CSE 321

Homework 5

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1) I have three functions in this part. “sumArrayElements” is the function that sums up all the elements of a list, “subSets” function is the main recursive function that tries every possible combination through calling every possible combination recursively and “findSubsets” function to call the recursive function. In the main recursive function, I take two parameters as arguments, one of them is the input array that I take its first element and call recursion with and without adding it to the out array which is the second argument of that function.

   The code is in “Q1.py” file.

2) I have three functions in this part. “sumArrayElements” is the function that sums up all the elements of a list, “smallestPath” function is the main recursive function that finds the best solution through calling every possible combination recursively and “findSmallestPath” function to call the recursive function. In the main recursive function, I take five parameters as arguments. “arr_in” is the main 2d array, y is for current y index in that 2d array, x is for current x index in that 2d array, “arr_out” is the possible solution if it is the best one and “arr_res” is the result array reference to set it to “arr_out” if necessary

   The code is in “Q2.py” file.

3) I have three functions in this part. “sumArrayElements” is the function that sums up all the elements of a list, “mostValuable” function is the main recursive function that finds the best solution through calling every possible combination recursively and “findMostValuable” function to call the recursive function. In the main recursive function, I take seven parameters as arguments. “arr_v_in” and “arr_w_in” are input arrays, “arr_v_out” and “arr_w_out” are possible solution arrays, “arr_res” is the result array just like in the previous parts and “w_cap” is the weight capacity.

   The code is in “Q3.py” file.