }
    fclose(inputFile);
    printf("Press any key to close\n");
    char a;
    scanf(" %c",&a);
    return 0;
}

```

input.txt

1 33 53 24 37 44 83 41 68 10 40

PROBLEMS

OUTPUT

TERMINAL

...



random_numbers



Element is present.

C:\E\4th sem\DSA>read_from_excel.exe

C:\E\4th sem\DSA>random_numbers.exe

enter the value of P, Q and N

10

90

10

10 random numbers between 10 and 90 are:

33

53

24

37

44

83

41

68

10

40

Press any key to close