Assignment # 7

Single Dimensional Array

1. WAP to read 10 elements in an array and calculate the sum and average of all elements.
2. WAP to read 10 elements in an array and count the occurrence of odd and even numbers.
3. WAP to read 10 elements in an array and copy all the elements to another array.
4. WAP to read 10 elements in an array and copy all the elements in reverse order to an another array.
5. WAP to separate odd and even integers in separate arrays.
6. WAP to read 10 elements in an array and search for a particular number among the array list.
7. WAP to read 10 elements in an array and find the maximum.
8. WAP to read 10 elements in an array and find the minimum.
9. WAPto count the frequency of each element of an array.
10. WAP to read 10 elements in an array and sort them in ascending order.
11. WAP to read 10 elements in an array and sort them in descending order.
12. WAP to insert New value in the array (sorted list).

1).

```
#include<stdio.h>
int main()
{
   int a[10],*p;
   float b=0;
   double avg;
int i;
printf("enter a 10 number \n");
for(i=0;i<10;i++)
{
scanf("%d",(a+i));
```

```
}
for(i=0;i<10;i++)
{
   b=b+*(a+i);
   avg=b/10;

}
printf("the sum is : %f\n",b);
printf("the avg is :%lf",avg);
return 0;
}
```

2).

```
#include<stdio.h>
int main()
{
   int i,a[5],*p,even=0,odd=0;
   for(i=0;i<5;i++)
   {
     printf("enter a number ");
     scanf("%d",(a+i));

   }
   for(i=0;i<5;i++)
   {
   if(*(a+i)%2==0)
   {
      even ++;
   }
   else{
      odd++;
   }
   }
   printf("the number of even  is :%d \n",even);
   printf("the number of odd is :%d\n",odd);
   return 0;
}
```

3).

```
#include<stdio.h>
int main()
{
   int a[10], i,b[10];
   for(i=0;i<10;i++)
   {
```

```
    printf("enter a number:");
    scanf("%d",(a+i));
    }
    printf("the copied number in next array is :");
    for(i=0;i<10;i++)
    {
       *(b+i)=*(a+i);

    printf(" %d",*(b+i));
    }

    return 0;

}
```

4).

```
#include<stdio.h>
int main()
{
    int a[10],b[10];
    int i;
    for(i=0;i<10;i++)
    {
       printf("enter a number ");
       scanf("%d",(a+i));
    }
    printf("the number in reverse order is :");
    for(i=9;i>=0;i--)
    {
       *(b+i)=*(a+i);
       printf("%d ",*((b+i)));
    }
    return 0;
}
```

5).

```
#include<stdio.h>
int main()
{
    int i,a[5],*p,even[10],odd[10],j=0,k=0;
    for(i=0;i<5;i++)
    {
      printf("enter a number ");
      scanf("%d",(a+i));
```

```
    }
    for(i=0;i<5;i++)
    {
    if(*(a+i)%2==0)
    {
       even[j]=*(a+i);
       j++;
    }
    else{
       odd[k]=*(a+i);
    k++;
    }
    }
    printf("the number of even  is :");
    for(i=0;i<j;i++){
       printf(" %d ",even[i]);
    }
    printf("\nthe number of odd is :\n");
    for(i=0;i<k;i++)
    {
       printf("%d ",odd[i]);
    }
    return 0;
}
```

6).

```
#include<stdio.h>
int main()
{
   int a[10],b,p;
   int i;
   for(i=0;i<10;i++)
   {
      printf("enter a number :");
      scanf("%d",(a+i));
   }
   printf("enter a paricular number to search :");
       scanf("%d",&b);
       for(i=0;i<5;i++)
       {
          if(*(a+i) ==b)
          {
             printf("the element found :%d\nd",*(a+i));
             return 0;
```

```
            }
        }
            printf("there is no particular number");

        return 0;

}
```

7).

```
#include<stdio.h>
int main()
{
   int a[10];
   int i;
   printf("enter a  10 number \n");
   for(i=0;i<10;i++)
   {
      scanf("%d",(a+i));
   }
   for(i=0;i<10;i++)
   {
      if(*(a+i)>a[0])
      {
         a[0]=*(a+i);
      }
   }
   printf("the max number is %d:",a[0]);
   return 0;
}
```

8).

```
#include<stdio.h>
int main()
{
   int a[10];
   int i;
   printf("enter a  10 number \n");
   for(i=0;i<10;i++)
   {
      scanf("%d",(a+i));
   }
   for(i=0;i<10;i++)
   {
      if(*(a+i)<a[0])
```

```
        {
            a[0]=*(a+i);
        }
    }
    printf("the min  number is %d:",a[0]);
    return 0;
}
```

9).

```
#include<stdio.h>
int main(){
    int a[10],i,j,count=0;
    printf("enter a 10  numbers \n ");
    for(i=0;i<10;i++)
    {
        scanf("%d",(a+i));
    }
    for(i=0;i<10;i++)
    {
        for(j=i+1;j<10;j++)
        {
            if(*(a+i)==*(a+j))
            {
                count++;
                break;
            }
        }
    }
    printf("The repeated element is =%d",count);
    return 0;
}
```

10).

```
#include<stdio.h>
int main(){
int a[10],i,j,temp=0;
printf("enter a 10 number \n");
for(i=0;i<9;i++)
{
    scanf("%d",(a+i));
}
for(i=0;i<9;i++)
{
    for(j=i;j<9;j++)
```

```
   {
      if(*(a+i) > *(a+j))
     { temp=*(a+i);
      *(a+i)=*(a+j);
      *(a+j)=temp;}
   }
}
printf("the number in ascending order is :");
for(i=0;i<9;i++)
{
   printf("%d ",*(a+i));
}
return 0;

}
```

11).

```
#include<stdio.h>
int main(){
int a[10],i,j,temp=0;
printf("enter a 10 number \n");
for(i=0;i<9;i++)
{
   scanf("%d",(a+i));
}
for(i=0;i<9;i++)
{
   for(j=i;j<9;j++)
   {
      if(*(a+i) < *(a+j))
     { temp=*(a+i);
      *(a+i)=*(a+j);
      *(a+j)=temp;}
   }
}
printf("the number in decending order is :");
for(i=0;i<9;i++)
{
   printf("%d ",*(a+i));
}
return 0;

}
```

12).

```
#include<stdio.h>
int main()
{
   int n;
   printf("enter a n number of array :");
   scanf("%d",&n);
   int a[n],i,pos,ele;
   int *p,*q;
   printf("enter a %d element \n",n);
   for(i=0;i<n;i++)
   {
      scanf("%d",(a+i));
   }
   printf("enter a element to enter ");
   scanf("%d",&ele);
   printf("enter a position to enter ");
   scanf("%d",&pos);
   for(i=n-1;i>=pos;i--)
   {
      *(a+(i+1))=*(a+i);
   }
   *(a+pos)=ele;
   for(i=0;i<=n;i++)
   {
      printf("%d \t",*(a+i));
   }
   return 0;
}
```