

CS224 – Lab 7

Purpose: Prolog is a great language to solve hard problems that require searches.

Knowledge: This lab will help you become familiar with the following content knowledge:

- Searching a search space

Task: Follow the steps in this lab carefully to complete the assignments. On phoenix, copy the file `~jillz/cs224/eightqueens.pl` and test it out with the query `eightqueens(X)`. Be sure to generate all the solutions.

Assignment 1:

Complete exercise 5 on p 490 of the Webber text. This will involve modifications to generate a list from 1 to N rather than just 1 to 8 and then minor adjustments for this change.

Criteria for Success: You should now be able to solve the n-queens problems for any n.

Assignment 2:

Complete exercise 9a on p491 of the Webber text. You will want to use the `subseq` predicate developed on p480.

Criteria for Success: You can test your relation with the example that is given in the text.

Extra Credit:

Complete exercise 9b on p491 of the Webber text.

Criteria for Success: Your solution generates all the minimum length covers.

Submit your file in Canvas for grading.