

Week 3 Lab: Two-dimensional Arrays

New Work

This week, you will be continuing to work on arrays. The first two stories should be easy as they are similar to stories done in Structured programming. The last three stories are more difficult since they involve two-dimensional arrays, which you have not worked with before. Story 5 and 6 should be easy if you use the functions you wrote to read and print one-dimensional arrays. Story 7 is tricky. It requires three nested loops, and keeping track of each loop is difficult.

Demo

Complexity (30 marks)

Five marks for each function: one each for compilation and formatting; three for correctness.

Story 4 (15 Marks)

As a programmer, I want to add an item to a 1-d array to learn how to do it.

1. Formatting is correct (5 Marks)
2. Compiles (5 Marks)
3. Runs (5 Marks)
 1. Checks for legal position to insert. (1 Mark)
 2. Moves all elements up. (2 marks)
 3. Puts new value in correct position. (2 marks)

Story 5 (15 marks)

As a programmer, I want to delete an item from a 1-d array so I can learn how to do it.

4. Formatting is correct (5 Marks)
5. Compiles (5 Marks)
6. Runs (5 Marks)
 1. Checks for legal position to insert. (1 Mark)
 2. Moves all elements up. (2 marks)
 3. Puts new value in correct position. (2 marks)

