## Problem ID: 11

## Problem Name: Kit cars

## Description: A kit car company regularly receive orders from customers asking them to build cars to order. The cars they build are from off-the-shelf parts that they keep on site. Each type of car that they build is created from between 20 and 300 different parts. When orders come in, often requesting dozens of cars at a time, they must work out whether or not they can complete the order based on the parts they have in stock.

## Propose a solution that will allow the company to determine firstly whether or not they can complete an order. If they cannot complete the order they want to know which cars they should complete from the order. They want to complete the cars that will yield the highest profit, based on a fixed selling price to their customers and the various prices of the different parts that they have already bought.

## UB Number:

## Name:

<ADD YOUR **ONE PAGE** ANALYSIS AND PROPOSED SOLUTION HERE AND REMOVE THIS TEXT.>

<ADD YOUR FLOW CHART OR PSEUDOCODE HERE AND REMOVE THIS TEXT. NO ADDITIONAL TEXT SHOULD BE ON THIS PAGE EXCEPT FOR TEXT IN A FLOWCHART OR PSEUDOCODE ALGORITHM>