ASSIGNMENT-08

1. //UPDATE A PARTICULAR LOCATION

```
#include<stdio.h>
int main()
{
   int a[10],i,p,size,value;
   printf("Enter size:\n");
   scanf("%d",&size);
   printf("Enter Elements:\n");
   for(i=0; i<size; i++)
   {
      scanf("%d",&a[i]);
   }
   printf("Elements are:\n");
   for(i=0; i<size; i++)
   {
      printf("%d\t",a[i]);
   }
   printf("\n");
   printf("Enter position:\n");
   scanf("%d",&p);
   printf("Enter new value:\n");
   scanf("%d",&value);
   a[p-1]= value;
   printf("Updated elements:\n");
   for(i=0; i<size; i++)
   {
      printf("%d\t",a[i]);
   }
```

```
  return 0;
}
```

OUTPUT

```
Enter size:
5
Enter Elements:
15
45
8941
5
123
Elements are:
15    45    8941   5     123
Enter position:
3
Enter new value:
0
Updated elements:
15    45    0     5     123
```

---

2. //SUM OF ELEMENTS

```
#include<stdio.h>
int main()
{
   int A[10],i,size=0,sum=0;
   printf("Enter size:");
   scanf("%d",&size);
   printf("Enter elements:\n");
   for(i=0; i<size ; i++)
   {
      scanf(" %d",&A[i]);
```

```
    sum = sum+ A[i];
  }
  printf("Sum of elements:%d",sum);
  return 0;
}
```

OUTPUT

```
Enter size:5
Enter elements:
5
10
15
20
25
Sum of elements:75
```

---

3. //ODD-EVEN AND POSITIVE-NEGATIVE

```
#include<stdio.h>
int main()
{
  int a[10], i,sum1=0,sum2=0, size;
  printf("Enter Size:\n");
  scanf("%d",&size);
  printf("Enter elements:\n");
  for(i=0; i<size; i++)
  {
    scanf("%d",&a[i]);
  }
  printf("Positive nmbrs:\n");
  for(i=0;i<size; i++)
    {
```

```
      if(a[i]>0)
       printf("%d\n",a[i]);
  }
 printf("Negative nmbrs:\n");
for(i=0;i<size;i++)
  {
     if(a[i]<0)
     printf("%d\n",a[i]);
  }
 printf("Even nmbrs:\n");
for(i=0;i<size;i++)
  {
     if(a[i]%2 == 0)
     {
       printf("%d\n",a[i]);
       sum1 = sum1+a[i];
     }
  }
  printf("odd nmbrs:\n");
for(i=0;i<size;i++)
  {
     if(a[i]%2 != 0)
      {
         printf("%d\n",a[i]);
         sum2= sum2 + a[i];
      }
  }
   printf("Sum of even nmbrs:%d\n",sum1);
   printf("Sum of odd nmbrs:%d\n",sum2);
```

```
    return 0;
}
```

OUTPUT

```
Enter Size:
5
Enter elements:
-1
5
4
-8
11
Positive nmbrs:
5
4
11
Negative nmbrs:
-1
-8
Even nmbrs:
4
-8
odd nmbrs:
-1
5
11
Sum of even nmbrs:-4
Sum of odd nmbrs:15
```

---

4. //MULTIPY ELEMENTS OF TWO ARRAS AND STORE IN ANOTHER ARRAY

```
#include<stdio.h>
int main()
{
   int a[5],b[5],c[5],i,size=0;
   printf("Enter the size of arrays:\t");
   scanf("%d",&size);
   printf("Enter elements of array 1:\n ");
   for(i=0; i<size; i++)
   {
      scanf("%d",&a[i]);
   }
   printf("Enter elements of array 2:\n");
   for(i=0; i<size; i++)
   {
      scanf("%d",&b[i]);
   }
   for(i=0;i<size;i++)
   {
      c[i]= a[i]*b[i];
   }
   printf("Elements of array 3 are:\n");
   for(i=0;i<size;i++)
   {
      printf("%d \t",c[i]);
   }
   return 0;
}
```

OUTPUT

```
Enter the size of arrays:      5
Enter elements of array 1:
1
2
3
4
5
Enter elements of array 2:
6
7
8
9
10
Elements of array 3 are:
6     14     24     36     50
```

---

5. **//max min and average of elements of an array**

```
#include<stdio.h>
int main()
{
   int a[5],i,size,max=0,min=0,sum=0,avg=0;
   printf("enter size:\n");
   scanf("%d",&size);
   printf("Enter elements:\n");
   for(i=0;i<size;i++)
   {
      scanf("%d",&a[i]);
   }
   max=min=a[0];
   for(i=0;i<size;i++)
```

```
  {
     if(a[i]>max)
        max=a[i];
     if(a[i]<min)
        min=a[i];
     sum=sum+a[i];
  }
  avg=sum/size;
  printf("Max Value:%d\n",max);
  printf("Min Value:%d\n",min);
  printf("Average Value:%d\n",avg);
return 0;
}
```

OUTPUT

```
enter size:
5
Enter elements:
10
550
987
4
0
Max Value:987
Min Value:0
Average Value:310
```

---

6. //prime numbers in an array

```
#include<stdio.h>
int main()
```

```
{
   int a[5],i,j,size,t,n;
   printf("enter size:\n");
   scanf("%d",&size);
   printf("elements:\n");
   for(i=0;i<size;i++)
   {
      scanf("%d",&a[i]);
   }
   printf("Prime nmbrs are:\n");
   for(i=0;i<size;i++)
   {
      n=a[i];
      t=0;
      for(j=1; j<=n; j++)
      {
         if(n%j==0)
            t++;
      }
         if(t==2)
            printf("%d\n",n);
   }
   return 0;
}
```

OUTPUT

```
enter size:
5
elements:
10
```

```
9
11
13
17
Prime nmbrs are:
11
13
17
```

---

7. //Total nmbr of elements in array are divisible by a specific nmbr

```
#include<stdio.h>
int main()
{
   int a[10],n=0,size,i,t=0;
   printf("size of array:");
   scanf("%d",&size);
   printf("Enter elements:\n");
   for(i=0; i<size; i++)
   {
      scanf("%d",&a[i]);
   }

   printf("\nEnter the specific nmbr:");
   scanf("%d",&n);
   for(i=0; i<size; i++)
   {

   if(a[i]%n==0)
      t++;
```

```
    }

    printf("Total nmbr of elements divisible by %d are:%d\n",n,t);

    return 0;
}
```

OUTPUT

```
size of array:5
Enter elements:
80
79
78
77
15

Enter the specific nmbr:5
Total nmbr of elements divisible by 5 are: 2
```

---

8. //Replacing even and odd elements

```
#include<stdio.h>
int main()
{
    int a[10],i,size;
    printf("enter size:");
    scanf("%d",&size);
    printf("Enter elements:\n");
    for(i=0; i<size; i++)
        scanf("%d",&a[i]);
    for(i=0; i<size; i++)
```

```
   {
      a[2*i+1]=1;
      a[2*i]=0;
   }
   printf("Elements after replacing:\n");
   for(i=0; i<size; i++)
      printf("%d\n",a[i]);
   return 0;

}
```

OUTPUT

```
Enter elements:
10
20
30
50
60
Elements after replacing:
0
1
0
1
0
```

---

9. //SECOND Max AND Min

```
#include<stdio.h>
int main()
{
   int a[10],size,i,max,min,max2,min2;
```

```
printf("enter size:");
scanf("%d",&size);
printf("elements:\n");
for(i=0; i<size; i++)
{
   scanf("%d",&a[i]);
}
max=min=max2=min2=a[1];

for(i=0; i<size; i++)
{
   if(a[i]>max)
      max=a[i];
   if(a[i]<min)
      min=a[i];
}

for(i=0; i<size; i++)
{
   if(max!= a[i]  && a[i]>max2)
      max2=a[i];
   if(min!=a[i]   && a[i]<min2)
      min2=a[i];
}

   //if(max==max2)


printf("\nMax:%d \t min:%d \n\n\n",max,min);
```

```
   printf("2nd Max:%d \t 2nd min:%d\n",max2,min2);

   return 0;

}
```

OUTPUT

```
enter size:5
elements:
10
20
666
5
1

Max:666        min:1


2nd Max:20      2nd min:5
```

---

10. **//REVERSAL OF ELEMENTS**

```
#include<stdio.h>
int main()
{
   int a[5],i,temp,size;
   printf("Enter Size:");
   scanf("%d",&size);
   printf("Enter elements:\n");
   for(i=0;i<size;i++)
   {
```

```
        scanf("%d",&a[i]);
    }
    for(i=0;  i<size/2;  i++)
    {
        temp=a[i];
        a[i]=a[size-1-i];
        a[size-1-i]=temp;
    }
    printf("Elements after reversal:\n");
    for(i=0; i<size; i++)
    {
        printf("%d\n",a[i]);
    }
    return 0;
}
```

OUTPUT

```
Enter Size:5
Enter elements:
1
2
3
4
5
Elements after reversal:
5
4
3
2
1
```

---

11. //SEARCH AN ELEMENT USING LINEAR SEARCH

```
#include<stdio.h>
int main()
{
   int a[5],size,i,n;
   printf("Size:");
   scanf("%d",&size);
   printf("Elements:\n");
   for(i=0;i<size;i++)
   {
      scanf("%d",&a[i]);
   }
   printf("Enter element to be searched:");
   scanf("%d",&n);
   for(i=0;i<size;i++)
   {
      if(a[i]==n)
            printf("Required index number is :%d",i);
   }
   return 0;
}
```

OUTPUT

```
Size:5
Elements:
10
20
30
```

```
40
50
Enter element to be searched:40
Required index number is : 3
```

---

12. //DELETING AN ELEMENT

```
#include<stdio.h>
int main()
{
   int a[5],size,i,j,n;
   printf("Enter size:");
   scanf("%d",&size);
   printf("Enter elements:\n");
   for(i=0;i<size;i++)
   {
      scanf("%d",&a[i]);
   }
   printf("enter element to be deleted:");
   scanf("%d",&n);
   for(i=0;i<size;i++)
   {
      if(a[i]==n)
         j=i;
      for(; j<size;j++)
         a[j]=a[j+1];
   }
   size--;
   printf("Elements after deletion:\n");
   for(i=0;i<size;i++)
```

```
   {
      printf("%d\n",a[i]);
   }
   return 0;

}
```

OUTPUT

```
Enter size:5
Enter elements:
10
11
20
30
40
enter element to be deleted:11
Elements after deletion:
10
20
30
40
```

---

13. //INSERT AN ELEMENT

```
#include<stdio.h>
int main()
{
   int a[5],size,i,index,n;
   printf("enter size:");
   scanf("%d",&size);
   printf("enter elements:\n");
```

```
   for(i=0;i<size;i++)
   {
      scanf("%d",&a[i]);
   }
   printf("Enter nmbr to be inserted:");
   scanf("%d",&n);
   printf("Enter index nmbr:");
   scanf("%d",&index);
   size++;
   for(i=size-1;i>=index;i--)
   {
      a[i]=a[i-1];
   }
   a[index]=n;
   printf("Elements after insertion:\n");
   for(i=0;i<size;i++)
   {
      printf("%d\n",a[i]);
   }
   return 0;
}
```

OUTPUT

```
enter size:5
enter elements:
1
3
5
9
11
```

```
Enter nmbr to be inserted:7
Enter index nmbr:3
Elements after insertion:
1
3
5
7
9
11
```

---

14. //SORTING AN ARRAY

```
#include<stdio.h>
int main()
{
   int a[5],size,temp,max,i,j;
   printf("Enter size:");
   scanf("%d",&size);
   printf("enter elements:\n");
   for(i=0;i<size;i++)
   {
      scanf("%d",&a[i]);
   }
   for(i=0;i<size-1;i++)
   {
      max=0;
      for(j=0; j<size-i; j++)
      {
         if(a[j]>a[max])
            max=j;
```

```
        }
        temp=a[max];
        a[max]=a[size-1-i];
        a[size-1-i]=temp;
    }
    printf("elements after sorting:\n");
    for(i=0;i<size;i++)
    {
        printf("%d\n",a[i]);
    }
    return 0;
}
```

OUTPUT

```
Enter size:5
enter elements:
50
30
40
10
20
elements after sorting:
10
20
30
40
50
```

---

15. //Insert an element in array

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

```
int main()
{
   int i,j,k,size,size1,a[10],b[10],c[10];
   printf("Enter Size:");
   scanf("%d",&size);
   printf("Enter elements of 1st array:\n");
   for(i=0; i<size; i++)
   {
      scanf("%d",&a[i]);
   }
   printf("Enter Elements of 2nd array:\n");
   for(i=0; i<size; i++)
   {
      scanf("%d",&b[i]);
   }
   printf("Resultant Array:\n");
   size1=size+size;
   i=j=0;
   for(k=0; k<size1; k++)
   {
      if(a[i]<b[i])
      {
         c[k]=a[i];
         i++;
      }
      else
      {
         c[k]=b[j];
         j++;
```

```
        }
    }
    for(k=0; k<size1; k++)
    {
        printf("%d \n",c[k]);
    }
    return 0;
}
```

OUTPUT

```
Enter Size:3
Enter elements of 1st array:
5
4
9
Enter Elements of 2nd array:
8
10
11
Resultant Array:
5
4
9
0
8
10
```