

# Logic Programming

## Exercise

Write the decision system for fraud detection of credit cards.

The system checks a concrete transaction where the transaction record contains at least

- the country where the credit card is used
- the residence address of the credit card holder
- the amount of the transaction

The system might have access to a database where all past transactions are stored.

A fraud is assumed if it is satisfying the following conditions:

- Credit card is used in Africa, the residence of the card holder is in Germany, and the amount is higher than 10'000 € (with the likelihood of 60%)
- Credit card is used outside of EU but not USA, the residence of card holder is in EU, and the amount deviate by 30% from the average (with the likelihood of 70%)

If you make assumptions, please document them!

1. Define the fraud detection as PROLOG rules