

Arrays

Array is a collection of similar data type items. Arrays are used to store group of data of same datatype. Arrays can be of any datatype. Arrays must have constant size. Continuous memory locations are used to store array. Array index always starts with 0.

Example for Arrays:

```
int a[5]; // integer array
```

```
char a[5]; // character(string) array
```

Types of Arrays:

1. One Dimensional Array
2. Two Dimensional Array
3. Multi Dimensional Array

One Dimensional Array

Array declaration

```
int age [5];
```

Array initialization

```
int age[5]={0, 1, 2, 3, 4, 5);
```

Accessing array

```
age[0]; /*0 is accessed */
```

```
age[1]; /* 1 is accessed */
```

```
age[2]; /* 2 is accessed */
```

Two Dimensional Array

Two dimensional array is combination of rows n columns.

Array declaration

```
int arr[2][2];
```

Array initialization

```
int arr[2][2] = {{1,2}, {3,4}};
```

Accessing array

```
arr[0][0]=1;
```

```
arr[0][1]=2;
```

```
arr[1][0]=3;
```

```
arr[1][1]=4;
```

Multi Dimensional Array

C programming language allows programmer to create arrays of arrays known as multidimensional arrays.

For example:

```
float a[2][4][3];
```

Passing Array To Function

In C we can pass entire Arrays to functions as an argument. For eg.

```
#include
```

```
void display (int a)
```

```
{
```

```
int i;
```

```
for(i=0;i < 4;i++)
```

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

```
}
```

```
int main() {
```

```
int c[]={1,2,3,4};
```

```
display(c); //Passing array to display.
```

```
return 0;
```

```
}
```