

Find the sum and average of an array?

```
int a[50],n,i,sum=0,avg;
printf("enter the limit\n");
scanf("%d",&n);
printf("enter the values\n");
for(i=0;i<n;i++)
{
    scanf("%d",&a[i]);++
}
for(i=0;i<n;i++){
    sum=sum+a[i];
}
avg=sum/n;
printf("Sum of entered numbers is :
%d\n",sum);
printf("Average is : %d\n",avg);
```

Write a program to reverse an array?

```
int a[50],n,i,index;
printf("enter the limit\n");
scanf("%d",&n);
printf("enter the values\n");
for(i=0;i<n;i++)
{
    scanf("%d",&a[i]);
}
for(i=n-1;i<n && i>=0;i--){
    printf("%d\t",a[i]);
}
```

Find the largest and second largest number in an array?

```
int main()

int i,a[100],limit,l=-3000,sl=-20000;

printf("enter the limit");

scanf("%d",&limit);

printf("enter the values \n");

for(i=0;i<limit;i++)

{

    scanf("%d",&a[i]);

}

for (i=0;i<limit;i++)

{

    if(a[i]>l)

    {

        sl=l;

        l=a[i];

    }

    else if(a[i]!=l && a[i]>sl)

    {

        sl=a[i];

    }

}

printf("\n largest number is

%d",l);

printf("\n second largest number

is %d",sl);
```

Find the smallest and second smallest number in an array?

```
int i,a[100],limit,l=300088,sl=20000;

printf("enter the limit");

scanf("%d",&limit);

printf("enter the values \n");

for(i=0;i<limit;i++)

{

    scanf("%d",&a[i]);

}

for (i=0;i<limit;i++)

{

    if(a[i]<l)

    {

        sl=l;

        l=a[i];

    }

    else if(a[i]!=l && a[i]<sl)

    {

        sl=a[i];

    }

}

printf("\n smallest number is

%d",l);

printf("\n second smallest

number is %d",sl);
```

Find the largest and smallest number in an array?

```
int i,a[100],limit,small,large;

small=a[0];

large=a[0];

printf("enter the limit");

scanf("%d",&limit);

printf("enter the values \n");

for(i=0;i<limit;i++)

{

    scanf("%d",&a[i]);

}

for (i=0;i<limit;i++)

{

    if(a[i]<small)

    {

        small=a[i];

    }

    if(a[i]>large)

    {

        large=a[i];

    }

    printf("\nsmallest is:

%d",small );

    printf("\nlargest is :%d",large );

}
```

Write a program to merge Two arrays?

```
int a[50],i,c[50],b[50],limita,limitb,limitc;

printf("enter the limit of first array\n");

scanf("%d",&limita);

printf("enter the values of first array\t");

for(i=0;i<limita;i++)

{

    scanf("%d",&a[i]);

}

printf("enter the limit of second array\n");

scanf("%d",&limitb);

printf("enter the values of second

array\t");

for(i=0;i<limitb;i++)

{

    scanf("%d",&b[i]);

}

limitc=limita+limitb;

for(i=0;i<limita;i++){

    c[i]=a[i];

}

for(i=0;i<limitb;i++) {

    c[limita+i]=b[i];

}

printf("\nmerged array is:");

for(i=0;i<limitc;i++)

{

    printf("%d\t",c[i]);

}
```

Write a program to move all zeros to the beginning of an array?

```
int a[50],n,i,count;

printf("enter the limit\n");
scanf("%d",&n);
printf("enter the values\n");
for(i=0;i<n;i++)
{
    scanf("%d",&a[i]);
}
count=n-1;
for(i=n-1;i>=0;i--){

    if(a[i]!=0){
        a[count]=a[i];
        count--;
    }
}
for(i=0;i<count;i++){
    a[i]=0;
}
for(i=0;i<n;i++){
    printf("%d\t",a[i]);
}
```

Write a program to move all zeros to the end of a given array?

```
int a[50],n,i,count=0;
printf("enter the limit\n");
scanf("%d",&n);
printf("enter the values\n");
for(i=0;i<n;i++)
{
    scanf("%d",&a[i]);
}
for(i=0;i<n;i++){

    if(a[i]!=0){
        a[count]=a[i];
        count++;
    }
}
for(i=count;i<n;i++){
    a[i]=0;
}
for(i=0;i<n;i++){
    printf("%d\t",a[i]);
}
```

Write a program to count the prime numbers?

```
int a[50],i,j,k,m,n,flag,count=0;
printf("enter the limit\n");
scanf("%d",&n);
printf("enter the values\n");
for(i=0;i<n;i++)
{
    scanf("%d",&a[i]);
}
for(j=0;j<=n;j++){
    flag=0;
    m=a[j]/2;
    for(k=2;k<=m;k++){
        if(a[j]%k==0){
            flag=1;
            break;
        }
    }

    if(flag==0){
        count++;
    }
}
printf("Total count of prime numbers is %d",count);
```

Write a program to print all prime numbers in an array?

```
int a[50],i,j,k,m,n,flag;
printf("enter the limit\n");
scanf("%d",&n);
printf("enter the values\n");
for(i=0;i<n;i++)
{
    scanf("%d",&a[i]);
}
for(j=0;j<=n;j++){
    flag=0;
    m=a[j]/2;
    for(k=2;k<=m;k++){
        if(a[j]%k==0){
            flag=1;
            break;
        }
    }

    if(flag==0){
        printf("%d",a[j]);
    }
}
}
```

Write a program to count the number of unique numbers in an array?

```
int a[50],i,j,count,flag,n;

printf("enter the limit\n");

scanf("%d",&n);

printf("enter the values\n");

for(i=0;i<n;i++)
{
    scanf("%d",&a[i]);
}

count=0;

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

    for(j=0;j<n;j++)
    {
        if(i!=j)
        {
            if(a[i]==a[j])
            {
                flag ++;
            }
        }
    }

    if(flag==0)
    {
        count++;
    }
}

printf("Total number of unique numbers is
: %d",count);
```

Write a program to print all unique elements in an array?

```
int main() {

int a[50],i,j,count,n;

printf("enter the limit\n");

scanf("%d",&n);

printf("enter the values\n");

for(i=0;i<n;i++)
{
    scanf("%d",&a[i]);
}

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

    for(j=0;j<n;j++)
    {
        if(i!=j)
        {
            if(a[i]==a[j])
            {
                count ++;
            }
        }
    }

    if(count==0)
    {
        printf("%d\t",a[i]);
    }
}

}
```

Write a program to count total number of duplicate elements in an array?

```
int a[50],i,j,count=0,n;
printf("enter the limit\n");
scanf("%d",&n);
printf("enter the values\n");
for(i=0;i<n;i++)
{
    scanf("%d",&a[i]);
}

for(i=0;i<n;i++)
{
    for(j=0;j<n;j++)
    {
        if(i!=j)
        {
            if(a[i]==a[j])
            {
                count ++;
            }
        }
    }
}

printf("total number of duplicates
: %d",count);
```

Write a program to delete all duplicate elements in an array?

```
int a[50],i,j,count,n;
printf("enter the limit\n");
scanf("%d",&n);
printf("enter the values\n");
for(i=0;i<n;i++)
{
    scanf("%d",&a[i]);
}
for(i=0;i<n;i++)
{
    count=0;
    for(j=i+1;j<n;j++)
    {
        {
            if(a[i]==a[j])
            {
                count ++;
            }
        }
    }
    if(count==0)
    {
        printf("%d\t",a[i]);
    }
}
```

Write a program to insert element in an array at specified position?

```
Int
i,a[100],j,limit,position,puthiyaelement;

printf("enter the limit");
scanf("%d",&limit);
printf("enter the values \n");
for(i=0;i<limit;i++)
{
    scanf("%d",&a[i]);
}
printf("enter position");
scanf("%d",&position);
printf("enter new element");
scanf("%d",&puthiyaelement);

    for(j=limit;j>=position;j--){
        a[j]=a[j-1];
    }
a[position-1]=puthiyaelement;
for(i=0;i<=limit;i++){
    printf("%d",a[i]);
}
```

Write a program to delete an element at a specific position from an array?

```
int a[50],n,i,j,k,index;

printf("enter the limit\n");
scanf("%d",&n);
printf("enter the values\n");
for(i=0;i<n;i++)
{
    scanf("%d",&a[i]);
}
printf("Enter the position\n");
scanf("%d",&index);
if(index<1 || index>n+1){
    printf("Cannot found entered position");
}
else {
    for(j=index-1;j<n;j++){
        a[j]=a[j+1];
    }
    for(j=0;j<n-1;j++){
        printf("%d",a[j]);
    }
}
```


Write a program to replace all even numbers by 0 and odd numbers by 1?

```
int a[50],n,i;

printf("enter the limit\n");

scanf("%d",&n);

printf("enter the values\n");

for(i=0;i<n;i++)
{
    scanf("%d",&a[i]);
}

for(i=0;i<n;i++){
    if(a[i]%2!=0){
        a[i]=1;
    }
    else if(a[i]%2==0){
        a[i]=0;
    }
}

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

Write a program to replace all prime numbers with 0 and non-prime numbers by 1?

```
int a[50],i,j,k,m,n,flag;

printf("enter the limit\n");

scanf("%d",&n);

printf("enter the values\n");

for(i=0;i<n;i++)
{
    scanf("%d",&a[i]);
}

for(j=0;j<n;j++){
    flag=0;
    m=a[j]/2;
    if(m>=1){
        for(k=2;k<=m;k++){
            if(a[j]%k==0){
                flag=1;
                break;
            }
        }

        if(flag==0){
            printf("%d",a[j]=0);

        }else if(flag>0 && a[j]>1){
            printf("%d",a[j]=1);
        }
    }else {
        printf("%d",a[j]=-1);
    }
}
```

Write a program to sort elements of array in ascending order?

```
int a[50],n,i,j,temp;

printf("enter the limit\n");

scanf("%d",&n);

printf("enter the values\n");

for(i=0;i<n;i++)
{
    scanf("%d",&a[i]);
}

printf("Ascending Order is:\t");

for(i=0;i<n;i++){
    for(j=i+1;j<n;j++){
        if(a[i]>a[j]){
            temp=a[i];
            a[i]=a[j];
            a[j]=temp;
        }
    }

    printf("%d\t",a[i]);
}
```

Write a program to sort elements of array in descending order?

```
int a[50],n,i,j,temp;

printf("enter the limit\n");

scanf("%d",&n);

printf("enter the values\n");

for(i=0;i<n;i++)
{
    scanf("%d",&a[i]);
}

printf("Descending Order is:\t");

for(i=0;i<n;i++){
    for(j=i+1;j<n;j++){
        if(a[i]<a[j]){
            temp=a[i];
            a[i]=a[j];
            a[j]=temp;
        }
    }

    printf("%d\t",a[i]);
}
```

Write the program to count all the even numbers and odd numbers in an array?

```
int
a[50],n,i,oddcount=0,evencount
=0;

printf("enter the limit\n");
scanf("%d",&n);
printf("enter the values\n");
for(i=0;i<n;i++)
{
    scanf("%d",&a[i]);
}

for(i=0;i<n;i++){
    if(a[i]%2!=0){
        oddcount++;
    }
    else if(a[i]%2==0){
        evencount++;
    }
}

printf("Count of Even Numbers
are: %d",evencount);

printf("\nCount of Odd
Numbers are: %d",oddcount);
```

Write a program to find all the odd numbers and even numbers in an array?

```
int a[50],n,i;

printf("enter the limit\n");
scanf("%d",&n);
printf("enter the values\n");
for(i=0;i<n;i++)
{
    scanf("%d",&a[i]);
}

printf("Odd Numbers are: ");
for(i=0;i<n;i++){
    if(a[i]%2!=0){
        printf("%d\t",a[i]);
    }
}

printf("\nEven Numbers are: ");
for(i=0;i<n;i++){
    if(a[i]%2==0){
        printf("%d\t",a[i]);
    }
}
```

Write a program to count and print all negative numbers in an array?

```
int a[50],n,i,count;

printf("enter the limit\n");
scanf("%d",&n);
printf("enter the values\n");
for(i=0;i<n;i++)
{
    scanf("%d",&a[i]);
}

count=0;
for(i=0;i<n;i++){
    if(a[i]<0){
        printf("%d\t",a[i]);
        count++;
    }
}

printf("\nNumber of Negative
numbers in an array:
%d",count);
```

Write a program to find the frequency of a specific number in an array?

```
int a[50],n,i,key,count=0;
printf("enter the limit\n");
scanf("%d",&n);
printf("enter the values\n");
for(i=0;i<n;i++)
{
    scanf("%d",&a[i]);
}

printf("Enter the number to find
frequency:\n");
scanf("%d",&key);

for(i=0;i<n;i++){
    if(a[i]==key){
        count++;
    }
}

printf("Frequency of %d is:
%d",key,count);
```

Write a program to separate odd and even numbers in separate array?

```
int a[50],i,c[50],b[50],j=0,k=0,n;
printf("enter the limit\n");
scanf("%d",&n);
printf("enter the values\n");
for(i=0;i<n;i++)
{
    scanf("%d",&a[i]);
}
for(i=0;i<n;i++){
    if(a[i]%2==0){
        b[j]=a[i];
        j++;
    }
    else if(a[i]%2!=0){
        c[k]=a[i];
        k++;
    }
}
for(i=0;i<j;i++){
    printf("%d\t",b[i]);
}
printf("\n");
for(i=0;i<k;i++){
    printf("%d\t",c[i]);}
```

Write a program to delete all multiples of 5 in an array?

```
int a[100]={2,5,7,10,4};
int n=5,i,j;
for(i=0;i<n;i++){
    if(a[i]%5==0){
        for(j=i;j<n;j++){
            a[j]=a[j+1];
        }
        n--;
        i--;
    }
}
for(i=0;i<n;i++){
    printf("%d ",a[i]);
}
```

