

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. WAP to 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 arr[10],i,sum=0;
    for(i=0;i<10;i++)
    {
        printf("enter a number :");
        scanf("%d",&arr[i]);
    }

    for(i=0;i<10;i++)
        sum +=arr[i];
    printf("the avg sum of number is: %d\n",sum);
    return 0;
```

```
}
```

2).

```
#include<stdio.h>
int main()
{
    int a[10],i,even=0,odd=0;
    for(i=0;i<10;i++)
    {
        printf("enter a number :");
        scanf("%d",&a[i]);
    }
    for(i=0;i<10;i++)
    {
        printf("%d",a[i]);
        if (a[i]%2==0)
        {
            even ++;
        }
        else{
            odd++;
        }
    }
    printf("\nthe total even number is:%d\n",even);
    printf("the total odd number 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]);
}
for(i=0; i<10; i++)
{
    b[i]=a[i];
}
printf(" initial array number is:");
for(i=0; i<10; i++)
{
    printf(" %d\t", a[i]);
}
printf("\nthe copied array number is :");
for(i=0; i<10; i++)
{
    printf(" %d\t", b[i]);
}
return 0;
}

```

4).

```

#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]);
    }
}

```

```

    }
    for(i=0;i<10;i++)
    {
        b[i]=a[i];
    }
    printf("\n initial number is :");
    for(i=0;i<10;i++)
    {
        printf("%d\t",a[i]);
    }
    printf("\nnumber in reverse order is :");
    for(i=9;i>=0;i--)
    {
        printf("%d\t",b[i]);
    }
    return 0;
}

```

5).

```

#include<stdio.h>
int main()
{
    int i,num[10],even[10],odd[10],j=0,k=0;
    for(i=0;i<10;i++)
    {
        printf("enter a number %d :",i+1);
        scanf("%d",&num[i]);
    }
    for (i=0;i<10;i++)
    {
        if(num[i] % 2 == 0)
        {

```

```

        even[j]=num[i];

        j++;
    }
    else
    {
        odd[k]=num[i];
        k++;
    }
}

printf("the even number is :");
for(i=0;i<j;i++)
{
    printf("%d\t",even[i]);
}
printf("\nthe odd number is :");
for(i=0;i<k;i++)
{
    printf("%d\t",odd[i]);
}
printf("\n");
return 0;
}

```

6).

```

#include<stdio.h>
int main()
{
    int num[10],i,a,store;
    printf("enter a number for array\n");
    for(i=0;i<10;i++)
    {
        printf("enter a number ");
    }
}

```

```

        scanf("%d",&num[i]);
    }
    printf("enter a particular number for search ");
    scanf("%d",&a);
    for(i=0;i<10;i++)
    {
        if (a==num[i])
        {
            printf("element found %d:",num[i]);
            return 0;
        }
    }
    printf("there is no particular number ");

}

```

7).

```

#include<stdio.h>
int main()
{
    int a[5],i;
    for(i=0;i<5;i++)
    {printf("enter a number %d :",i+1);
    scanf("%d",&a[i]);}
    for(i=0;i<5;i++)
    {
        if (a[0]<a[i])
        {
            a[0]=a[i];
        }
    }
    printf("the max number is %d",a[0]);
    return 0;
}

```

```
}
```

8).

```
#include<stdio.h>
int main()
{
    int a[5],i;
    for(i=0;i<5;i++)
    {printf("enter a number %d :",i+1);
    scanf("%d",&a[i]);}
    for(i=0;i<5;i++)
    {
        if (a[0]>a[i])
        {
            a[0]=a[i];
        }
    }
    printf("the min number is %d",a[0]);
    return 0;
}
```

9).

```
#include <stdio.h>

int main()
{
    int arr[10], i, j,size, Count = 0;
    printf("enter the size of array :");
    scanf("%d",&size);
    for (i = 0; i < size; i++)
    {
        printf("enter a number :");
        scanf("%d", &arr[i]);
    }
}
```

```

        for (i = 0; i < size; i++)
        {
            for(j = i + 1; j < size; j++)
            {
                if(arr[i] == arr[j])
                {
                    Count++;
                    break;
                }
            }
        }

        printf("\n Total Number of repeated Elements in this Array = %d ",
Count);

return 0;
}

```

10).

```

#include<stdio.h>
int main()
{
    int n,i,j;
    printf("enter a number of array");
    scanf("%d",&n);
    int arr[n];
    for(i=0;i<n;i++)
    {
        printf("enter a number %d :",i+1);
        scanf("%d",&arr[i]);
    }
    int temp=0;

```



```

    int a = sizeof(arr)/sizeof(arr[0]); //length of array
    for (i=0;i<a;i++)
    {
        for(j=i+1;j<a;j++)
        {
            if(arr[i]>arr[j])
            {
                temp=arr[i];
                arr[i]=arr[j];
                arr[j]=temp;
            }
        }
    }
    printf("\n");
    printf("element in ascending order : ");
    for(i=0;i<a;i++)
    {
        printf("%d \t",arr[i]);

    }
    return 0;
}

```

11).

```

#include<stdio.h>
int main()
{
    int n,i,j;
    printf("enter a number of array :");
    scanf("%d",&n);
    int arr[n];
    for(i=0;i<n;i++)
    {

```

```

        printf("enter a number %d : ", i+1);
        scanf("%d",&arr[i]);
    }
    int temp=0;
    int length =sizeof(arr)/sizeof(arr[0]);
    for(i=0;i<length;i++)
    {
        for(j=i+1;j<length;j++)
        {
            if(arr[i]<arr[j])
            {
                temp = arr[i];
                arr[i] =arr[j];
                arr[j]=temp;
            }
        }
    }
    printf("\n");
    printf("the decending order is :");
    for(i=0;i<length;i++)
    {
        printf("%d\t",arr[i]);
    }
    return 0;
}

```

12).

```

#include<stdio.h>
int main()
{
    int ele,pos,i,n;
    printf("enter a number of array ");
    scanf("%d",&n);

```

```
int arr[n];
for(i=0;i<n;i++)
{
    printf("enter a number ");
    scanf("%d",&arr[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--)
{
    arr[i+1] =arr[i];
}

arr[pos]=ele;
for(i=0;i<=n;i++)
{
    printf("%d\t",arr[i]);
}
return 0;
}
```