University of Denver
COMP 3501/4704-4
Introduction to Artificial Intelligence
HW #2; Due noon May 7, 2014

1. Download the JavaFF planner from http://www.inf.kcl.ac.uk/staff/andrew/JavaFF/ or from https://personal.cis.strath.ac.uk/david.pattison/.

2. Read about PDDL to discover how to encode a problem that the planner can solve. One good tutorial is available here: http://www.cs.toronto.edu/~sheila/2542/w09/A1/introtopddl2.pdf

3. Download sample problems (http://www.inf.kcl.ac.uk/staff/andrew/JavaFF/examples.tar.gz) to make sure the planner works. Place these outside the javaff directory. You can test as follows:

```
[~/Development/FF] nathanst% ls
examples  javaff
[~/Development/FF] nathanst% java javaff/JavaFF examples/depots/domain.pddl examples/
depots/pfile01
```

4. Implement a grid pathfinding domain with multiple agents, where each action moves a single agent, and no two agents can stand in the same location. For testing, build a 2x2 grid with one agent and the goal to move from the lower-left to the upper-right corner. Then, build a 3x3 grid with 1 to 8 agents in random locations. These should all use the same pddl file but separate problem instances. Note that you do not need to use advanced pddl type features. Just using strips features will be sufficient.

5. Write up and turn in your solution, reporting running time as the number of agents increases.