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**CSCI203 Algorithm and Data Structures**  
**Lab Assg 10**  
**July Session 2019**

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### **Objectives**

- To be able to solve problem using knapsack strategy
- To be able to identify the most valuable object
- To practice writing solutions to problems in a clear and succinct way

### **Problem**

The knapsack problem is a problem in combinatorial optimization. Given a set of items, each with a weight and a value, determine the number of each item to include in a collection so that the total weight is less than or equal to a given limit and the total value is as large as possible. Write a program to enter the limit capacity of the knapsack, a number of items together with its weight and values. Use knapsack strategy to find the most valuable items picked.

### **Submission**

Upload **ZIP/RAR** document titled **yourname\_W17\_L10** into the correct submission folder in **Moodle before 11pm** Malaysian time. Late submission will not be accepted.

Your document should contain your source code, screen shots and other necessary files. Show your code and output during lab to receive your marks.

### **Marking Criteria**

(1 mark for correctness, function as required, input/output  
1 mark for efficiency, validation, readability, display format)