BCS 230 Lab2

CRN 23798, 23322, 20108   Spring 2015

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Objective: To learn to
- declare and initialize arrays
- process each array element individually
- process array elements using a for loop
- use arrays as actual arguments to functions
- practice a serious caution in checking the bounds of the array indices

Task:

Write C++ statements to do the following:

1. In function main, declare an array `alpha` of 20 elements of type `int` and initialize the first three elements to 1, 2, 3, and the rest elements to 0.

2. Write a function `printArray` to print all the elements of an array. The function `printArray` has two formal parameters, an `int` array `array` and an `int` variable `SIZE` representing the number of elements of the array. In function `main`, call function `printArray` to print out the elements of `alpha`. The function prototype of `printArray` is:
    ```
    void printArray(int array[], int SIZE);
    ```
    Remember, **arrays are passed to a function by reference only, no need to add &.**

3. Write a function `FibArray` to set array `alpha` to a Fibonacci sequence. Print `alpha` to show the sequence.
    Note, A Fibonacci sequence is an integer sequence in which the first two numbers are 1 and 1, and each subsequent number is the sum of the previous two numbers. The first ten numbers in Fibonacci sequence are: 1, 1, 2, 3, 5, 8, 13, 21, 34, 55.

4. Set the value of the twelfth element of `alpha` to six times the value of the fourteen element minus seven. Print array `alpha`.

5. Use a `for` loop to output the elements of `alpha` whose index is odd.

6. Output the value of alpha[20], then set alpha[20] to 555 and output its value again. What is wrong with your program?