Assignment 0 - Setup & Formatting

Artificial Intelligence
WS 2015

Due: 2015-10-19, 23:55

General Information

This assignment is supposed to

1. ensure you are properly prepared for this course, so you can start on the first exercise as soon as possible,
2. familiarise you with the submission system for the programming exercises, and
3. make sure that you know how to **properly format** your submission.

1 Handbook and Programming Environment Setup

Go to the MOODLE page associated with this course, and download the game framework as well as the handbook. Go read the handbook. Unzip the archive. Set up your programming environment. A detailed description on how to do that for the Eclipse platform is described in the handbook.

You don't need to use Eclipse, or any IDE at all if you don't want to - at your own peril.

If you did manage to setup your programming environment and ran the unit tests, you will have noticed that all tests for `assignment0` are failing. We'll fix that now.

2 Locating the error

Locate the class `at.jku.cp.ai.search.algorithms.RS` which should be here:

```
src
└── at
    └── jku
        └── cp
            └── ai
                └── search
                    └── algorithms
                        └── RS.java
```

Locate the `TODO` in the comments. Follow the suggestion in the `TODO` comment. Run the unit tests again, they should be all passing now. If you happen to have a particularly slow

computer, you may exceed the timeout that is set for each test. Should this be the case, you may need to increase the time limit - **however**:

The time limit is there for a reason, namely to prevent our test harness to get stuck in an infinite loop, along with the methods being tested.

All the problem instances you are provided with can be solved in a very reasonable amount of time, with a very reasonable amount of memory with our reference implementations on a (rather old) 2GHz Intel Core Duo T7200. If your tests are failing because of timeouts, and you have a faster processor than that, you should be highly suspicious that there is a bug hiding somewhere. You should be equally suspicious, if your OS decides to use swap space!

3 Theory

Consider the well-known game of "Tic-Tac-Toe" (`https://en.wikipedia.org/wiki/Tic-tac-toe`). Please answer the following questions:

3.1 State space

How big is the state space of Tic-Tac-Toe?

3.2 80ies pop culture

Who or what is "WOPR", and what could "WOPR" infer from playing Tic-Tac-Toe?

4 Formatting

Once all your unit tests are passing and you answered all the theoretical questions, you should format your submission in the following way:

- create a directory "`assignment<i>`" where "`<i>`" is the assignment number
- for this particular assignment, this would be "`assignment0`"
- create a directory "`assignment0/src`"
- copy all the source files you have edited into this directory, preserving the directory structure
- for this particular assignment, this would yield a directory

  "`assignment0/src/at/jku/cp/ai/search/algorithms`"

  with exactly one file in it, named

  "`RS.java`"

- write your answers to the theoretical questions into a PDF named "`report.pdf`", which goes into the "`assignment0`" directory
- **zip** the "`assignment0`" folder, and name the resulting file "`<groupname>_assignment0.zip`" where "`<groupname>`" is your group's name - the group name will be assigned to you in the MOODLE forums
- upload the zip file to MOODLE