Assignment 1 (/10)

- Due 9/10/2015

  1. Heap of Beans (/10)
     - Write a letter to a friend or family member explaining the rules and object of the game, and how to win.
       * Refer to page 96 of your text for a checklist in writing this and future assignments
  2. **EXTRA CREDIT** : Heap of Beans 2.0 (/1)
     - Let n be a positive whole number that is greater than one (e.g., $2, 3, 4, 5, 6 \ldots$). Suppose we have a heap of beans with $n \times n$ beans (e.g., $4, 9, 16, 25, 36 \ldots$). For this game, use the same rules used for Heap of Beans with the extra rule that a player may take up to $n - 1$ beans. For example, if n was 6, there are 36 beans in the pile and each player takes turns taking $1, 2, 3, 4$ or 5 beans until there are no more beans. Describe a winning strategy.