

22C:16 (CS:1210) Quiz 6

You have 20 minutes to complete this quiz.

1. Define a function called `moveNegatives` that takes a list `L` of integers as a parameter. The function is required to return a new list obtained by moving all the negative integers in `L` to the front of the list. For example, it would be correct for the function call `moveNegatives([3, -4, 4, -1, -7, 11, 8])` to return `[-7, -1, -4, 3, 4, 11, 8]`. It is not required that the negative integers or the positive integers retain their relative order, i.e., they can be shuffled in any manner during the process of moving the negative integers to the front. Also, this task need not be performed in-place. In other words, the function can create a new list and return that list.

Hint: Recall that if `M` is a list then `M.insert(i, e)` inserts an element `e` in position `i`, moving subsequent elements one location to the right.

2. Define a function called `expand` that takes two lists – a list of words called `wordList` and a list of corresponding frequencies called `freqList` and returns an “expanded” list in which each word appears as many times as its frequency. For example, if `wordList` is `["hi", "hello", "prediction"]` and `freqList` is `[3, 2, 1]`, then the function should return `["hi", "hi", "hi", "hello", "hello", "prediction"]`. The “expanded” list should contain words in order, i.e., since `"hi"` appears first in `wordList`, all copies of `"hi"` should appear first in the “expanded” list, etc. You can assume that `freqList` contains only positive integers.