Selected Topics 3

- Construct a simple production rule system to control the air conditioning in a room to keep the temperature between 20 and 24.
- Follow the “curiosity kill the cat” example given in the slides, show how to use forward chaining, backward chaining and resolution to solve this problem.
- Explain why transition closure cannot be formalized in classical first-order logic.
- Compute the well-founded model, the classical model and the stable model of the following program:
  p :- not q
  q :- not p
- Again, pick up one of the application areas mentioned in the slides. Go deeper and deeper to explain how rule based logics are used in these areas.
- Go deeper to discuss the similarities and differences among rule based logics
- Go deeper to discuss the similarities and differences between rule based logics and classical logics.