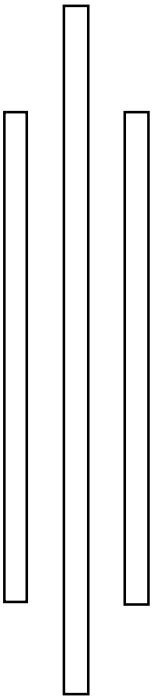
TRIBHUVAN UNIVERSITY

INSTITUTE OF ENGINEERING

Lab Sheet #8



PURWANCHAL CAMPUS

DHARAN-8

Submitted by:

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Date: .....

Submitted to:

Department of

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Engineering

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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.

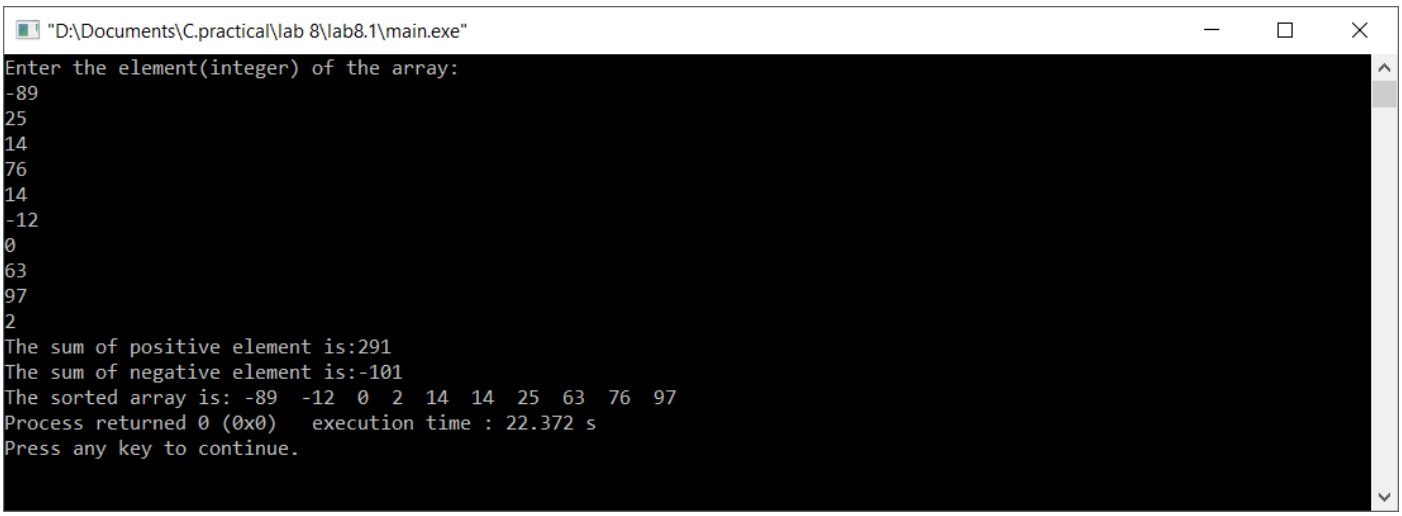
Code:

```
#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):



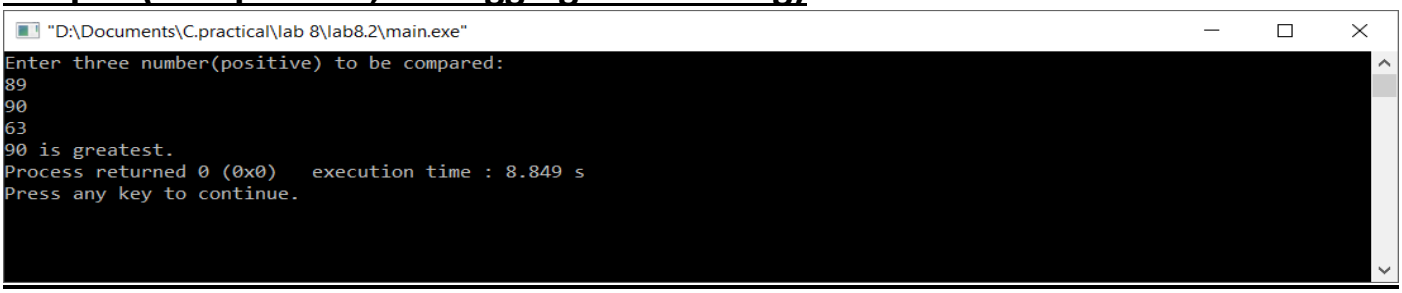
Title:

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)



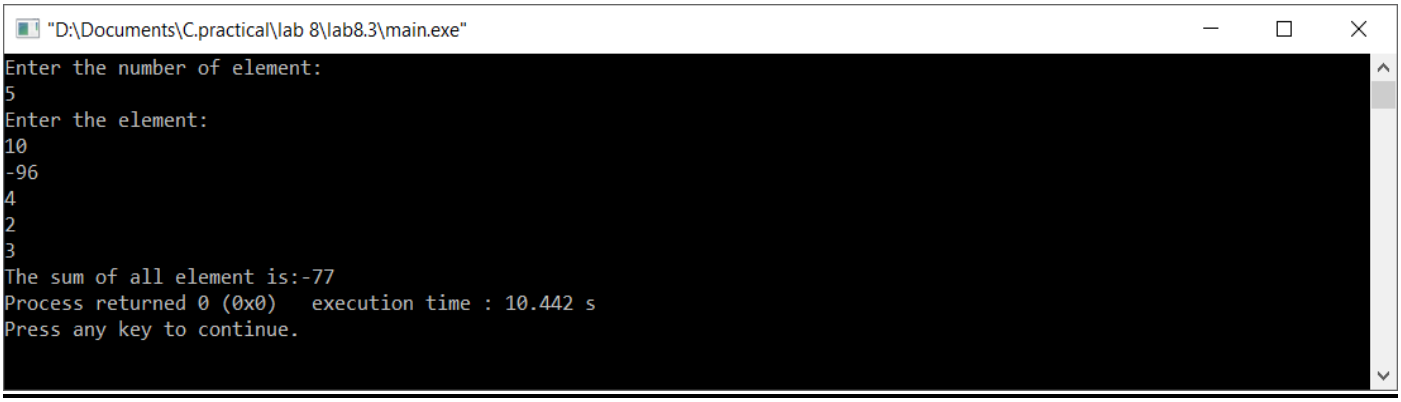
Title:

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):



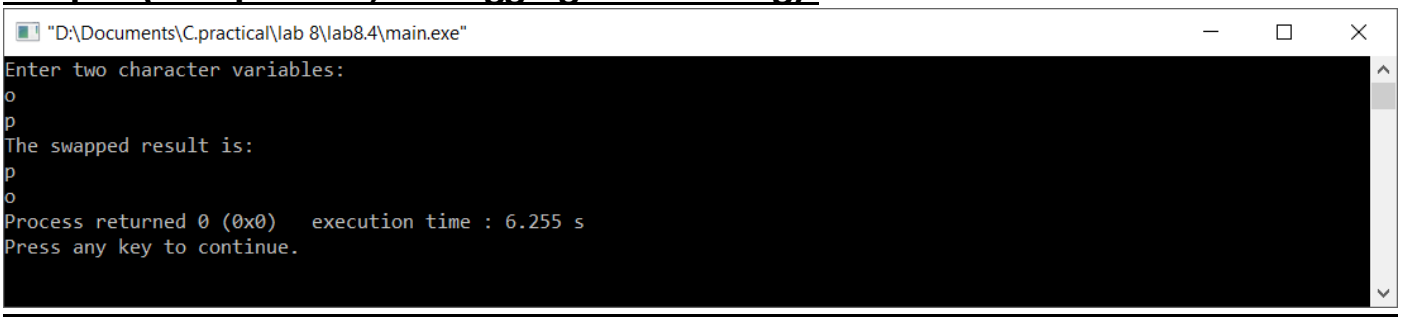
Title:

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):



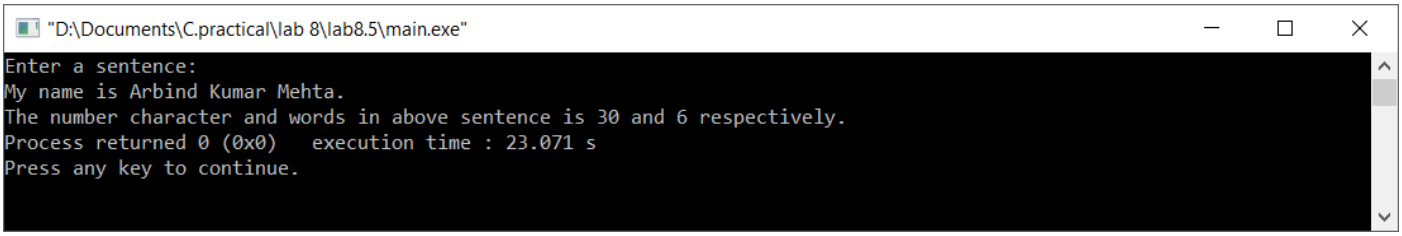
Title:

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):



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):

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):

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):

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):

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):

Title:

10. Write a program to print the following pattern

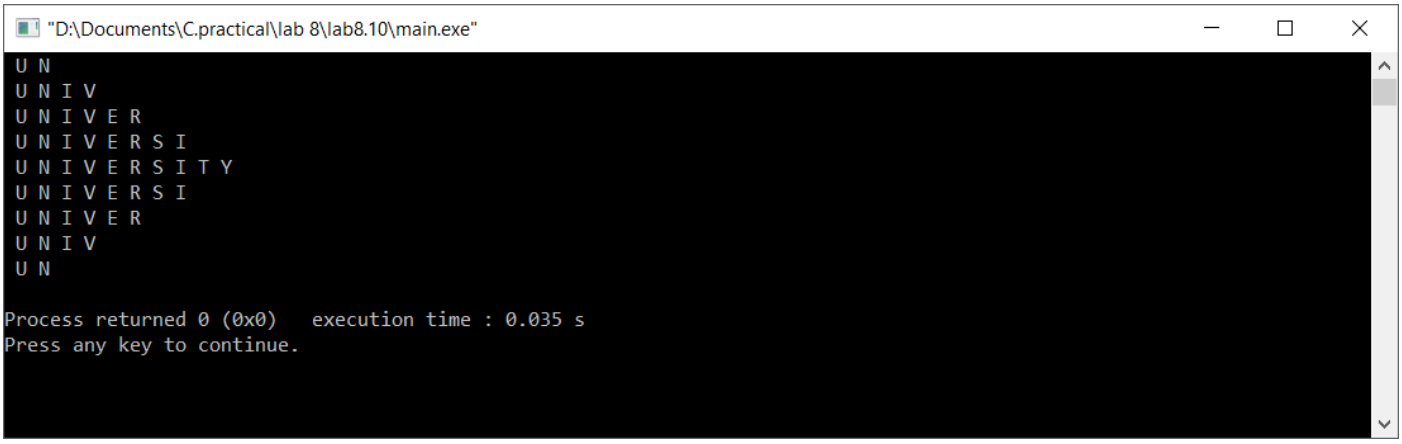
```
U N
U N I V
U N I V E R
U N I V E R S I
U N I V E R S I T Y
U N I V E R S I
U N I V E R
U N I V
U N
```

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):



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