Exercise: Array concepts and vocab

**char** thought[] = { 'I', ' ', '<', '3', ' ', 'P', 'L', 'T', 'L', '!'};

1. Create a diagram that represents the array thought in memory after the line of code above has executed.
2. What is the type of thought? What is the type of thought[6]?
3. What is the last element of thought? What index would you use to reference that element? What is the difference between an element and an index?
4. Is there an alternative way that thought could have been declared and initialized?

Exercise: Code tracing arrays

1. Draw a memory diagram and trace the code below to find the output generated.

Work individually first, then do round robin to complete the whole code step by step.

**int** x[] = { 5, 6, 2, 3, 5 };

**int** length = 5;

**for** (**int** c = length - 1; c > 0; c--)

x[c] = x[c-1];

**for** (**int** c = 0; c < length; c++)

cout << x[c] << " ";

Exercise: Arrays by pictures

Picture 1 Picture 2

x

‘a’

‘b’

‘c’

‘d’

y

‘a’

‘b’

‘c’

‘d’

x

‘a’

‘b’

‘c’

‘d’

y

‘1’

‘2’

‘3’

‘4’

Picture 3

Work in pairs to write code to go from:

A. Picture 1 to Picture 2 B. Picture 1 to Picture 3

x

‘b’

‘c’

‘d’

‘a’

y

‘1’

‘2’

‘3’

‘4’