

Exercise 2 – dynamic arrays

Question 1

An array's size is the number of positions that are available to store elements, while its capacity refers to the memory allocated to the array.

Question 2

If there is space in memory after the array, then the remaining new element can simply be added to the end. If the space after the array is occupied, then the array must be allocated elsewhere in memory and the elements copied over.

Question 3

A technique to amortize the cost of array expansion in real-world array implementations is to implement a growth factor. This allows arrays to have larger capacity than initially needed so they can add elements faster without having to move around as often.