Philip Pesic

Week 12

April 9 2023

Week 12 Q10

1) What is an array ?

An array is a collection of values stored under one alias and an index

2) What are the restrictions on the datatype for each element of an array ?

All array elements must be the same datatype

3) Why use an array ?

To store many values concisely and efficiently

4) What is the 'Offset problem' with arrays ?

Arrays are indexed, meaning the first element has index zero, and the last has index size - 1

5) What is long list initialization? give an example

Long list initialization is the act of manually assigning values to an array

Int array[] = {1, 2, 3, 4};

6) What are Nested for loops ?

A nested for loop is a for loop inside another. The entirety of the nested loop will run for each single loop of the outer loop

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7) What are multidimensional arrays ?

Multidimensional arrays are array with, well, more than one dimension. They can be thought of

as a plane or cube of values rather than a line.

0 1 2

1 1 2   arr[1][2] == 2

2 2 4

8) Why are the array elements contiguous ?

Array elements are contiguous because they are stored under one alias and contiguous RAM

addresses

9) Can you declare an array with no elements ?

Yes, but it is not very functional as you cannot add elements later

10) Do you like arrays ?

I like arrays because they have a wide variety of use cases, several forms (2d, 3d), and can be

accessed flexibly through their index