

CS331 Project #2 (120 Points)
Winter - 2018
Instructor: Tannaz Rezaei
Due Date: Mon - 03/12/2018 - Midnight

Task #1 – Fractional Knapsack

Use greedy approach to implement **fractional knapsack** problem.

- a. Ask user for knapsack capacity.
- b. Ask user for n objects weights and profits or read an input.txt that contains n objects weights and profits.
- c. List objects that maximize the profit and show the maximum profit as output considering knapsack capacity. (60 Pts)

Task #2- 0/1 Knapsack

Use Dynamic programming approach to implement **0/1 knapsack** problem.

- a. Ask user for knapsack capacity.
- b. Ask user for n objects weights and profits or read an input.txt that contains n objects weights and profits.
- c. List objects that maximize the profit and show the maximum profit as output considering knapsack capacity. (60 Pts)

What to Submit?

1. Java or Python source codes for each task (**Please comment each line**)
2. input.txt file
3. Readme.txt (Please describe how to run your code)
- 4- Executable file.
5. Please zip all documents as yourname_project2.zip and submit it on blackboard.

Discussion among students is encouraged, but I expect each student to hand in original work.