

Array

- Array is a data structure which contains list of same types of data items.
- Items of the array are allocated in contiguous memory locations.

### **Example:**

```
int a[5];
```

it contain 5 integers they are a[0], a[1], a[2], a[3], a[4].

The 5 elements can be read in a for loop as fallows.

```
for(int i=0; i<5; i++)  
    scanf("%d", &a[i]);
```

## Example:

```
int a[3][3];
```

it contains 9 integers they are:

```
a[0][0], a[0][1], a[0][2]
```

```
a[1][0], a[1][1], a[1][2]
```

```
a[2][0], a[2][1], a[2][2]
```

these elements can be read by following loop:

```
for(int i=0; i<3; i++)  
    for(int j=0; j<3; j++)  
        scanf("%d", &a[i][j]);
```

```
/*To find maximum and  
minimum from list of 10 nos*/
```

```
#include<stdio.h>
```

```
#include<conio.h>
```

```
void main()
```

```
{
```

```
int a[10], max, min;
```

```
clrscr();
```

```
printf("Enter 10 numbers:");
```

```
for(int i=0; i<10; i++)
```

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

```
max=a[0];
```

```
min=a[0];
```

```
for(i=1; i<10; i++) {
```

```
    if (a[i]>max) max=a[i];
```

```
    if (a[i]<min) min=a[i];
```

```
}
```

```
printf("\n Max=%d", max);
```

```
printf("\n Min=%d", min);
```

```
getch();
```

```
}
```

INPUT	OUTPUT
23 45 68 87 15 34 57 74 92 6	Max=92 Min=6

```
/*To Search a number from list of 10  
nos*/
```

```
#include<stdio.h>
```

```
#include<conio.h>
```

```
void main()
```

```
{
```

```
int a[10] =  
{11,33,55,22,44,66,99,77,88,111};
```

```
int x;
```

```
clrscr();
```

```
printf("Enter a number to search:");
```

```
scanf("%d", &x);
```

```
for(i=0; i<10; i++)
```

```
{
```

```
if(a[i]==x) {
```

```
printf("\n Found");
```

```
break;
```

```
}
```

```
}
```

```
If (i==10)
```

```
printf("\n Not Found");
```

```
getch();
```

```
}
```

INPUT	OUTPUT
55	Found
11	Found
111	Found
10	Not Found
20	Not Found
120	Not Found