

Logic Programming

Assume we have facts for the predicates:

```
human(john).  
human(paul).  
human(mary).  
  
male(john).  
male(paul).  
  
female(mary).  
  
father(john,mary).  
  
mother(mary,paul).
```

Exercise

Write Horn clauses defining the following predicates with the given meaning.

- a) **man(X)** A man is a human who is male
 woman(X) A woman is a human who is female
- b) **parent(X,Y)** X is the parent of Y if it is either the father or the mother of Y
- c) **grandparent(X,Y)** A grandparent is a parent of a parent
- d) **ancestor(X,Y)** An ancestor is a parent or
 an ancestor is an ancestor of a parent