Faculty of Information Engineering & Technology
The Networking Department
Course: Analysis and Design of Algorithms [CSEN 707]

German University in Cairo

Dr. Tallal El Shabrawy Eng. Mariham Wasfy

Project Deadline 15th of January 2021

Knapsack 2 Dimensional Problem:

A knapsack problem requires finding a subset placed items from a set of items while maximizing the sum of the items benefit and not exceeding the knapsack total capacity or violating any other constraints.

Design a **Dynamic Programming** Algorithm to solve the above problem.

Deliverables:

- Code: any programming language Java, C, C++, MATLAB or Python.
- Report:
 - o Pseudocode, flowchart or English description to your code flow.
 - O Your code should print subset list of picked items and total obtained benefit.
 - o Test you code by input givens in tutorial 6 problem 1 get the output and screenshot it.

Submission:

Send zipped code and PDF computerized report to my email <u>mira.wasfy94@gmail.com</u>, mention your name and ID of each member in your team.

Deadline:

Hard deadline on Saturday 16th of January 2021 11:59 PM.

Teams:

Group of 4 maximum. (Switch tutorials are allowed)

Needless to mention that **cheating cases aren't allowed**. Cheating case both teams will be graded ZERO.

Merry Christmas & Happy New Year Best of luck ©