Assignment 12

//1.Find the maximum and minimum number in the array

```
#include<stdio.h>

int main(){
  int i,n;
    printf("Enter the number of elements:");
    scanf("%d",&n);

    int* arr = (int*)malloc(sizeof(int)*n);
     printf("Enter the numbers:");
    for(i=0;i<n;i++){
            scanf(" %d",&arr[i]);
            }
            min(arr,n);
            max(arr,n);
}

void min(int* arr,int n){
 int i;
int min= arr[0];
for(i=1;i<n;i++){
            if(arr[i]<min){
                        min=arr[i];
            }
            }
```

```
printf("Minimum number:%d",min);
}
void max(int* arr,int n){
        int i;
        int max=arr[0];

        for(i=1;i<n;i++){
                if(arr[i]>max){
                        max=arr[i];
                }
        }

                printf("\nMaximum number:%d",max);
        }
```

2. Search the given number in array.

```
#include<stdio.h>
void main(){
          int i,n,ele;
   printf("Enter the number of elements:");
   scanf("%d",&n);
   int* arr = (int*)malloc(sizeof(int)*n);
   printf("Enter the numbers:");
   for(i=0;i<n;i++){
        scanf(" %d",&arr[i]);
        }
 printf("Enter the element you want to search:");
        scanf("%d",&ele);
```

```
        search(arr,ele,ele);
}
void search(int* arr,int ele,int n)
{
   int j;
        for(j=0;j<n;j++){

                if(arr[j]==ele){

                        printf("Number %d is at index:%d",ele,j);
                }
        }
        }
```

3. Find sum of all numbers.

```
#include<stdio.h>
void main(){
          int i,n;
   printf("Enter the number of elements:");
   scanf("%d",&n);
   int* arr = (int*)malloc(sizeof(int)*n);
   printf("Enter the numbers:");
   for(i=0;i<n;i++){
        scanf(" %d",&arr[i]);
        }
        sum_numbers(arr,n);
```

```
}

void sum_numbers(int* arr,int n){
                int i,sum=0;
                for(i=0;i<n;i++){
                sum=sum+arr[i];
        }

        printf("Sum of all numbers in a array: %d",sum);
}




//Q4.Find odd and even among all the numbers

#include<stdio.h>

int main(){
 int i,n;
      printf("Enter the number of elements:");
   scanf("%d",&n);
   int* arr = (int*)malloc(sizeof(int)*n);
   printf("Enter the numbers:");
   for(i=0;i<n;i++){
        scanf(" %d",&arr[i]);
        }
         even(arr,n);
         odd(arr,n)
}
```

```
void even(int* arr,int n){

    int i;
printf("Even:");
        for(i=0;i<=n;i++){
                if(arr[i]%2==0){
                        printf(" %d",arr[i]);
                }
        }

}

void odd(int* arr,int n){


                int k;

                        printf("\nOdd:");

                for(k=0;k<=n;k++){

                        if(arr[k]%2!=0){

                                printf(" %d",arr[k]);

                        }
                }
}
```

5. Print alternate elements in array.

```
#include<stdio.h>

int main(){

 int i,n;

   printf("Enter the number of elements:");
   scanf("%d",&n);

   int* arr = (int*)malloc(sizeof(int)*n);
   printf("Enter the numbers:");
   for(i=0;i<n;i++){
          scanf(" %d",&arr[i]);
          }
           alternate(arr,n);

}

void alternate(int* arr,int n){
                    int i;

           for(i=0;i<n;i=i+2){

                    printf(" %d",arr[i]);
           }

}
```

//6. Accept array and print only prime numbers of array

```
#include<stdio.h>
void main(){

 int i,n;
   printf("Enter the number of elements:");
   scanf("%d",&n);

   int* arr = (int*)malloc(sizeof(int)*n);
   printf("Enter the numbers:");
   for(i=0;i<n;i++){
          scanf(" %d",&arr[i]);
          }
          prime(arr,n);
}
void prime(int* arr,int n){
          int i,j;

          int flag=0;
          for(i=0;i<n;i++){
                    flag =1;
                    for(j=2;j<arr[i];j++){
                                        if(arr[i]%j==0)
                              {
                                          flag = 0;
                                break;
                                }
                    }
```

```
                        if(flag==1){

                printf(" %d",arr[i]);

        }
        }
}

//7. Take two array and add sum in third array
//Examplearr[5]= {1,2, 3, 4,5}
//brr[5]={10,20,30, 40, 50}
//crr[5]={11,22,33,44,55}

#include<stdio.h>
void main(){
        int i,n;
   printf("Enter the number of elements:");
   scanf("%d",&n);

   int* arr = (int*)malloc(sizeof(int)*n);
    int* brr = (int*)malloc(sizeof(int)*n);
   printf("Enter the numbers for first array:");
   for(i=0;i<n;i++){
        scanf(" %d",&arr[i]);
        }

         printf("Enter the numbers for second arrray:");
   for(i=0;i<n;i++){
```

```
        scanf(" %d",&brr[i]);
        }
 sum(arr,brr,n);
}

void sum(int* arr, int* brr,int n){
        int sumarr[5];
        int i ,j;
        for(i=0;i<n;i++){

                sumarr[i]=arr[i]+brr[i];

        }

        printf("Sum of two arrays:");
        for(j=0;j<n;j++){

                printf(" %d",sumarr[j]);
        }


}
```

//8. Merge two arrays.

```
#include<stdio.h>
void main(){
            int i,n;
   printf("Enter the number of elements:");
   scanf("%d",&n);

   int* arr = (int*)malloc(sizeof(int)*n);

   int* brr = (int*)malloc(sizeof(int)*n);
     printf("Enter the numbers for first array:");
   for(i=0;i<n;i++){
           scanf(" %d",&arr[i]);
           }

            printf("Enter the numbers for second arrray:");
   for(i=0;i<n;i++){
           scanf(" %d",&brr[i]);
           }
           merge(arr,brr,n);
}

void merge(int* arr,int* brr,int n){
           int i,j,k;

           int crr[6];

            printf("crr[6]={");
```

```
        for(i=0;i<3;i++){

                crr[i]= arr[i];
        }

        for(j=0;j<3;j++){

                crr[j+3]=brr[j];
        }

       for(k=0;k<6;k++){

                printf("%d",crr[k]);
}

        printf("}");
}
```

//9. Reverse the given array.

```
#include<stdio.h>
void main(){

        int i,n;
    printf("Enter the number of elements:");
  scanf("%d",&n);
```

```
    int* arr = (int*)malloc(sizeof(int)*n);



    printf("Enter the numbers:");
    for(i=0;i<n;i++){
            scanf(" %d",&arr[i]);
            }


            rev(arr,n);
}


void rev(int* arr,int n){
                    int i;
            for(i=n-1;i>-1;i--){
                                printf("%d",arr[i]);
            }
}
```

10. Sort the array.

```
#include<stdio.h>
void main(){
            int i,n;
   printf("Enter the number of elements:");
   scanf("%d",&n);
   int* arr = (int*)malloc(sizeof(int)*n);
     printf("Enter the numbers:");
   for(i=0;i<n;i++){
           scanf(" %d",&arr[i]);
           }
          sort(arr,n);
}
void sort(int* arr,int n){
           int i,j;
           for(i=0;i<n;i++){
                    for(j=0;j<n-i-1;j++){
                             if(arr[j]>arr[j+1]){
                                      int temp =arr[j];
                                  arr[j]=arr[j+1];
                                  arr[j+1]=temp;
                             }
                    }
           }
           for(i=0;i<n;i++){
           printf(" %d",arr[i]);
           }
}
```