CS156 Module 3 Week 6 Homework Assignment 3

To answer the following question, you will need to first read Chapter 7 in the required textbook.

Suppose the agent has progressed to the point shown in Figure 7.4(a), page 213, having perceived nothing in [1,1], a breeze in [2,1], and a stench in [1,2], and is now concerned with the contents of [1,3], [2,2], and [3,1]. Each of these can contain a pit, and at most one can contain a Wumpus. Following the example of Figure 7.5, page 215 construct the set of possible worlds.

(You should find 32 of them.) Mark the worlds in which the KB is true and those in which each of the following sentences is true:

α2 = “There is no pit in [2,2].”

α3 = “There is a wumpus in [1,3].”

Hence show that KB |= α2 and KB |= α3.

Yes, just one question to answer because there is an accompanying programming assignment.

Answer:

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The set of worlds where KB is true is a subset of set of worlds where α2

is true and the set of worlds α3 where is true. Therefore, KB |= α2 and KB |= α3