Algorithm Animation Project

Project description

You goal is to use the *isdraw* library or the Java GUI and graphics libraries or the *jpt* library in combination with the music/sound library and create a tutorial or a demonstration program that will teach the user something about the behavior of a specific algorithm over the time.

Examples may be:

- An animation of sorting algorithms that uses a bar chart, illuminates the bars that we are comparing, colors differently the sorted and unsorted parts of the `ArrayList` and plays a sound corresponding to the height of every bar each time the item corresponding to that bar is either compared or moved.

- An animation of a binary search tree algorithms - insertion, deletion, finding the first item, etc.

- An animation of the heap algorithms: build a heap, convert the heap into a sorted list.

- A graphical explanation of working with linked lists or doubly-linked lists: insertion, deletion, searching.

- A graphical representation of the graph traversal algorithms - the DFS, BFS, and shortest path: show the nodes already visited, those in the *ToDo* list, animate backtracking to find the path at the end.

Actually, I think you can come up with a much more creative examples.

Enjoy!