If you do not want to do this assignment, you can stop reading now, and retain the scores you have earned thus far in graded items for the course. This assignment contains a large number of conditions and caveats. The reason for the plethora of conditions is in fairness for students who have performed well during the semester by ensuring that this assignment does not trivialize efforts in which they have succeeded.

This assignment will allow students who were victims of confusion or unforeseen circumstances on another homework assignment to replace a particular grade as described below.

This assignment is ceiling displacement credit, and is not required to be completed by any student. You may choose to substitute your grade on this assignment for exactly one homework assignment of your choice.

Ceiling displacement credit means that a grade on this assignment which is less than or equal to the selected replacement grade will be ignored. This assignment is considered more difficult than any previous homework assignment, since it can replace one problem any previous homework assignment. Successful completion of this assignment will reflect that the student has demonstrated initiative and skills to deserve a second chance for at most one problem; it does not reflect that the student has mastered or deserves a certain letter grade for the term. Further, failure to attempt this assignment, or an insufficient completion of this assignment, will not reflect on the submitting student in any way.

The completion of this assignment is left to students willing to prove their initiative. Thus, no assistance will be given by the Instructor to complete the assignment. The instructor reserves the right to answer clarifying questions about the requirements if fewer than 24 hours remain before the assignment is due. Late submissions are not accepted.

Finally, this is an optional assignment, so students submitting this assignment should not abdicate their scheduled project responsibilities. Any students who plan to submit this assignment should discuss and resolve, in good faith, their intentions with project teammates, to avoid uncomfortable situations should the schedules conflict.
1 Game, Match. Seems like there was something else...

Download the modeling environment for the game “Set” from the website. Modify the language as you see fit and provide interpreters (including an improved decorator) to have the modeling environment support the following use cases:

- Deal an initial game
- Deal 3 more cards (should not be possible if a set exists); you may choose, for example, to have 3 cards dealt if a user drags in a single card from the types box
- Organize the cards in a regular layout (e.g., a 3x3, rectangle with regular spacing)
- Re-organize the existing cards (randomize relative position)
- Allow the user to select 3 cards and declare them a set (thus removing them from the deck)
- Manage the deck of cards
- Declare the game over, with no remaining sets, and no cards in the deck
- Visualize the cards using a style similar to http://www.setgame.com/set/puzzle_frame.htm

You must submit all necessary files, including source code and your revised metamodel (or the original metamodel, if you made no revisions), and a brief writeup explaining how to “play” your model, to d2L. **Late submissions will not be graded.**