**Array name can store address of first array element.pointer is a variable stores the address of another variable**

**Arrays and pointers** are synonymous in terms of how they use to access memory. But, the important difference **between** them is that, a **pointer** variable can take different addresses as value whereas, in case of **array** it is fixed. In **C** , name **of the array** always points to the first element **of an array**.  
Difference Between Array And Pointer in table

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| **BASIS OF COMPARISON** | **ARRAY** | **POINTER** |
| **Description** | An array is a single, pre-allocated chunk of contagious element (all the same type), fixed in size and location. | A pointer is a place in memory that keeps the address of another place inside. |
| **Nature** | They are static in nature. Once the memory is allocated, it cannot be resized or freed dynamically according to users requirement. | Pointer is dynamic in nature. The memory allocation can be resized or freed later at any point in time. |
| **Allocation** | Arrays are allocated at compile time i.e at the time when programmer is writing program. | Pointers are allocated at runtime i.e after executing program. |
| **Initialization** | Array can be initialized at definition. Example int num={2, 4, 5} | Pointer can’t be initialized at the definition. |
| **Number Of Variables Stored** | An array size decides the number of variables it can store. | A pointer variable can store the address of only one variable. |
| **Assembly Code** | The assembly code of Array is different than pointer. | The assembly code of pointer is different than array. |
| **Memory Allocation** | Memory allocation is sequential. | Memory allocation is random. |
| **Existence** | Array is a group of elements. | Pointer is not a group of elements. It is a single variable. |
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| **Syntax** | Array syntax Data type arrayName [data type]; | Pointer syntax-data type \*variable\_name; |