

2D Array Questions

- 1) Write a method that takes in a 2D `int` array as its parameter, and returns the minimum element in the array. For example, if the array is `{{1, 2, 3}, {4, 5, 6}, {7, 8, 9}}`, then the method would return 9. If the array is `{{1, 10, 3}, {5, 3, 2}}`, then the method would return 10. You may assume that the array is rectangular (i.e. all the rows have the same length, and all of the columns have the same length).
- 2) Write a method that takes in two `int` parameters called `height` and `width`, and returns a 2D `int` array with `height` rows and `width` columns. Furthermore, the entry in `i`-th row and `j`-th column should be `i + j`. For example, if the `height` is 3 and the `width` is 4, then the method should return the array `{{2, 3, 4, 5}, {3, 4, 5, 6}, {4, 5, 6, 7}}`. If the `height` is 1 and the `width` is 1, then the method should return the array `{{2}}`. You may assume that positive integers are passed in for `height` and `width`.
- 3) Write a method that takes in an `int n` as its parameter, and returns an `n x n int` array. The entries in this array should alternate between 0 and 1 in both the rows and columns. For example, if `n` is 1, then the method should return the array `{{0}}`. If `n` is 2, then the method should return the array `{{0, 1}, {1, 0}}`. If `n` is 3, then the method should return the array `{{0, 1, 0}, {1, 0, 1}, {0, 1, 0}}`, etc.