COP 3502 Suggested Program Edits/Questions: Base Conversion/Bitwise Operators (Week 13 Programs)

1) Add functionality to baseconv2.c which allows for base conversion between two arbitrary bases, neither of which are base 10. (You can basically stitch together two function calls here.)

2) Write a program that converts between two bases, both of which are perfect powers of 2, which works without going through base 10 as an intermediary base.

3) The posted solution to contractor (contractor.c) uses an optimization where the total earnings and total set of days worked is calculated based on the saved values for all the jobs except for 1. (Namely, the money[i] and numDays[i] are updated based on previously stored values in money and numDays.) The posted solution to knapsack doesn't do this optimization. Add this optimization into that solution.

4) The numBitsOn function in the posted solution recovery.c continually right shifts n by 1 place. Alternatively, this can be solved by using a for loop and iterating through each bit position and adding 1 to the counter if that particular bit position is on in n (without every changing n). Implement the function in this manner.

5) Edit the knapsack.c file so that the input takes in names for each item, in addition to the weight and value of each item, and it prints out the names of the items in the optimal subset.