Problem no 01:

Problem name: Addition of two matrices.

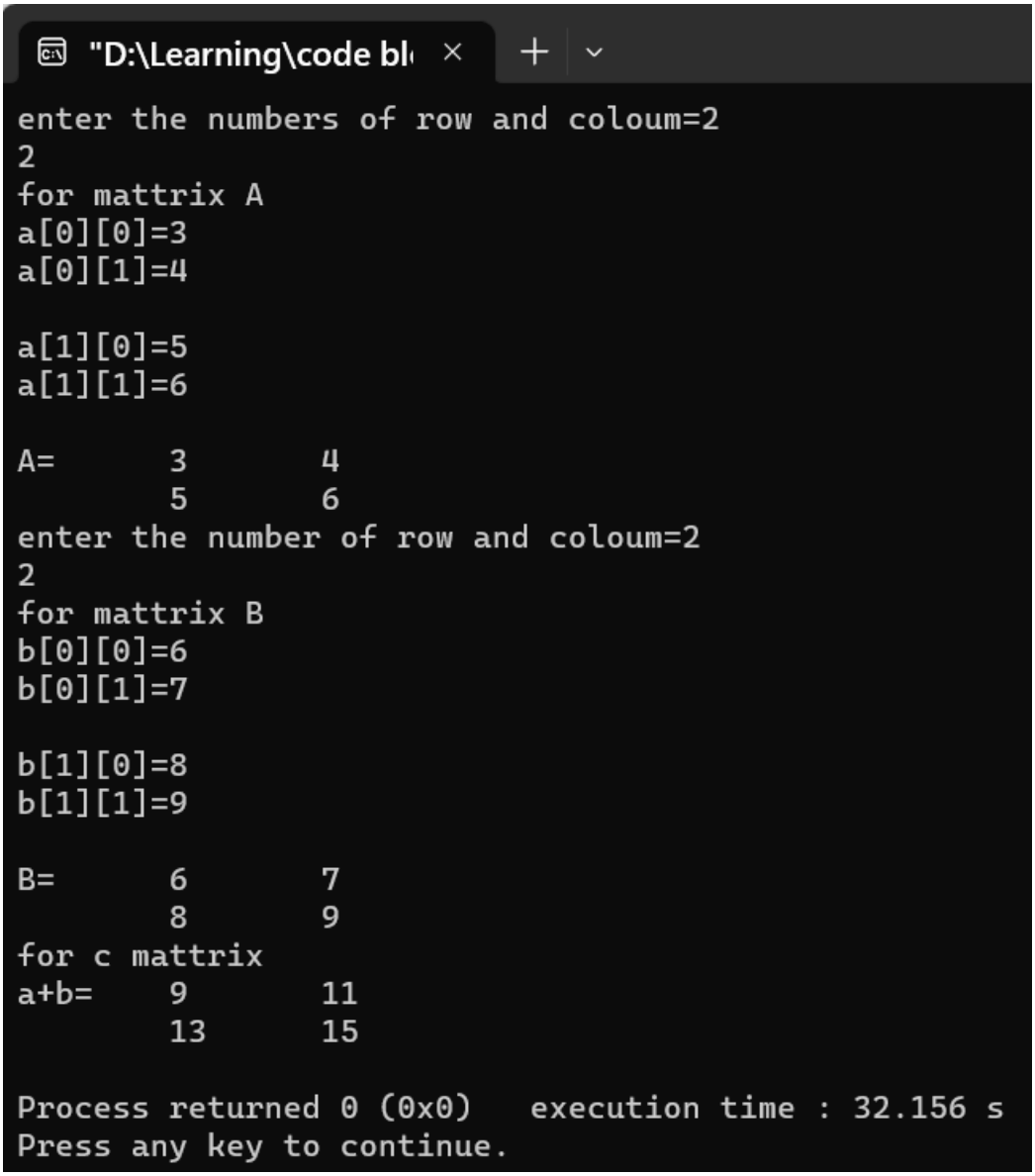
Code:

```
#include<stdio.h>
int main(){
   int r,c,row,coloum;
   int a[10][10],b[10][10],x[10][10];
   printf("enter the numbers of row and coloum=");
   scanf("%d %d",&row,&coloum);
   printf("for mattrix A\n");
   for(r=0;r<row;r++)
   {
      for(c=0;c<coloum;c++)
      {
         printf("a[%d][%d]=",r,c);
         scanf("%d",&a[r][c]);
      }
      printf("\n");
   }
   printf("A= ");
   for(r=0;r<row;r++)
   {
      for(c=0;c<coloum;c++)
      {
```

```
        printf("\t%d",a[r][c]);
      }
      printf("\n");
   }
   printf("enter the number of row and coloum=");
   scanf("%d %d",&row,&coloum);
   printf("for mattrix B\n");
   for(r=0;r<row;r++)
   {
      for(c=0;c<coloum;c++)
      {
         printf("b[%d][%d]=",r,c);
         scanf("%d",&b[r][c]);
      }
      printf("\n");
   }
printf("B=");
   for(r=0;r<row;r++)
   {
      for(c=0;c<coloum;c++)
      {
         printf("\t%d",b[r][c]);
      }
      printf("\n");
   }
```

```
    printf("for c mattrix\n");
    for(r=0;r<row;r++)
    {
        for (c=0;c<coloum;c++)
        {
            x[r][c]=a[r][c]+b[r][c];
        }
    }
    printf("a+b=");
    for(r=0;r<row;r++)
    {
        for(c=0;c<coloum;c++)
        {
            printf("\t%d",x[r][c]);
        }
        printf("\n");
    }
return 0;
}
```

Output:



Problem no 02:

Problem name: Find even and odd number form an array and count numbers.

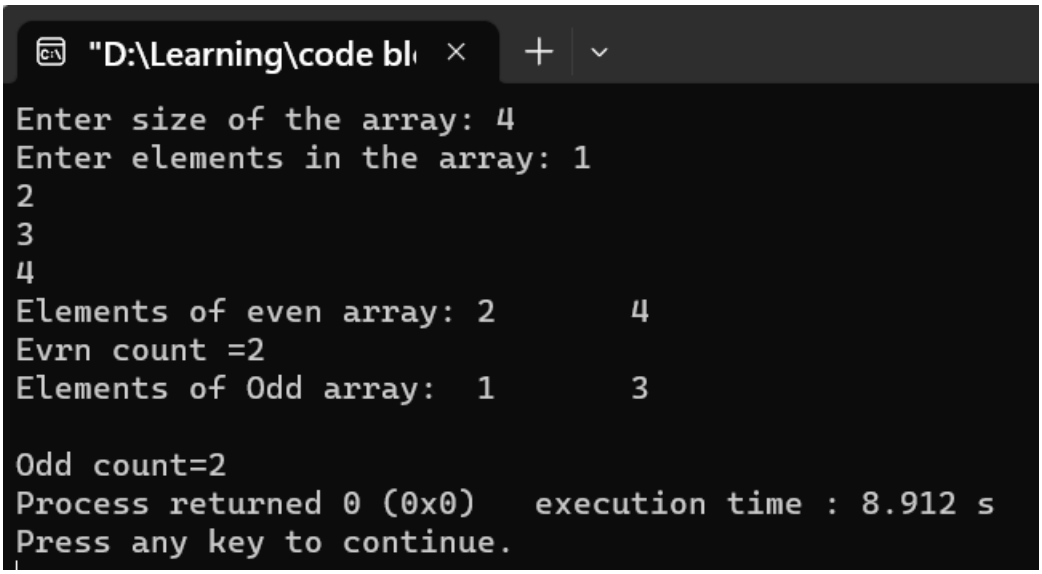
Code:

```
#include <stdio.h>
int main()
{
   int arr[100];
   int even[100], odd[100];

   int evenCount=0, oddCount=0;
   int i, size;
   printf("Enter size of the array: ");
   scanf("%d", &size);
   printf("Enter elements in the array: ");
   for(i=0; i<size; i++)
   {
      scanf("%d", &arr[i]);
   }
   printf("Elements of even array:");
   for(i=0; i<size; i++)
   {
      if(arr[i]%2==0)
      {
         printf("\t%d",arr[i]);
         evenCount++;
      }
   }
   printf("\nEvrn count =%d\n",evenCount);
```

```
    printf("Elements of Odd array:");
    for(i=0;i<size;i++)
    {
        if(arr[i]%2==1)
        {
            printf("\t%d",arr[i]);
            oddCount++;
        }
    }
    printf("\n\nOdd count=%d",oddCount);
   return 0;
}
```

Output:



Problem no 03:

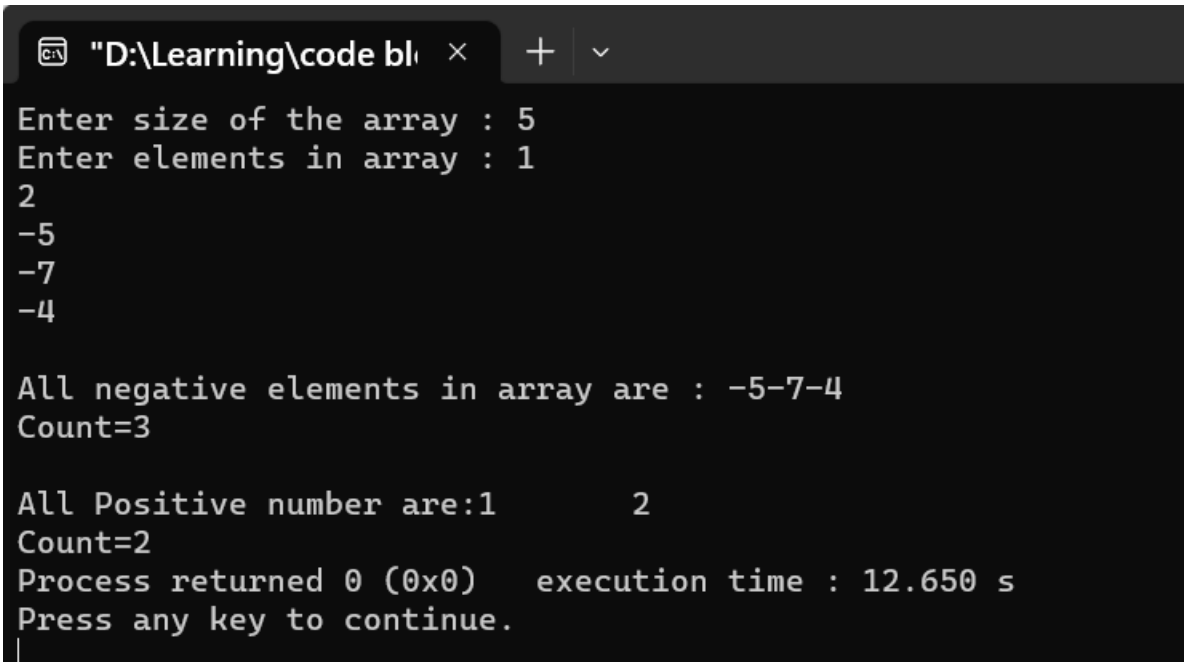
Problem name: Find negative and positive number from an array and count number.

Code:

```
#include <stdio.h>
int main()
{
   int arr[100];
   int i, N,count1=0,count2=0;
   printf("Enter size of the array : ");
   scanf("%d", &N);
   printf("Enter elements in array : ");
   for(i=0; i<N; i++)
   {
      scanf("%d", &arr[i]);
   }
   printf("\nAll negative elements in array are : ");
   for(i=0; i<N; i++)
   {
      if(arr[i] < 0)
      {
         printf("%d", arr[i]);
         count2++;
```

```
    }
  }
  printf("\nCount=%d",count2);
  printf("\n\nAll Positive number are:");
  for(i=0;i<N;i++)
  {
    if(arr[i]>0)
    {
      printf("%d\t",arr[i]);
      count1++;
    }
  }
  printf("\nCount=%d",count1);
  return 0;
}
```

Output:



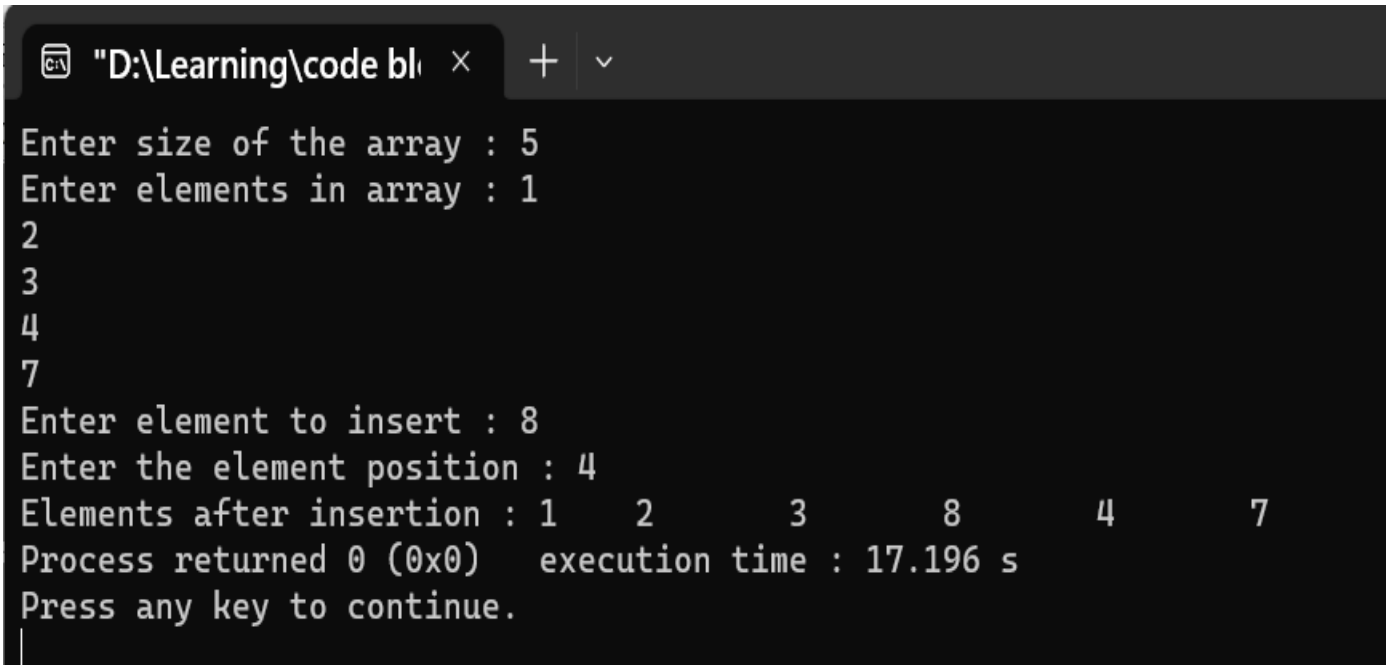
Problem no 04:

Problem name: Insert operation of an array.

Code:

```
#include <stdio.h>
int main()
{
   int a[100];
   int i, size, num, x;
   printf("Enter size of the array : ");
   scanf("%d", &size);
   printf("Enter elements in array : ");
   for(i=0; i<size; i++)
   {
      scanf("%d", &a[i]);
   }
   printf("Enter element to insert : ");
   scanf("%d", &num);
   printf("Enter the element position : ");
   scanf("%d", &x);
   if(x > size+1 || x <= 0)
   {
      printf("Invalid position! Please enter position between 1 to %d", size);
   }
   else
```

```
    {
        for(i=size; i>=x; i--)
        {
            a[i] = a[i-1];
        }
        a[x-1] = num;
        size++;
        printf("Elements after insertion : ");
        for(i=0; i<size; i++)
        {
            printf("%d\t", a[i]);
        }
    }
    return 0;
}
```



Problem no 05:

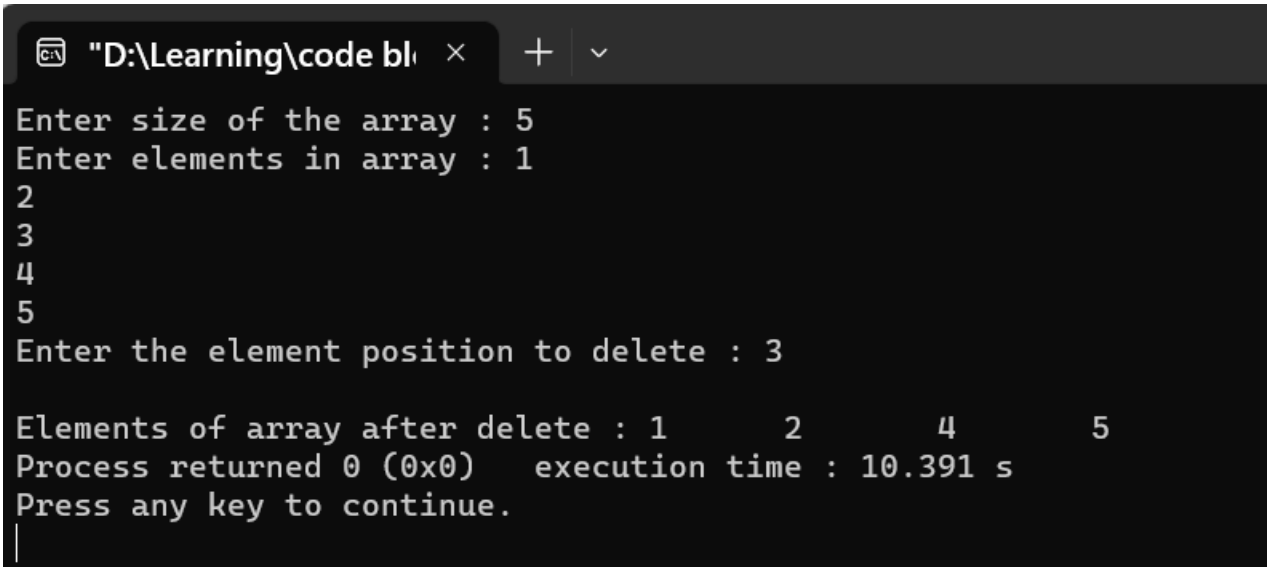
Problem name: Delete operation of an array.

Code:

```
#include <stdio.h>
int main()
{
   int array[100];
   int i, asif, n;
   printf("Enter size of the array : ");
   scanf("%d", &asif);
   printf("Enter elements in array : ");
   for(i=0; i<asif; i++)
   {
      scanf("%d", &array[i]);
   }
   printf("Enter the element position to delete : ");
   scanf("%d", &n);
   if(n < 0 || n > asif)
   {
      printf("Invalid position! Please enter position between 1 to %d", asif);
   }
   else
   {
```

```
    for(i=n-1; i<asif-1; i++)
    {
       array[i] = array[i + 1];
    }
    asif--;
    printf("\nElements of array after delete : ");
    for(i=0; i<asif; i++)
    {
       printf("%d\t", array[i]);
    }
  }
  return 0;
}
```

Output:



Bangladesh University of Business & Technology

Lab Report: 08

Course Title: Structured Programming Language Lab

Code: CSE-112

Submitted By	Submitted To
Name: Rakibul islam asif **ID:22235103319** **Intake:51, Section:8** **Department of CSE**	**Name: Md. Saddam Hossain.** **Assistant Professor** **Department of CSE BUBT**

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