

Autonomous Intelligent Systems

Lab 4

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1 Question 1

1.1 PDDL Model 1

The resulting plan of model 1 shows that a constraint needs to be placed on the types of objects that can move. Modelling the agent as having *agency* achieves this, i.e. Introduce a predicate, (*agency* ?*x*) in the domain and assign *agency* to the agent in the problem file. Then for the *move* and *shoot* actions, a precondition is introduced so that ?*who* must have *agency* to perform the action.

The *dead* predicate needs to be added to the effects of the *shoot* action.

Another precondition needs to be introduced into the *move* action. This precondition needs to ensure that there is not a monster in the square that is being moved to.

1.2 PDDL Model 2

In model 2, a precondition needs to be added to the *move* action so that the agent does not move into the block where the monster is.