A04 8 Puzzle - Part 1

| 10/24/2022

MISSING 30 Possible Points

| Attempt 1 ⌄ | ◗ **IN PROGRESS** Next Up: Submit Assignment | 🗨 Add Comment |

Unlimited Attempts Allowed

⌄ **Details**

Sorting

Assignment: 8 Puzzle - Part 1

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Learning Objectives

- Select the appropriate data structure(s) to solve a problem given a set of programming specifications.
- Determine the performance characteristics of a software application.
- Implement A* search algorithm.

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Overview

This assignment should be completed with a partner.

In this assignment, you will write a program to solve the 8-puzzle problem and its natural generalizations using the A* search algorithm.

The assignment is broken up into two parts. In this first part of the assignment, you are asked to implement one out of two classes.

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Instruction

Find a partner unless you got one assigned already. Ideally, you would have a different partner for each of the team assignments.

Assignment Instructions:

The instructions are based on an assignment of Princeton's algorithm course and comes with additional resources listed below.
http://www.cs.princeton.edu/courses/archive/fall14/cos226/assignments/8puzzle.html ⤷ **(http://www.cs.princeton.edu/courses/archive/fall14 /cos226/assignments/8puzzle.html)**

This first part of the assignment requires the implementation of the class **Board**. It should be created in a **package called a04**.

In order to earn full points, the class needs to pass most of the JUnit tests on CodePost (see rubric). You can submit as often as you like but only up until the specified deadline.
Before you submit via Canvas, take a screen-shot of the CodePost website that shows your bruinmail, the class that is tested, and the number of passing/failing tests.

Additional Resources:

Whenever there is a difference or inconsistency between the assignment instructions and one of the additional resources, the instructions need to be followed.

Checklist:
Here is a checklist that includes frequently asked questions, input files for testing, and possible progress steps.
http://www.cs.princeton.edu/courses/archive/fall14/cos226/checklist/8puzzle.html ⤷ **(http://www.cs.princeton.edu/courses/archive/fall14/cos226**

▷

(https://www.youtube.com/watch?v=d6aRjJKDfpY&feature=youtu.be)

⊦→

Submission

One team member embeds the screenshot from CodePost that shows your bruinmail, the assignment, and the number of passing tests. **How to embed images in Canvas** **(https://community.canvaslms.com/t5/Student-Guide/How-do-I-embed-images-from-Canvas-into-the-Rich-Content-Editor/ta-p/356)**

Both team members submit the name of the partner and the discussed pebble distribution. If the pebble distribution is not 50/50, include a description that explains the difference.

⌄ **View Rubric**

A04 Part 1 Rubric									
Criteria	**Ratings**								**Pts**
JUnit tests for class Board view longer description	**30 pts** **Full Marks** No more than 1 test fails	**26 pts** **2 Tests fail**	**22 pts** **3 tests fail**	**18 pts** **4 tests fail**	**14 pts** **5 tests fail**	**10 pts** **6 tests fail**	**6 pts** **7 or more tests fail**	**0 pts** **Insufficie nt** No submissio n or no evidence of passed tests.	/ 30 pts
								Total Points: 0	

> Keep in mind, this submission will count for everyone in your Project Groups group.

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