**Arrays**

* variable - It is a named block of memory that can hold single-value data.
* Array - It is a continuous memory allocation used to store multiple values
* Every array has two things: 1. Address   2. Index

**Characteristics:**

* Array is homogenous.
* 0X1 0X2 0X3 0X4 0X5 = **ADDRESS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |

* 0 1 2 3 4 = **INDEX**
* In these blocks, we can store data with the same datatype; we can’t store another variable type.
* Array is fixed in size (The above array size is 5).
* To store and fetch elements in an array we required two things.
  + Array reference / Array Address.
  + Index.
* Syntax: Datatype[] VariableName;
* Ex: int[] arr; // ‘int’ is datatype and ‘arr’ is variable name.
* Now the above example can hold only integer type of values.

|  |
| --- |
| 0X1 |

* It is Array reference variable.
* We can create array in 2 ways:
* By using **new** operator.
  + Syntax: **new datatype[size];**
  + **new:** It will create a block of memory and return the address.
  + **datatype:** It will tell what type of data you can store inside the block of memory.
  + **size:** It will tell how many values you can store.
  + **Ex:** int[] arr = new int[3];

|  |  |  |
| --- | --- | --- |
|  |  |  |

* Without using **new** operator.
* Special Case: char[] arr = new char[5];
* Output: ‘nothing’