

Assignment Chapter 6

1. Exercise 6-5. Using the `move` and `path` definitions for the knight's tour of Section 6.2.2, trace the execution of `pattern_search` on the goals:

- (a) `path(1,9)`
- (b) `path(1,5)`
- (c) `path(1,6)`

When the `move` predicates are attempted in order, there is often looping in the search. Discuss loop detection and backtracking in this situation.

2. Exercise 4-8. Using the goal and start states of Figure 6.3, hand run the production system solution to the 8-puzzle:

- (a) In goal-driven fashion
- (b) In data-driven fashion

3. Exercise 4-9. Consider the financial advisor problem discussed in Chapters 2,3,4. Using predicate calculus as a representation language:

- (a) Write the problem explicitly as a production system.
- (b) Generate the state space and stages of working memory for the data-driven solution to the example in Chapter 3.