## Assignment 12

1. **Find minimum and maximum number in array.**

```
#include<stdio.h>
#include<stdlib.h>
int main(){
int n,i,min,max;
scanf("%d",&n);
int *a=(int*)malloc(n*sizeof(int));
for(i=0;i<n;i++)scanf("%d",&a[i]);
min=max=a[0];
for(i=1;i<n;i++){
if(a[i]<min)min=a[i];
if(a[i]>max)max=a[i];
}
printf("%d %d",min,max);
free(a);
return 0;
}
```

2. **Search the given number in array**

```
#include<stdio.h>
#include<stdlib.h>
int main(){
int n,i,x,f=0;
scanf("%d",&n);
int *a=(int*)malloc(n*sizeof(int));
for(i=0;i<n;i++)scanf("%d",&a[i]);
scanf("%d",&x);
for(i=0;i<n;i++)if(a[i]==x){f=1;break;}
if(f)printf("Found");
else printf("Not found");
free(a);
```

```
return 0;
}
```

**3. Find sum of all numbers.**

```
#include<stdio.h>
#include<stdlib.h>
int main(){
int n,i,sum=0;
scanf("%d",&n);
int *a=(int*)malloc(n*sizeof(int));
for(i=0;i<n;i++){scanf("%d",&a[i]);sum+=a[i];}
printf("%d",sum);
free(a);
return 0;
}
```

**4. Find odd and even among the numbers.**

```
#include<stdio.h>
#include<stdlib.h>
int main(){
int n,i;
scanf("%d",&n);
int *a=(int*)malloc(n*sizeof(int));
for(i=0;i<n;i++)scanf("%d",&a[i]);
for(i=0;i<n;i++)if(a[i]%2==0)printf("%d ",a[i]);
printf("\n");
for(i=0;i<n;i++)if(a[i]%2!=0)printf("%d ",a[i]);
free(a);
return 0;
}
```

**5. Print alternate elements in array.**

```
#include<stdio.h>
#include<stdlib.h>
int main(){
int n,i;
scanf("%d",&n);
int *a=(int*)malloc(n*sizeof(int));
for(i=0;i<n;i++)scanf("%d",&a[i]);
for(i=0;i<n;i+=2)printf("%d ",a[i]);
free(a);
return 0;
}
```

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

```
#include<stdio.h>
#include<stdlib.h>
int isPrime(int n){
if(n<2)return 0;
for(int i=2;i*i<=n;i++)if(n%i==0)return 0;
return 1;
}
int main(){
int n,i;
scanf("%d",&n);
int *a=(int*)malloc(n*sizeof(int));
for(i=0;i<n;i++)scanf("%d",&a[i]);
for(i=0;i<n;i++)if(isPrime(a[i]))printf("%d ",a[i]);
free(a);
return 0;
}
```

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

```
#include<stdio.h>
#include<stdlib.h>
int main(){
int n,i;
scanf("%d",&n);
int *a=(int*)malloc(n*sizeof(int));
int *b=(int*)malloc(n*sizeof(int));
int *c=(int*)malloc(n*sizeof(int));
for(i=0;i<n;i++)scanf("%d",&a[i]);
for(i=0;i<n;i++)scanf("%d",&b[i]);
for(i=0;i<n;i++){c[i]=a[i]+b[i];printf("%d ",c[i]);}
free(a);free(b);free(c);
return 0;
}
```

**8. Merge two arrays**

```
#include<stdio.h>
#include<stdlib.h>
int main(){
int n,i;
scanf("%d",&n);
int *a=(int*)malloc(n*sizeof(int));
int *b=(int*)malloc(n*sizeof(int));
int *m=(int*)malloc(2*n*sizeof(int));
for(i=0;i<n;i++)scanf("%d",&a[i]);
for(i=0;i<n;i++)scanf("%d",&b[i]);
for(i=0;i<n;i++)m[i]=a[i];
for(i=0;i<n;i++)m[n+i]=b[i];
for(i=0;i<2*n;i++)printf("%d ",m[i]);
free(a);free(b);free(m);
```

```
return 0;
}
```

**9. Reverse the given array.**

```
#include<stdio.h>
#include<stdlib.h>
int main(){
int n,i;
scanf("%d",&n);
int *a=(int*)malloc(n*sizeof(int));
for(i=0;i<n;i++)scanf("%d",&a[i]);
for(i=n-1;i>=0;i--)printf("%d ",a[i]);
free(a);
return 0;
}
```

**10. Sort the array.**

```
#include<stdio.h>
#include<stdlib.h>
int main(){
int n,i,j,t;
scanf("%d",&n);
int *a=(int*)malloc(n*sizeof(int));
for(i=0;i<n;i++)scanf("%d",&a[i]);
for(i=0;i<n-1;i++)
for(j=0;j<n-i-1;j++)
if(a[j]>a[j+1]){t=a[j];a[j]=a[j+1];a[j+1]=t;}
for(i=0;i<n;i++)printf("%d ",a[i]);
free(a);
```

```
return 0;
}
```