

Intelligent Systems: Reasoning and Recognition

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ENSIMAG 2
Exercise 10

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a) Define an abstract class for person with slots NAME (capitalized), father, mother, brother and sister. The slots for brother and sister must be multi-slots so that they can contain a list.

Define a concrete class for MAN as a subclass of person, with the slots "wife" and "gender" having fixed values of "male". Assure that that object of class MAN can activate rules.

Define a concrete class for WOMAN as a subclass of person, with the slots "husband" and "gender" having fixed values of "female". Assure that that object of class MAN can activate rules.

b) Create a rule ask-wife to ask for the name of the wife for a man if the wife is nil. Create a rule ask-husband to ask for the name of the husband for a woman if the husband is nil. Write the rule create-husband and create-wife that will create a MAN or WOMAN for the husband or wife if they do not currently exist.

c) Write the rules ask-father and ask-mother to create the father and mother for each person if these are nil. Do not create the father or mother if the user names them as unknown.

d) define a message handler named get-father-name to get the NAME of the father of a PERSON. If the father is unknown, then print a message stating that the father is unknown.

e) Define a message handler named get-paternal-grandfather to get a ptr to the father of the father of a PERSON. If a father is unknown, then print a message stating that the father is unknown.

f) Define a message handler that return the names of the paternal grandfather for a person