



# INTRODUCTION TO ARRAYS

Structured, Compound, or Aggregate Data

Many variables accessed with one name



# ARRAYS

- Name many variables with one name
- Each variable is called an array element
- All of the variables or elements must be the same data type
- Individual variables or elements are accessed with an index or subscript
- The size of the array is specified when the array is created
- All of the variables or elements are arranged contiguously (i.e., next to each other) in memory



# ARRAY EXAMPLES

- **Defining an array:** `int test[10];`
  - The array type is `int` (all of the array elements are integers)
  - The array name is `test`
  - The size of the array is `10` – the maximum number of element the array can hold
  - C++ arrays, like Java arrays, are *zero-indexed*: legal index values range from `0` to `9`
- **Accessing array elements:**
  - `test[3] = 100;`
  - `sum += test[2];`
  - `cout << test[8] << endl;`