

Logic Programming

Exercise 1

We will build a genealogy that covers relations in a family. Consider a genealogy database consisting of the following predicates:

```
female(x), male(x), parent(x,y),  
mother(x,y), father(x,y),  
sister(x,y), brother(x,y)
```

Define rules allowing you to determine the following relations:

```
grandfather(x,y), grandmother(x,y), grandparent(x,y),  
son(x,y), daughter(x,y), child(x,y),  
grandson(x,y), granddaughter(x,y), grandchild(x,y)
```

Exercise 2

Define the following predicates to determine if a list:

- a. has an even number of elements
- b. is a palindrome (i.e. it reads the same from left to right as it does from right to left).