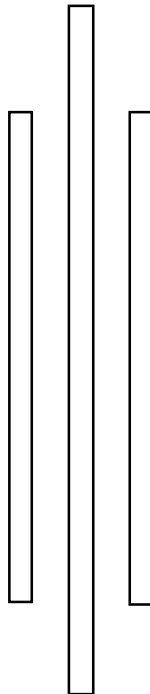


TRIBHUVAN UNIVERSITY



INSTITUTE OF ENGINEERING

Lab Sheet #8



PURWANCHAL CAMPUS

DHARAN-8

Submitted by:

Name: **Arbind Kumar Mehta**

Roll No: **PUR075BCT017**

Faculty: BCT

Group: I/I 'A'

Date:

Submitted to:

Department of

Electronics & Computer

Engineering

Checked by:

Title:

Write a program to find separately the sum of the positive and negative integer elements of an array of size 10. Pass the positive and negative elements to separate functions eg: sumpositive(int*), sumnegative(int*) to carry out its sum. Also pass this array to a function called sortarray(int[]) and display the array elements into ascending order using pointer.

Code:

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

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

```
int sum1(int *a)
```

```
{
```

```
    int i,su1;
```

```
    for(i=0;i<10;i++)
```

```
    {
```

```
        if(*(a+i)>0)
```

```
        su1=su1+*(a+i);
```

```
    }
```

```
    return(su1);
```

```
}
```

```
int dif(int *a)
```

```
{
```

```
    int i;
```

```
    int dif=0;
```

```
    for(i=0;i<10;i++)
```

```

{
    if(*(a+i)<0)
        dif=dif-*(a+i);

}
return(dif);
}

void sorarr(int *a)
{
    int i,j,temp;
    for(i=0;i<9;i++)
    {
        for(j=i+1;j<10;j++)
        {
            if(*(a+i)>*(a+j))
            {
                temp=*(a+i);
                *(a+i)=*(a+j);
                *(a+j)=temp;
            }
        }
    }
    printf("The sorted array is: ");
    for(i=0;i<10;i++)
        printf("%d ",*(a+i));
}

int main()

```

```

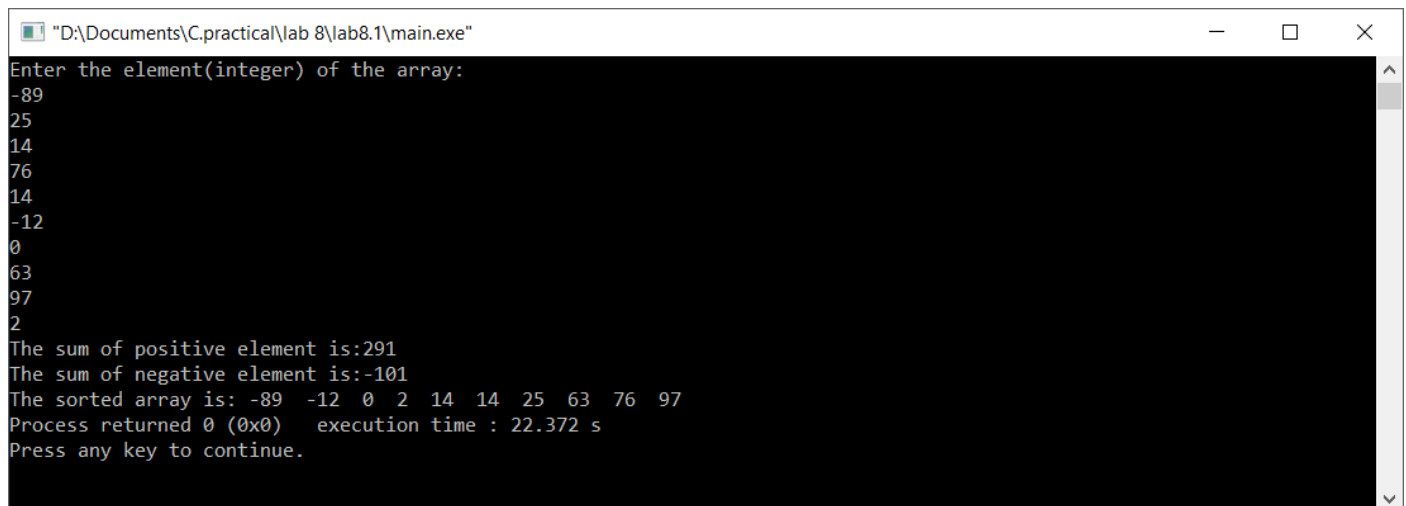
{
    int a[10],i,j;

    printf("Enter the element(integer) of the array:\n");
    for(i=0;i<10;i++)
    {
        scanf("%d",&a[i]);
    }
    printf("The sum of positive element is:%d\n",sum1(a));
    printf("The sum of negative element is:-%d\n",dif(a));
    sorarr(a);

    return 0;
}

```

Output (Compilation, Debugging and Testing):



```

"D:\Documents\C.practical\lab 8\lab8.1\main.exe"
Enter the element(integer) of the array:
-89
25
14
76
14
-12
0
63
97
2
The sum of positive element is:291
The sum of negative element is:-101
The sorted array is: -89 -12 0 2 14 14 25 63 76 97
Process returned 0 (0x0)   execution time : 22.372 s
Press any key to continue.

```

Title:

Write a program to find biggest among three numbers using pointer.

Code:

```
#include <stdio.h>

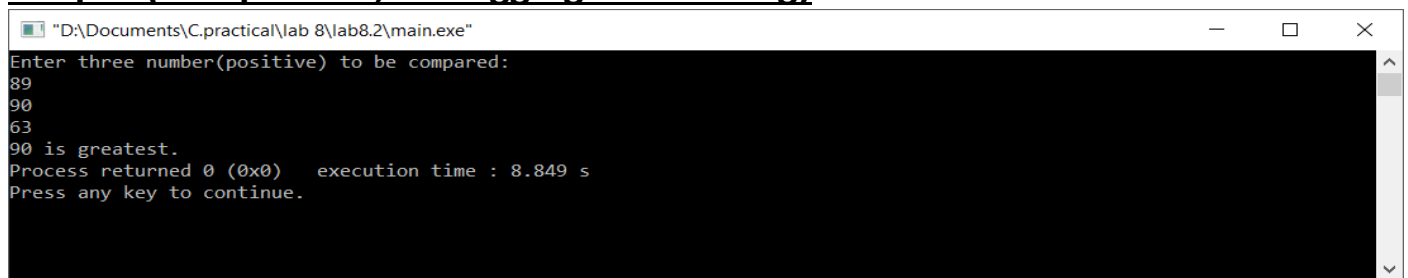
#include <stdlib.h>

int main()
{
    int *n[3],i;
    n[0]=(int*)malloc(3*sizeof(int));
    printf("Enter three number(positive) to be compared:\n");
    for(i=0;i<3;i++)
        scanf("%d",(&n[i]));

    if((*n>*(&n[1]))&&(*n>*(&n[2])))
        printf("%d is greatest.",*n);
    if((*(&n[1])>*(&n[2]))&&(*(&n[1])>*n))
        printf("%d is greatest.",*(&n[1]));
    if((*(&n[2])>*(&n[1]))&&(*(&n[2])>*n))
        printf("%d is greatest.",*(&n[2]));

    return 0;
}
```

Output (Compilation, Debugging and Testing)



```
"D:\Documents\C.practical\lab 8\lab8.2\main.exe"
Enter three number(positive) to be compared:
89
90
63
90 is greatest.
Process returned 0 (0x0)   execution time : 8.849 s
Press any key to continue.
```

Title:

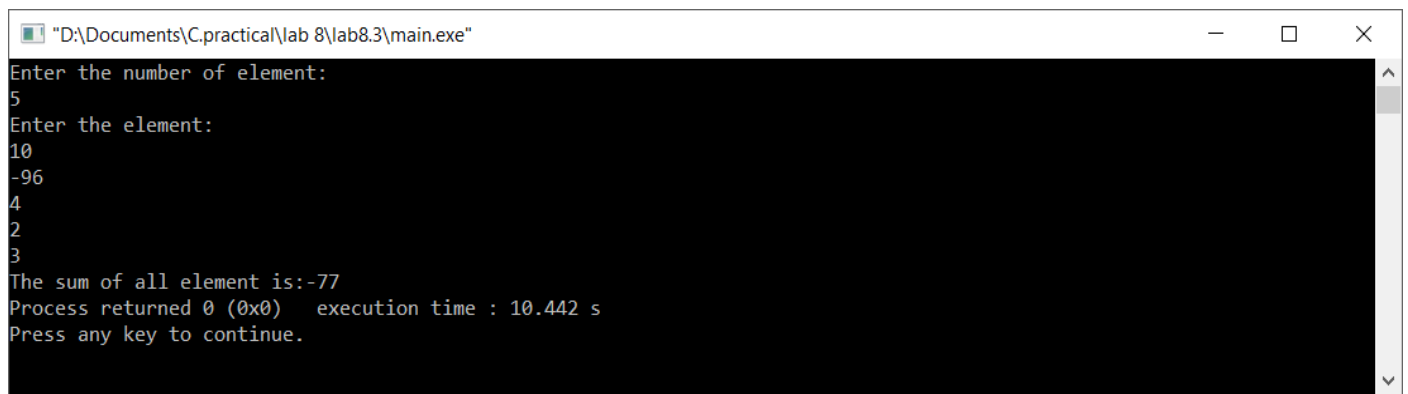
Write a program to find the sum of all the elements of an array using pointers.

Code:

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

int main()
{
    int *ptr,sum=0,n,i;
    printf("Enter the number of element:\n");
    scanf("%d",&n);
    ptr=(int*)malloc(n*sizeof(int));
    printf("Enter the element:\n");
    for(i=0;i<n;i++)
    {
        scanf("%d",(ptr+i));
        sum+=*(ptr+i);
    }
    printf("The sum of all element is:%d",sum);
    return 0;
}
```

Output (Compilation, Debugging and Testing):



```
"D:\Documents\C.practical\lab 8\lab8.3\main.exe"
Enter the number of element:
5
Enter the element:
10
-96
4
2
3
The sum of all element is:-77
Process returned 0 (0x0)   execution time : 10.442 s
Press any key to continue.
```

Title:

Write a program to swap value of two variables using pointer.

Code:

```
#include <stdio.h>
#include <stdlib.h>
int main()
{
    char c1,c2,*p1,*p2,temp;
    printf("Enter two character variables:\n");
    scanf("%c %c",&c1,&c2);
    p1=&c1;
    p2=&c2;
    temp=*p1;
    *p1=*p2;
    *p2=temp;
    printf("The swapped result is:\n%c\n%c",*p1,*p2);
    return 0;
}
```

Output (Compilation, Debugging and Testing):



```
"D:\Documents\C.practical\lab 8\lab8.4\main.exe"
Enter two character variables:
o
p
The swapped result is:
p
o
Process returned 0 (0x0)   execution time : 6.255 s
Press any key to continue.
```

Title:

Write a program to read a sentence and count the number of characters & words in that sentence.

Code:

```
#include <stdio.h>

#include <stdlib.h>

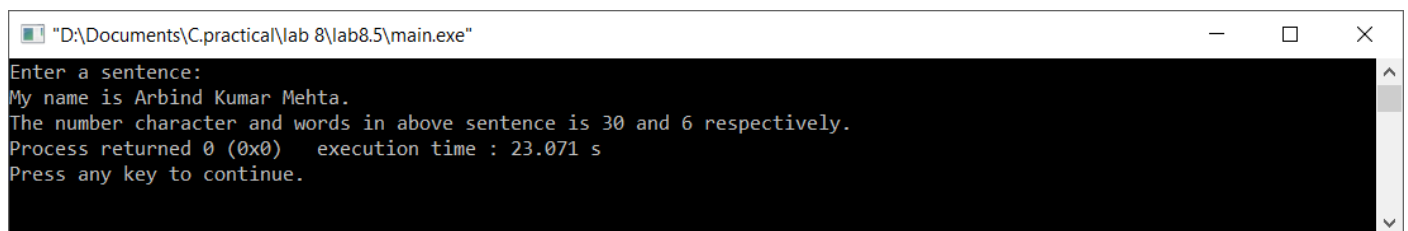
int main()
{
    char ch[100];
    int i=0,car=0,wr=0;
    printf("Enter a sentence:\n");
    gets(ch);
    while(ch[i]!='\0')
    {
        if(ch[i]==' ')
            wr++;

        car++;
        i++;
    }

    printf("The number character and words in above sentence is %d and %d
    respectively.",car,wr+1);

    return 0;
}
```

Output (Compilation, Debugging and Testing):



```
"D:\Documents\C.practical\lab 8\lab8.5\main.exe"
Enter a sentence:
My name is Arbind Kumar Mehta.
The number character and words in above sentence is 30 and 6 respectively.
Process returned 0 (0x0)   execution time : 23.071 s
Press any key to continue.
```


Title:

Write a program to read a sentence & delete all the white spaces. Replace all “.” by “.”.

Code:

```
#include <stdio.h>

#include <stdlib.h>

#include <string.h>

int main()
{
    char ch[100],ne[100];
    int i,j=0,n;
    printf("Enter a sentence:\n");
    gets(ch);
    for(i=0;i<strlen(ch);i++)
    {
        if(ch[i]!=' ')
        {
            ch[j++]=ch[i];

        }
    }
    ch[j]='\0';

    for(i=0;i<strlen(ch);i++)
    {
        if(ch[i]=='.')
        {
            ch[i]=':~';
        }
    }
}
```

```

    }
}
printf("%s",ch);
return 0;
}

```

Output (Compilation, Debugging and Testing):

```

"D:\Documents\C.practical\lab 8\lab8.6\main.exe"
Enter a sentence:
I am Mr.Arbind Kumar Mehta.
IamMr:ArbindKumarMehta:
Process returned 0 (0x0) execution time : 46.074 s
Press any key to continue.

```

Title:

Write a program to copy one string to another string with and without using string handling function.

Code:

```

#include <stdio.h>

#include <stdlib.h>

#include <string.h>

int main()
{
    int i=0,j,size=0;
    char s1[]={"ARBIND KUMAR MEHTA"},s2[10];

    while(s1[i]!='\0')
    {
        size++;
    }
}

```

```

        i++;
    }
    printf("The string s1 is: %s\nThe size of s1 is %d\n",s1,size);

    for(i=0;i<size;i++)
    {
        s2[i]=s1[i];
    }
    s2[size]='\0';
    printf("The string s2 is %s\n",s2);

    return 0;
}

```

Output (Compilation, Debugging and Testing):

```

"D:\Documents\C.practical\lab 8\lab8.7\main.exe"
The string s1 is: ARBIND KUMAR MEHTA
The size of s1 is 18
The string s2 is ARBIND KUMAR MEHTA
Process returned 0 (0x0) execution time : 0.047 s
Press any key to continue.

```

Title:

Write a program to concatenate two strings.

Code:

```

#include <stdio.h>
#include <stdlib.h>

```

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

```
int main()
```

```
{
```

```
    char s1[20],s2[20],s[40];
```

```
    int i=0,j=0;
```

```
    printf("Enter the first string:\n");
```

```
    gets(s1);
```

```
    printf("Enter the second string:\n");
```

```
    gets(s2);
```

```
    //concaneting string
```

```
    while(s1[i]!='\0')
```

```
    {
```

```
        s[i]=s1[i];
```

```
        i++;
```

```
    }
```

```
    while(s2[j]!='\0')
```

```
    {
```

```
        s[i]=s2[j];
```

```
        i++;
```

```
        j++;
```

```
    }
```

```
    s[i]='\0';
```

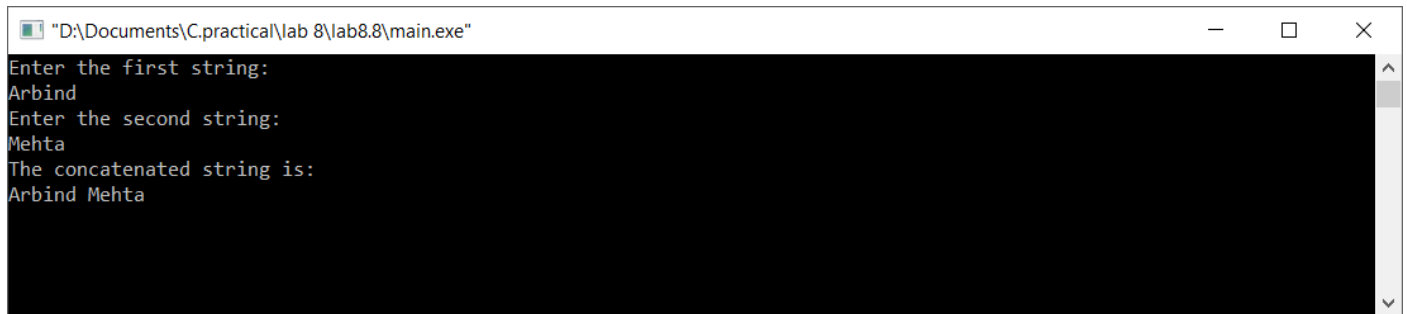
```
    printf("The concatenated string is:\n");
```

```
    puts(s);
```

```
    getch();
```

```
    return 0;
}
```

Output (Compilation, Debugging and Testing):



```
"D:\Documents\C.practical\lab 8\lab8.8\main.exe"
Enter the first string:
Arbind
Enter the second string:
Mehta
The concatenated string is:
Arbind Mehta
```

Title:

Write a program to compare two strings.

Code:

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

int main()
{
    char s1[20],s2[20];
    int i=0,flag=0;

    printf("Enter first string:\n");
    gets(s1);
    printf("Enter second string:\n");
    gets(s2);

    while(s1[i]!='\0' || s2[i]!='\0')
    {
        if(s1[i]!=s2[i])
```

```

        flag=1;
    i++;
}

if(flag==1)
    printf("Two string are different.");
else
    printf("Two string are same.");
getch();
return 0;
}

```

Output (Compilation, Debugging and Testing):

```

"D:\Documents\C.practical\lab 8\lab8.9\main.exe"
Enter first string:
Arbind Kumar Mehta
Enter second string:
Arbind Kumar Mehta
Two string are same.

```

Title:

Write a program to sort 5 string words stored in an array of pointers.

Code:

```

#include <stdio.h>
#include <stdlib.h>
#include<string.h>
int main()
{
    char (*s)[10];
    char temp[10];
    int i,n,j,k;

```

```

s=(char*)malloc(10*sizeof(char));
printf("Enter words to be sorted:\n");
for(i=0;i<5;i++)
{
    scanf("%s",*(s+i));
}
printf("The words are:\n");
for(i=0;i<5;i++)
{
    printf("%s\n",*(s+i));
}
for(i=0;i<4;i++)
{
    for(j=i+1;j<5;j++)
    {
        if(strcmp(*(s+i),*(s+j))>0)
        {
            strcpy(temp,*(s+i));
            strcpy(*(s+i),*(s+j));
            strcpy(*(s+j),temp);
        }
    }
}
printf("\nThe sorted words are:\n");
for(i=0;i<5;i++)
{
    printf("%s\n",*(s+i));
}

```

```

}

    getch();

    return 0;

}

```

Output (Compilation, Debugging and Testing):

```

"D:\Documents\C.practical\lab 8\lab8.11\main.exe"
Enter words to be sorted:
Computer
Mobile
Acer
computer
Arbind
The words are:
Computer
Mobile
Acer
computer
Arbind
The sorted words are:
Acer
Arbind
Computer
Mobile
computer

```

Title:

10. Write a program to print the following pattern

```

    UN
  UNIV
UNIVER
UNIVERSI
UNIVERSITY
UNIVERSI
UNIVER
UNIV
UN

```

Code:

```

#include <stdio.h>

#include <stdlib.h>

```



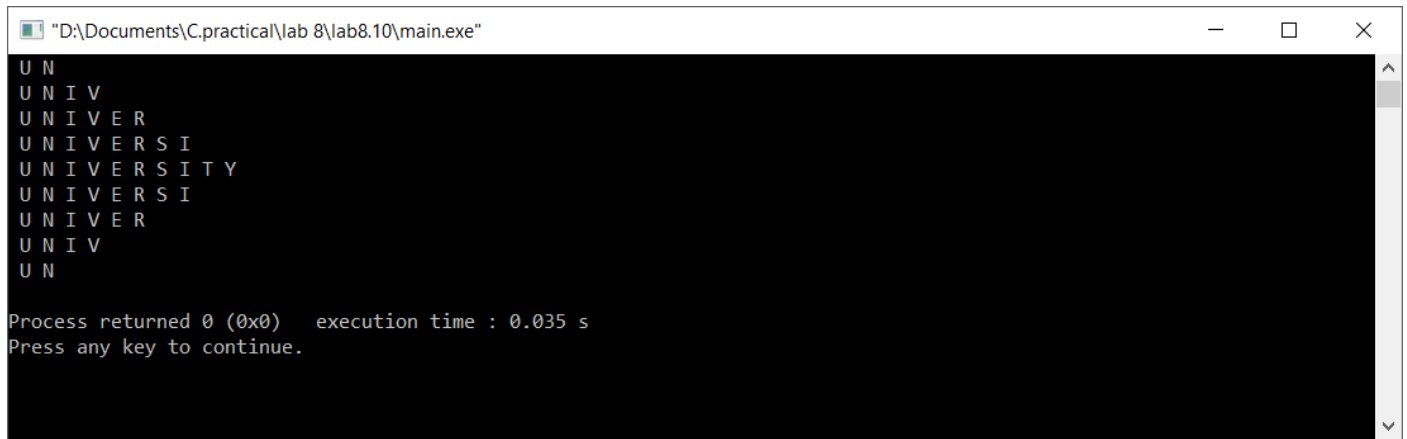
```

int main()
{
    int i,j;
    char s[]="UNIVERSITY";

    for(i=0;i<5;i++)
    {
        for(j=0;j<2+2*i;j++)
        {
            printf(" %c",s[j]);
        }
        printf("\n");
    }
    for(i=3;i>=0;i--)
    {
        for(j=0;j<2+2*i;j++)
        {
            printf(" %c",s[j]);
        }
        printf("\n");
    }
    return 0;
}

```

Output (Compilation, Debugging and Testing):



```
"D:\Documents\C.practical\lab 8\lab8.10\main.exe"
U N
U N I V
U N I V E R
U N I V E R S I
U N I V E R S I T Y
U N I V E R S I
U N I V E R
U N I V
U N

Process returned 0 (0x0)   execution time : 0.035 s
Press any key to continue.
```
