

# Arrays

**Definition:** Variables that can hold a specified amount of values of the same datatype.

## Defining an array:

```
int a[10]; // Uninitialized
```

```
int a[3] = { 1,2,3 } // Initialized
```

```
char a[6] = { 'W','e','r','n','e','r' };
```

```
char a[] = "Werner";
```

## **Rules:**

- Arrays can only contain one datatype
- Arrays cannot contain more elements than specified at declaration with the [].
- Array elements are referenced from 0. Therefore:
  - in the array `int a[5]` the first element is zero and the last element is 4

Passing Arrays to functions

## **When passing the array :**

`int a[5]` to the function `printArray(int arr[])` the function call looks as follows.

```
printArray(a,5);
```