```
using System;

namespace lab1
{
   class Program
   {
      public void showMenu()
      {
         Console.WriteLine("<-----Menu----->");
         Console.WriteLine("1. Input array");
         Console.WriteLine("2. Show array ");
         Console.WriteLine("3. Get specific number in array ");
         Console.WriteLine("4. Insert number at position");
         Console.WriteLine("5. Remove array");
         Console.WriteLine("6. Remove number at specific location");
         Console.WriteLine("7. Replace number at position by another number");
         Console.WriteLine("8. Size of array");
         Console.WriteLine("9. Check empty");
         Console.WriteLine("10. Check full");
         Console.WriteLine("11. Exit");
         Console.WriteLine("==================================");
      }


      public void Getpos(int[] arr, int pos)
      {
         Console.WriteLine("Your number at {0} position that you have found is: {1}",pos+1,
arr[pos]);
      }

      public void InsertNum(int[] arr,int n, int num, int pos)
      {
         if ( n >= 100) Console.WriteLine("Array is full");
         else
         {
            n =n+1;
            for(int i=n; i > pos; i--)
            {
               arr[i] = arr[i-1];
            }
            arr[pos] = num;
         }
      }

      public void RemoveArray(int[] arr, int n)
      {
         for (int i=0; i<n; i++)
         {
            arr[0] = 0;
         }
         n=0;
```

```
}

public void RemoveAt(int[] arr,int n, int pos)
{
   if(pos >n) Console.Write("You selection run out of array");
   else
   {
      if(pos == n-1)
      {
         arr[n-1]=0;
         n=n-1;
      }
      else
      {
         for (int i=pos; i<n;i++)
         {
            arr[i]=arr[i+1];
         }
         n=n-1;
      }
   }
}


public void replaceNum(int[] arr, int reNum, int pos)
{
   arr[pos] = reNum;
}
public void Display(int[] arr, int n)
{
  Console.WriteLine();
   Console.Write("Your array: ");
   for (int i=0; i<n;i++)
   {
      Console.Write(arr[i]);
      Console.Write(" ");
   }
   Console.WriteLine();
}
static void Main(string[] args)
{
   Program myProgram = new Program();
   myProgram.showMenu();

   int[] arr = new int[100];
   int n=0;

   Console.Write("Input number of number in array: ");
   n = Convert.ToInt32(Console.ReadLine());

   Console.Write("Enter your command: ");
```

```
int pickOption = Convert.ToInt32(Console.ReadLine());

while (pickOption != 11)
{
   if (pickOption <1 || pickOption >11)
   {
      Console.WriteLine("Error");
   }else
   {
      switch(pickOption)
      {
         case 1:
            for (int i=0; i<n; i++)
            {
               Console.Write("Input your number {0} that you want insert to array: ", i+1);
               arr[i] = Convert.ToInt32(Console.ReadLine());
            }
            break;

         case 2:
            myProgram.Display(arr, n);
            break;

         case 3:
            Console.Write("Input your number location: ");
            int l = Convert.ToInt32(Console.ReadLine());
            myProgram.Getpos(arr,l-1);
            break;

         case 4:
            Console.Write("Input your number: ");
            int insNum = Convert.ToInt32(Console.ReadLine());
            Console.WriteLine();
            Console.Write("Input your insert position: ");
            int insLoc = Convert.ToInt32(Console.ReadLine());
            myProgram.InsertNum(arr,n,insNum,insLoc-1);
            Console.WriteLine();
            myProgram.Display(arr, n+1);
            break;
         case 5:
            myProgram.RemoveArray(arr,n);
            Console.Write("Your array has been deleted");
            break;
         case 6:
            Console.Write("Input your position that you want to delete: ");
            int posDel = Convert.ToInt32(Console.ReadLine());
            myProgram.RemoveAt(arr,n,posDel-1);
            Console.WriteLine();
            Console.Write("Your new array: ");
            myProgram.Display(arr,n-1);
            break;
```

```
                case 7:
                    Console.Write("Input your replace number: ");
                    int repNum = Convert.ToInt32(Console.ReadLine());
                    Console.WriteLine();
                    Console.Write("Input your replace position: ");
                    int repPos = Convert.ToInt32(Console.ReadLine());
                    myProgram.replaceNum(arr,repNum,repPos);

                    break;
                case 8:
                    Console.Write(" Array size: {0}", n);

                    break;
                case 9:
                    if (arr.Length == 0) Console.WriteLine("The array is empty");
                    else
                    {
                        Console.WriteLine("The araay is not empty");
                    }
                    break;

                case 10:
                    if (arr.Length >= 1-0) Console.WriteLine("The array is full");
                    else
                    {
                        Console.WriteLine("The araay is not full");
                    }
                    break;

                case 11:
                    break;
                default:
                    break;
            }
            if (pickOption == 11) break;
        }
        Console.Write("Enter your command: ");
        pickOption = Convert.ToInt32(Console.ReadLine());
    }

    Console.WriteLine("Thank you for using our service");
    Console.WriteLine();
    Console.ReadKey();
  }
 }
}
```