

Palomar College
Computer Science &
Information Technology
CSCI 112 Programming Fundamentals I
Chapter 7 – HW 10

4. Write the code for the following:

- Declare one array for storing the square of the integers from 0 through 10.
- Write a for loop to give the array the values.
- Declare a second array for storing the cubes of the integers from 0 to 15;
- Write a for loop to give the array the values.

```
int squared[11] = {0};  
for (i = 0; i <= 10; i++)  
(  
    squared[i] = (i * i);  
)
```

```
int cubed[16] = {0};  
for (i = 0; i <= 15; i++)  
(  
    cubed[i] = (i * i) * i;  
)
```

5. Download the code from Canvas titled arrayinput. Run it, examine and write down what is the difference between the two input techniques.

The first type doesn't allow you to enter less inputs than asked for. The sentinel allows you to input 3 inputs when you can enter 5 inputs.

6. The code in the slides numbered 7.14 uses a while loop and not a for, why?

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1. What is a data structure? Give an example? Why do we have data structures?

- composite of related data items stored under the same name.
- ex: Student ID's to organize the data to assist the programmer

2. What is the difference between `int x3` and `int x[3]`?

`x3` is/could be a variable name.
`x[3]` is referring to the 4th value in an array.

3. For the declaration
`int list[8] = {0};`

What is this?

an array

How many elements?

to be decided

What type of data in the structure?

array

What are the possible index values?

an input from the user

Are the values initialized?

no the array is initialized