

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

#program no: 01
/* Name: Mehedi Hasan Shuvo
   Student ID: 194016
*/

int main()
{

    int n;
    printf("How Many Element Added Do You Want? \n");
    scanf("%d",&n);
    int number[n];
    for(int i=0; i<n; i++)
    {
        scanf("%d",&number[i]);
    }
    for(int i=0; i<n; i++)
    {
        printf("%d ",number[i]);
    }

    return 0;
}
```

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

#program no: 02
/* Name: Mehedi Hasan Shuvo
   Student ID: 194016
*/

int main()
{

    int n,sum=0;
    float avg;
    printf("How Many Element Added Do You Want? :");
    scanf("%d",&n);
    int number[n];
    for(int i=0; i<n; i++)
    {
        printf("element of- %d: ",i+1);
        scanf("%d",&number[i]);
    }
    for(int i=0; i<n; i++)
    {
        sum+=number[i];
    }
    printf("Summation Is: %d\n",sum);

    return 0;
}
```

```
}
```

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

```
#program no: 03
/* Name: Mehedi Hasan Shuvo
   Student ID: 194016
*/
```

```
int main()
{
    int n,sum=0;
    float avg;
    printf("How Many Element Added Do You Want? :");
    scanf("%d",&n);
    int number[n];
    for(int i=0; i<n; i++)
    {
        printf("element of- %d: ",i+1);
        scanf("%d",&number[i]);
    }
    for(int i=0; i<n; i++)
    {
        sum+=number[i];
    }
    printf("Summation Is: %d\n",sum);
    avg=(float)sum/n;
    printf("Avrage Is: %f",avg);

    return 0;
}
```

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

```
#program no: 04
/* Name: Mehedi Hasan Shuvo
   Student ID: 194016
*/
```

```
int main()
{
    int n;
    printf("How Many Element Added Do You Want? :");
    scanf("%d",&n);
    int number[n];
    for(int i=0; i<n; i++)
    {
        printf("element of- %d:",i+1);
        scanf("%d",&number[i]);
    }
    int checkNumber;
    printf("What Is The Index Do you want Remove? ");
    scanf("%d",&checkNumber);
```

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for(int i=checkNumber-1; i<n-1; i++)
{
    number[i]=number[i+1];
}

for(int i=0; i<n-1; i++)
{
    printf("%d ",number[i]);
}

return 0;
}

```

```

#include<stdio.h>
#include<conio.h>

#program no: 05
/* Name: Mehedi Hasan Shuvo
   Student ID: 194016
*/

int main()
{
    int n;
    printf("How Many Element Added Do You Want? : ");
    scanf("%d",&n);
    int number[n];
    for(int i=0; i<n; i++)
    {
        printf("element of- %d:",i+1);
        scanf("%d",&number[i]);
    }
    int largest=number[0];
    int smallest=number[0];

    for(int i=0; i<n; i++)
    {
        if(number[i]>largest)
        {
            largest=number[i];
        }

        if(number[i]<smallest)
        {
            smallest=number[i];
        }
    }

    printf("\nLargest Number: %d\n",largest);
    printf("Smallest Number: %d\n",smallest);

    return 0;
}

```

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

#program no: 06
/* Name: Mehedi Hasan Shuvo
   Student ID: 194016
*/

int main()
{
    int n;
    printf("How Many Element Added Do You Want? :");
    scanf("%d",&n);
    int number[n];
    for(int i=0; i<n; i++)
    {
        printf("element of- %d:",i+1);
        scanf("%d",&number[i]);
    }
    for(int i=n-1; i>=0; i--)
    {
        printf("%d ",number[i]);
    }

    return 0;
}
```

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

#program no: 07
/* Name: Mehedi Hasan Shuvo
   Student ID: 194016
*/

int main()
{
    int n;
    printf("How Many Element Added Do You Want? ");
    scanf("%d",&n);
    int number[n];
    for(int i=0; i<n; i++)
    {
        printf("element of- %d:",i+1);
        scanf("%d",&number[i]);
    }
    int checkNumber,data;
    printf("What Is The Index Do you want Added Data? ");
    scanf("%d",&checkNumber);
    printf("Data: ");
    scanf("%d",&data);

    for(int i=n; i>=checkNumber; i--)
    {
        number[i]=number[i-1];
    }
}
```

```

    }
    number[checkNumber-1]=data;

    for(int i=0; i<n+1; i++)
    {
        printf("%d ",number[i]);
    }

    return 0;
}

```

```

#include<stdio.h>
#include<conio.h>

#program no: 08
/* Name: Mehedi Hasan Shuvo
   Student ID: 194016
*/

int main()
{

    int i, j, a, n;
    printf("Enter the value of n:");
    scanf("%d", &n);
    int number[n];
    printf("Enter the numbers \n");
    for (i = 0; i < n; ++i)
    {
        printf("element of- %d:",i+1);
        scanf("%d", &number[i]);
    }

    for (i = 0; i < n; ++i)
    {
        for (j = i + 1; j < n; ++j)
        {
            if (number[i] < number[j])
            {
                a = number[i];
                number[i] = number[j];
                number[j] = a;
            }
        }
    }

    printf("The numbers arranged in descending order are given below\n");

    for (i = 0; i < n; ++i)
    {
        printf("%d\n", number[i]);
    }
    return 0;
}

```

```

#include<stdio.h>
#include<conio.h>

#program no: 09
/* Name: Mehedi Hasan Shuvo
   Student ID: 194016
*/

int main()
{
    int row,column;
    printf("Enter The Value of row and COrumn: ");
    scanf("%d%d",&row,&column);

    int disp[row][column];
    int i, j;
    for(i=0; i<row; i++)
    {
        for(j=0; j<column; j++)
        {
            printf("Enter value for disp[%d][%d]:", i, j);
            scanf("%d", &disp[i][j]);
        }
    }
    printf("Two Dimensional array elements:\n");
    for(i=0; i<row; i++)
    {
        for(j=0; j<column; j++)
        {
            printf("%d ", disp[i][j]);
            if(j==2)
            {
                printf("\n");
            }
        }
    }

    return 0;
}

```

```

#include<stdio.h>
#include<conio.h>

#program no: 10
/* Name: Mehedi Hasan Shuvo
   Student ID: 194016
*/

int main(){
    int row,column;
    printf("enter The Value of row,column: ");
    scanf("%d%d",&row,&column);
    int matrix[row][column];

    int firstMatrix[row][column];
    int secondMatrix[row][column];

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for(int i=0;i<row;i++){
    for(int j=0;j<column;j++){
        printf("elemtn of [%d][%d]",i,j);
        scanf("%d",&firstMatrix[i][j]);
    }
}

for(int i=0;i<row;i++){
    for(int j=0;j<column;j++){
        printf("elemtn of [%d][%d]",i,j);
        scanf("%d",&secondMatrix[i][j]);
    }
}

for(int i=0;i<row;i++){
    for(int j=0;j<column;j++){
        matrix[i][j]=firstMatrix[i][j]*secondMatrix[i][j];
    }
}

for(int i=0;i<row;i++){
    for(int j=0;j<column;j++){
        printf("%d ",matrix[i][j]);
    }
}

return 0;
}

```

```

#include<stdio.h>
#include<conio.h>

#program no: 11
/* Name: Mehedi Hasan Shuvo
   Student ID: 194016
*/

int main()
{
    int row,column;
    scanf("%d%d",&row,&column);
    int firstMatrix[row][column];
    int secondMatrix[row][column];

    for(int i=0; i<row; i++)
    {
        for(int j=0; j<column; j++)
        {
            scanf("%d",&firstMatrix[i][j]);
        }
    }

    for(int i=0; i<row; ++i)
    {

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        for(int j=0; j<column; ++j)
        {
            secondMatrix[j][i]=firstMatrix[i][j];
        }
    }

    printf("\nTranspose of the matrix:\n");
    for (int i = 0; i < column; ++i)
        for (int j = 0; j < row; ++j)
        {
            printf("%d ", secondMatrix[i][j]);
            if (j == row - 1)
                printf("\n");
        }
    return 0;
}

```

```

#include<stdio.h>
#include<conio.h>

```

```

#program no: 12
/* Name: Mehedi Hasan Shuvo
   Student ID: 194016
*/

```

```

int main()
{

    int n;
    printf("How Many Element Added Do You Want? \n");
    scanf("%d",&n);
    int number[n];
    for(int i=0; i<n; i++)
    {
        scanf("%d",&number[i]);
    }
    int temp=number[0];

    for(int i=0; i<n-1; i++)
    {
        number[i]=number[i+1];
    }
    number[n-1]=temp;

    for(int i=0; i<n; i++)
    {
        printf("%d ",number[i]);
    }
    return 0;
}

```



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

#program no: 13
/* Name: Mehedi Hasan Shuvo
   Student ID: 194016
*/

int main()
{
    int n,k=0,uncomonNumber=0;

    printf("Input the number of elements to be stored in the array: ");
    scanf("%d",&n);
    int arr1[n],arr2[n];

    printf("Input %d elements in the array :\n",n);
    for(int i=0; i<n; i++)
    {
        printf("element - %d : ",i+1);
        scanf("%d",&arr1[i]);
    }

    for(int i=0; i<n; i++)
    {
        int count=0;
        for(int j=0; j<n; j++)
        {
            if(arr1[i]==arr1[j])
                count++;
        }
        if(count==1)
        {
            arr2[k++]=arr1[i];
            uncomonNumber++;
        }
    }

    printf("The unique elements found in the array are:\n");
    for(int i=0; i<uncomonNumber; i++)
    {
        printf("%d ",arr2[i]);
    }

    return 0;
}
```

```

#include<stdio.h>
#include<conio.h>

#program no: 14
/* Name: Mehedi Hasan Shuvo
   Student ID: 194016
*/

int main()
{
    int arr1[100], arr2[100], arr3[200];
    int s1, s2, s3;
    int i=0, j=0, k=0;

    printf("Input the number of elements to be stored in the first array :");
    scanf("%d",&s1);

    printf("Input %d elements in the array :\n",s1);
    for(int i=0; i<s1; i++)
    {
        printf("element - %d : ",i+1);
        scanf("%d",&arr1[i]);
    }
    printf("Input the number of elements to be stored in the second array :");
    scanf("%d",&s2);

    printf("Input %d elements in the array :\n",s2);
    for(int i=0; i<s2; i++)
    {
        printf("element - %d : ",i+1);
        scanf("%d",&arr2[i]);
    }

    while(i<s1 && j<s2)
    {
        if(arr1[i] < arr2[j])
        {
            arr3[k]=arr1[i];
            i++;
            k++;
        }
        else
        {
            arr3[k]=arr2[j];
            j++;
            k++;
        }
    }
    while(i<s1) arr3[k++]=arr1[i++];
    while(j<s2) arr3[k++]=arr2[j++];

    for(int i=0; i<s1+s2; i++)
        printf("%d ",arr3[i]);

    return 0;
}

```

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

#program no: 15
/* Name: Mehedi Hasan Shuvo
   Student ID: 194016
*/

int main()
{
    int n, i, j, ctr;
    printf("Input the number of elements to be stored in the array :");
    scanf("%d",&n);
    int arr1[100], countLengthArray1[100];
    printf("Input %d elements in the array :\n",n);
    for(i=0; i<n; i++)
    {
        printf("element - %d : ",i);
        scanf("%d",&arr1[i]);
    }
    for(i=0; i<n; i++)
    {
        ctr = 1;
        for(j=i+1; j<n; j++)
        {
            if(arr1[i]==arr1[j])
            {
                ctr++;
                countLengthArray1[j] = 0;
            }
        }

        if(countLengthArray1[i]!=0)
        {
            countLengthArray1[i] = ctr;
        }
    }
    printf("\nThe frequency of all elements of array : \n");
    for(i=0; i<n; i++)
    {
        if(countLengthArray1[i]!=0)
        {
            printf("%d occurs %d times\n", arr1[i], countLengthArray1[i]);
        }
    }
    return 0;
}
```