

2G1524

Distributed Artificial Intelligence and Intelligent Agents Home works

Course leader:

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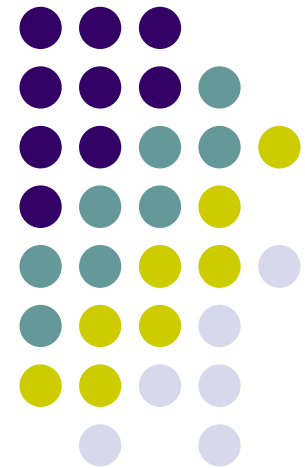
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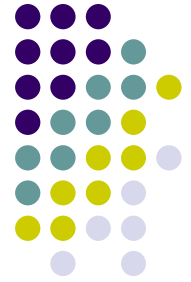


Homework #3



The Wumpus World

Homework #3 - Deadline



- Start date: 2006-11-16
- Due date: 2006-11-26
- Deliverable: Report (See course web)



Homework #3 - Aims

To understand:

- Individual agent properties
- Usage of utility functions
- Agent environment and interaction
- Behavioural agents
- Reasoning under uncertainty

Homework #3



- Part 1: Download and install wumpus
- Part 2: Develop a behaviour for the Wumpus Hunter Agent



Homework #3 – Part 1

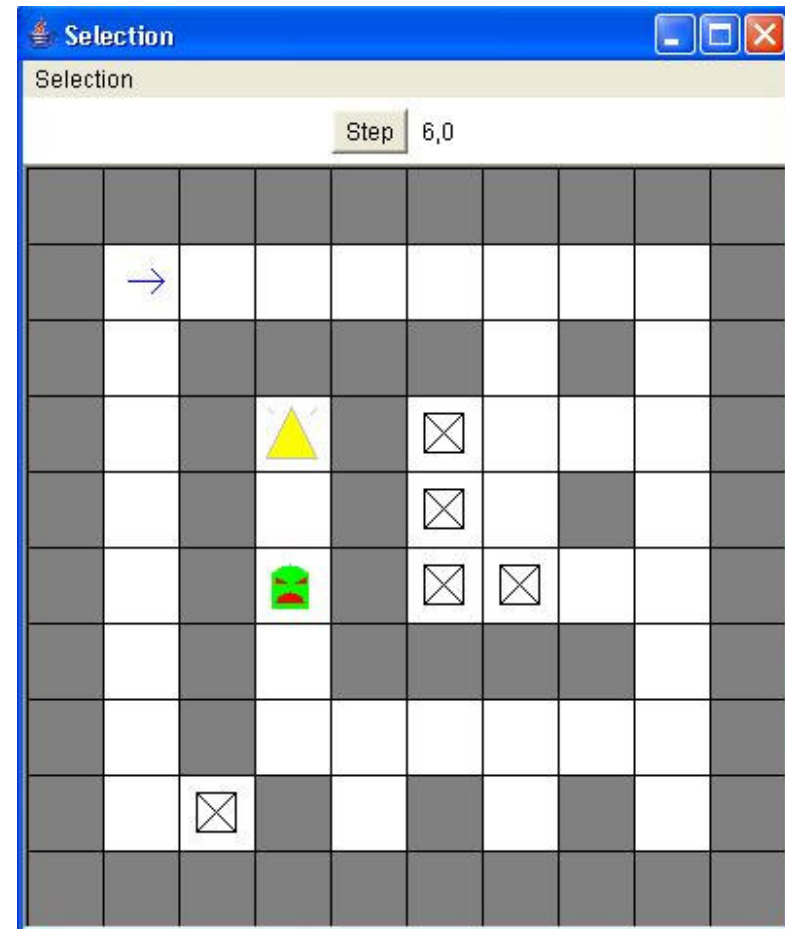
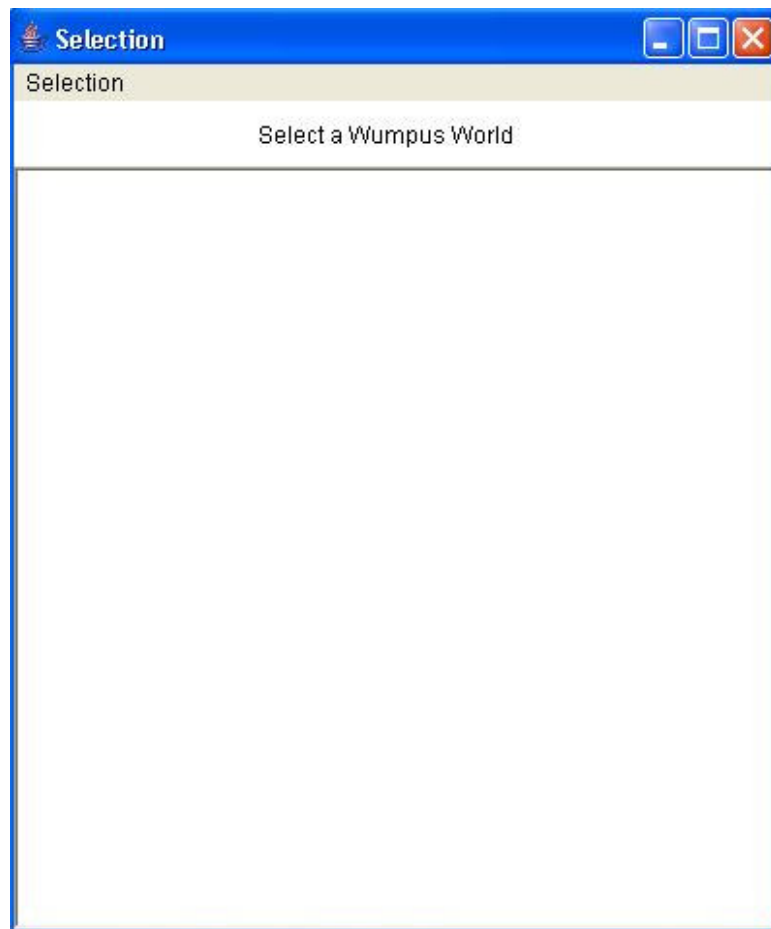
- Download wumpus.zip from <http://www.imit.kth.se/courses/2G1524/Homeworks/wumpus.zip>
- Unzip wumpus.zip
- Directory 890 appears and includes all relevant files
- Directory 890 includes *.dat files starting with capital and small letters.
 - Windows: No difference
 - UNIX: All round*.dat files should be renamed to Round*.dat files.

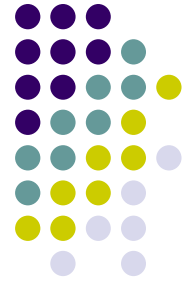


Homework #3 – Part 1

- Setting CLASSPATH in Windows:
 - Add 890 directory to CLASSPATH
 - Example: set CLASSPATH=C:\890;%CLASSPATH%
- Setting CLASSPATH in Linux/UNIX:
 - Add 890 directory to CLASSPATH
 - Example: export CLASSPATH=~/.890:\$CLASSPATH
- Check if it works:
 - `java ksu.cis.wumpus.WumpusWorld`

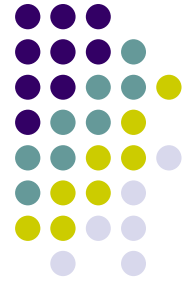
Homework #3 – Part 1





Homework #3 – Part 2

- Develop a behaviour for the Wumpus Hunter Agent
- Wumpus Hunter Agent description:
<http://www.imit.kth.se/courses/2G1524/Homeworks/WumpusWorld.pdf>
- The behaviour will encode mapping from a percept to an action
- Additionally the behaviour could consider the current state of the agent as well



Homework #3 – Part 2

- The only class you have to modify is:
 - `ksu.cis.wumpus.WumpusHunterAgent`
- In file:
 - `890/kse/cis/wumpus/WumpusHunterAgent.java`
- The behaviour
public Action execute(Percept perceptArg)
implements agent's behaviour.
- This is the only method you have to modify.



Homework #3 – Part 2

- Implement a behaviour such that the agent would be able to fetch gold and avoid the wumpus and pits.
- Select a map and run the agent.



Homework #3 - Deliverable

Report including:

- An implementation of the behaviour method
- Detailed textual description of the behaviour
- A description about how the agent performed
- How many steps were needed for the agent before it received the gold



Homework #3 - Delivery

- Delivery: Send your report by e-mail to both misha@imit.kth.se and hrmizani@imit.kth.se.
- Deadline: 2006-11-26
- See course web for more information.

GOOD LUCK!