

Artificial Intelligence: Assignment 2

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1 Prolog - Programming in Logic

1.1 SWI-Prolog

- Prolog는 <http://www.swi-prolog.org/> 에서 SWI-Prolog를 다운받아 설치할 수 있다. 예제 및 prolog관련 내용은 다음 Tutorial자료를 참조하시오. <http://lpn.swi-prolog.org/lpnpagel.php?pageid=online>.

1.2 Problem 1: Zebra puzzle

- **Zebra puzzle:** 다음 zebra puzzle을 풀기 위해 필요한 prolog 규칙 및 질의어를 작성하시오 (**prolog code (zebra.pl)**와 실행 결과에 대한 간단한 보고서 제출할 것). 실행 결과 작성시, SWI-Prolog 화면 출력 결과를 capture 해도 좋음.

Five men with different nationalities and with different jobs live in consecutive houses on a street. The houses are painted different colors. The men have different pets and have different favorite drinks. Determine who owns a zebra and whose favorite drink is mineral water (which is one of the favorite drinks) given these clues:

- 1. The Englishman lives in the red house.
- 2. The Spaniard owns a dog.
- 3. The Japanese man is a painter.
- 4. The Italian drinks tea.
- 5. The Norwegian lives in the first house on the left.
- 6. The green house is on the right of the white one.
- 7. The photographer breeds snails.
- 8. The diplomat lives in the yellow house.
- 9. Milk is drunk in the middle house.
- 10. The owner of the green house drinks coffee.
- 11. The Norwegian's house is next to the blue one.
- 12. The violinist drinks orange juice.
- 13. The fox is in a house next to that of the physician.
- 14. The horse is in a house next to that of the diplomat.