Data Structure: inputFileName.txt

Access Programs: object.code, object.description, object.cost, object.quantity, object.used
Notation to indicate the various data stored in each object (line in data file).

Implementation:

Uses: none

Contstants: none

Variables:

recorded_min_cost: LONG recorded_max_cost: LONG
Represents values that create the domain for getAllItemsInCostRange()

code: STRING description: STRING cost: LONG quantity: INT
Represents the data of the stored objects

object_used: BOOLEAN
Represents whether the object has been iterated through by getAllItemsInCostRange()

Format: (X is positive integer)

Line Number	Object data
1	recorded_min_cost '\t' recorded_max_cost '\n'
X+1	code '\t' description '\t' cost '\t' quantity '\t' object_used

Decision Process:

Our group decided that it was best to contain the data structure for the program within the text file to keep all of the data localized as the scale of the data being used is very small and does not need to be modulated.

The objects in the data file are not sorted in any particular order to keep the complexity of creating the files very low as the file is rewritten often by various modules. This decision was made because even though searching functions suffer higher run times, those functions also contain Boolean values which require the whole file to be searched regardless of what order the objects are in to be obtained.