TO: Professor Ania Jennings

FROM: Bradley Harper, Grant Qualls, Jonathan Rich, Evan Sells

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Group 18 has determined that we would like to demonstrate an algorithm for our tutorial. We believe that the 0-1 Knapsack Problem would be an excellent choice to illustrate. Being an upper-level algorithm, the Knapsack Problem categorizes and sorts items in a way such that one can acquire the maximum value per item in the metaphorical knapsack.

**Methods of Delivery**

The Knapsack Problem is a semi-complex algorithm to display and comprehend through standard code. We plan to use a couple methods to give the full effect of this algorithm. To best express our tutorial the following methods will be used or considered:

* Sample Code
* Real World Examples
* Video Demonstration
* Graphs and Tables

**Interest of Topic**

This algorithm is interesting because it is an NP hard problem, where no polynomial time algorithm is known. However, an efficient algorithm to solve this problem would be vastly beneficial in the warehousing and logistics industry; particularly in metro areas where real estate commands a premium and traffic considerations warrant the use of smaller, more nimble vehicles. This problem is a direct metaphor for those industries. While attempting to create an efficient knapsack problem algorithm is outside the scope of this assignment, exploring existing algorithms that solve this problem is interesting nonetheless.