**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;

}

1. **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;

}