

Prolog – One

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A Prolog program is a set of *rules* which are built from *predicates* in a first order logic. To describe a domain in FOL, we need to identify its objects, the properties of them, and the relationships between the objects. For example, to describe the *family relations*, we need the following

- The individuals such as *tom, marry, ...*
- The properties of each individual such as *gender, age, ...*
- The relationships between individuals such as *father, mother, son, daughter, ...*

For example, let us consider a family of four individuals: John, Marry, Tom, and Celine. John is the father of Tom and Celine and Marry is the mother of Tom and Celine. Tom is a boy and Celine is a girl. Tom is older than Celine.

Given the above information can we answer the following questions:

- Is John a male?
- What is the gender of Celine?
- Are Celine and Tom siblings?
- Who is a brother of Celine?
- Who is a brother of Tom?
- etc.

Homework 1. Give 5 questions that you think you can answer with ‘yes’ given the above information. Give 5 questions that you think you can answer with ‘no’ given the above information.