Extra Practice Questions

Solutions to extra practice questions are not provided but students are highly encouraged to start a discussion on forums

1. Define a function that when passed a two-dimensional floating-point array, returns the highest value in the array.

2. Define a function that when passed a one-dimensional floating-point array, returns true if the array is sorted in ascending order (each item is less than or equal to the next item), false otherwise.

3. Define a function that when passed a two-dimensional integer array, and an integer idx, returns the sum of all items in the sub-array at index idx.

For example, if arr = {{1, 4}, {5, 9, 3, 7}, {6}} and idx = 1, the function returns the sum of arr[1] (which is {5, 9, 3, 7}) = 24.

4. Using solution to Q11.3 (or assuming such a function exists), define a function that when passed a two-dimensional integer array, returns true if the sum of each sub-array is less than or equal to the sum of the next sub-array, false otherwise.

For example if arr = {{1, 4}, {5, 9, 3, 7}, {6, 9, 50}}, function returns true, but if arr = {{1, 4}, {5, 9, 3, 7}, {6}}, function returns false.

5. (ADVANCED) Define a function that when passed a one-dimensional integer array, returns true if each item in the array occurs exactly once, false otherwise.

6. (ADVANCED) Define a function that when passed a one-dimensional integer array, returns an array containing the even items from the array.

For example, if arr = {5, 6, 7, -3, -8, 0}, it returns the array {6, -8, 0}.

7. (ADVANCED) Define a function that when passed two one-dimensional integer arrays, returns an array containing the items that exist in both the arrays (in the order they occur in the first array).

For example, if a = {1, 5, 1, 7, 2, 5, 7} and b = {3, 4, 1, 6, 7, 7, 7, 6, 6, 7}, it returns the array {1, 7, 7}.