

QUINT: Interpretable Question Answering over Knowledge Bases

Abdalghani Abujabal, Rishiraj Saha Roy, Mohamed Yahya* and Gerhard Weikum

Max Planck Institute for Informatics, Saarbrücken, Germany
 {abujabal, rishiraj, weikum}@mpi-inf.mpg.de

*Bloomberg L.P., London, United Kingdom
 myahya6@bloomberg.net

Motivation

- ❖ Interpretability by visualizing the complete derivation sequence from the question to the final answer
- ❖ Role-aligned templates are the main asset for interpretable question-answering
- ❖ Automatically learns role-aligned templates from question-answer pairs as opposed to existing methods which manually compile a handful of templates
- ❖ First step towards interactive question answering



Where was Martin Luther raised?



place of birth
 places lived in

Answer(s)

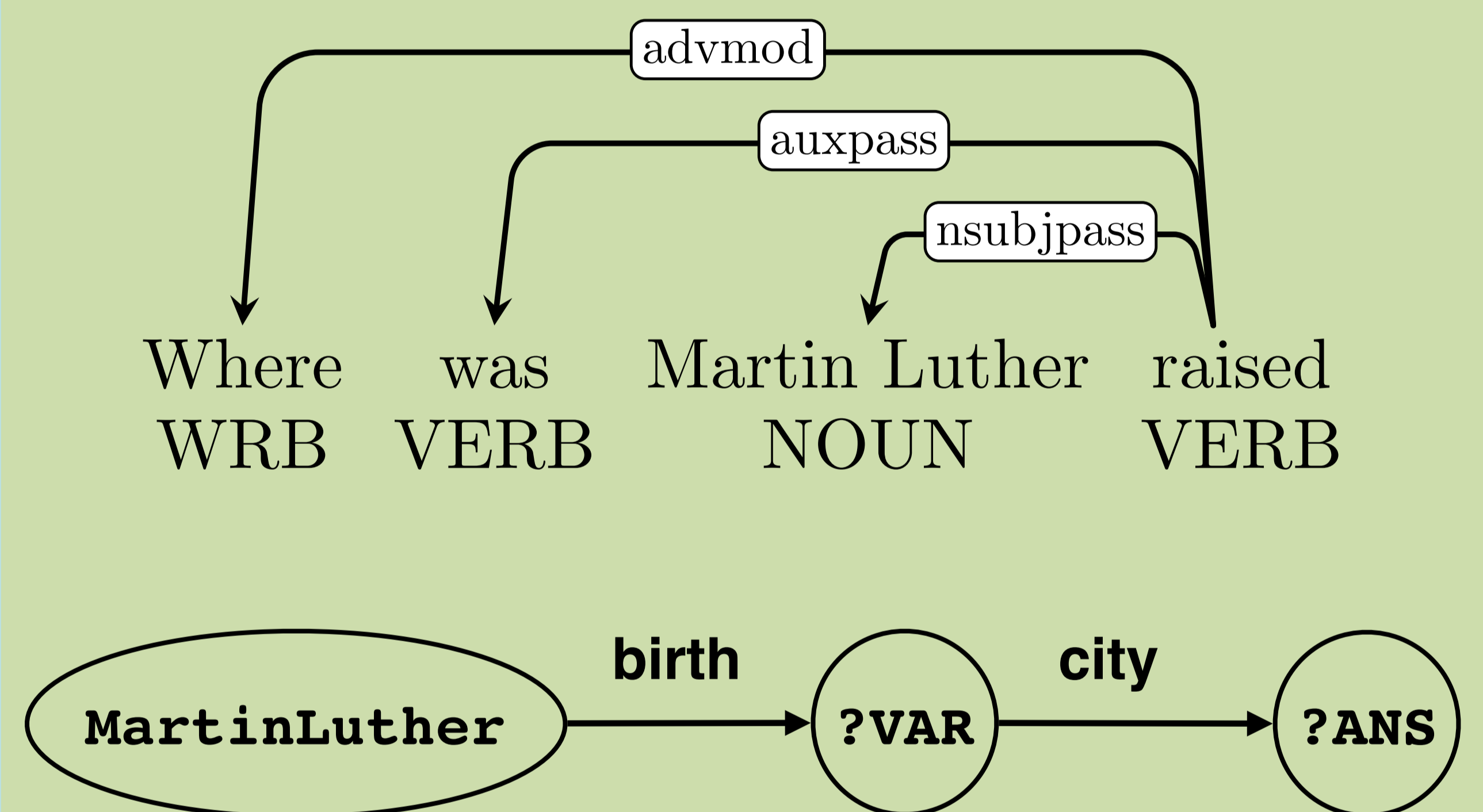
Eisleben 🌐

Eisleben is a town in Saxony-Anhalt, Germany. It is famous as the hometown of Martin Luther, hence its official name is Lutherstadt Eisleben. As of 2005, Eisleben had a population of 24,552. It lies on the Halle-Kassel railway.



Question & Query

Dependency parse of question



Brief Explanation

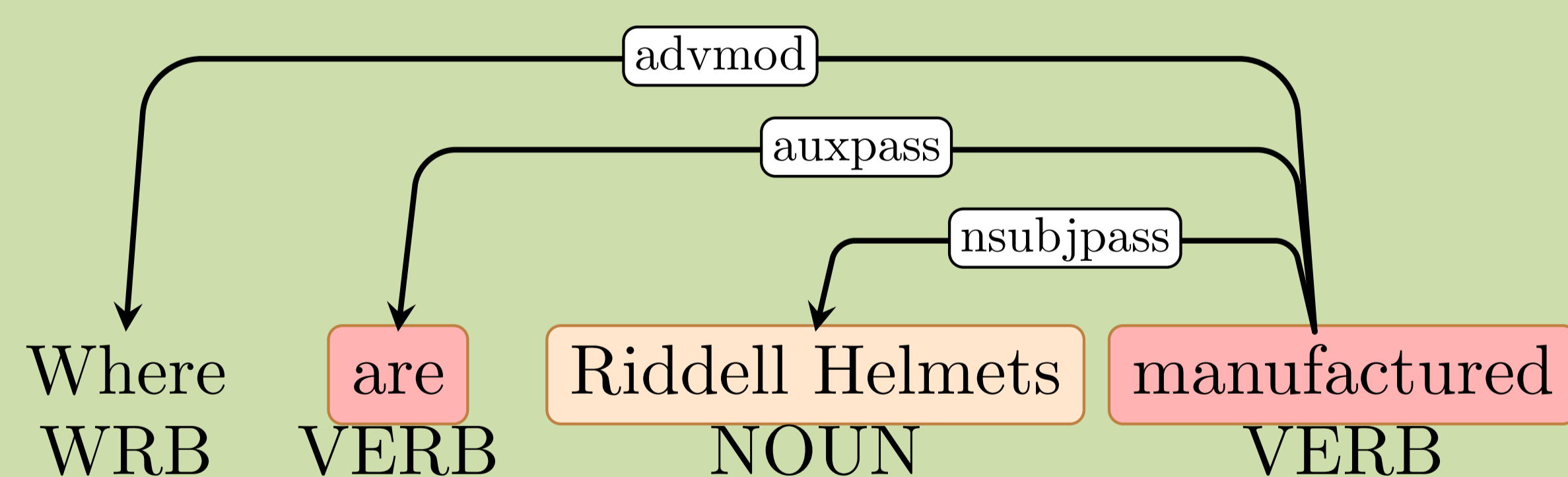
QUINT understood your question as follows:

The phrase "Martin Luther" is interpreted as Martin Luther

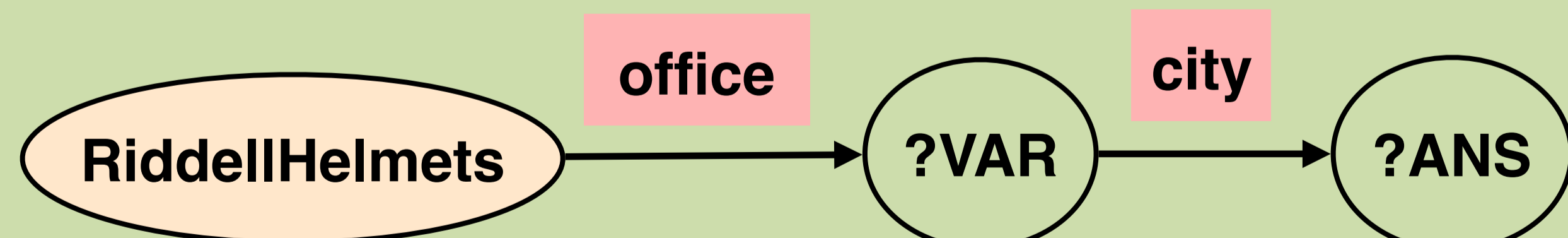
The words "was, raised" are interpreted as the relation Place of birth

Template Generation

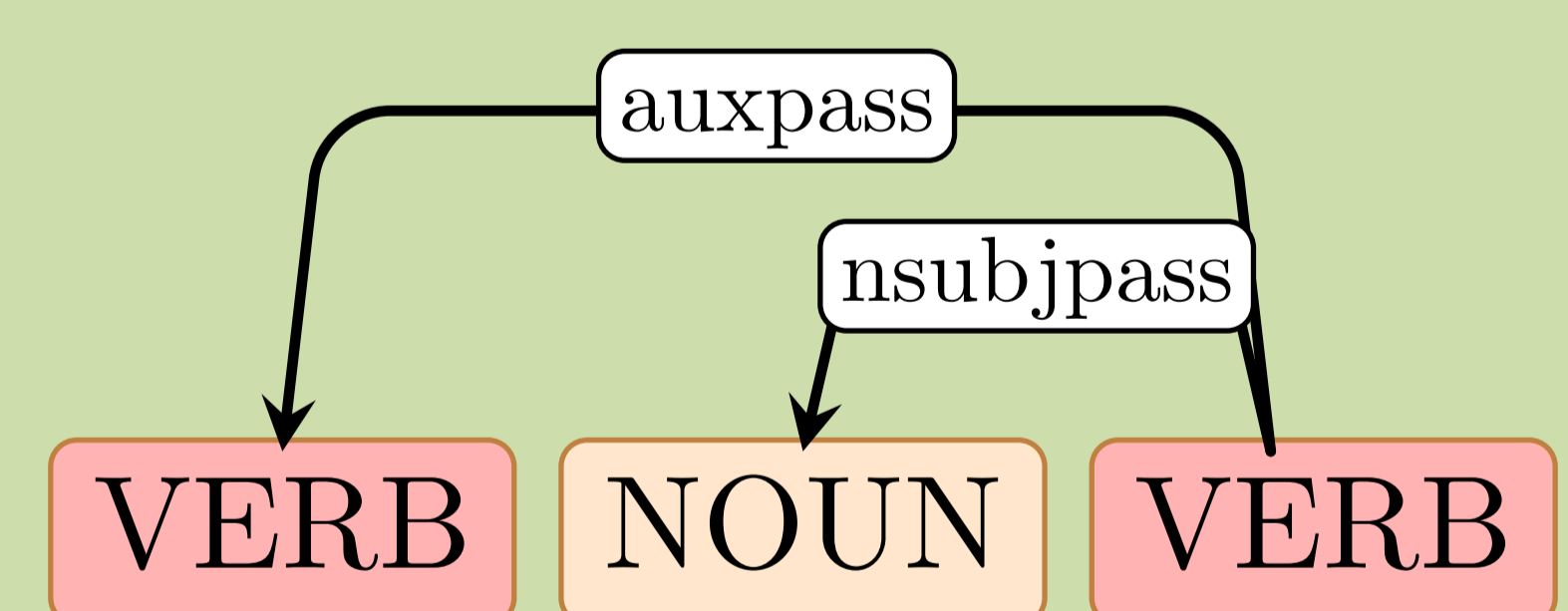
Training Question



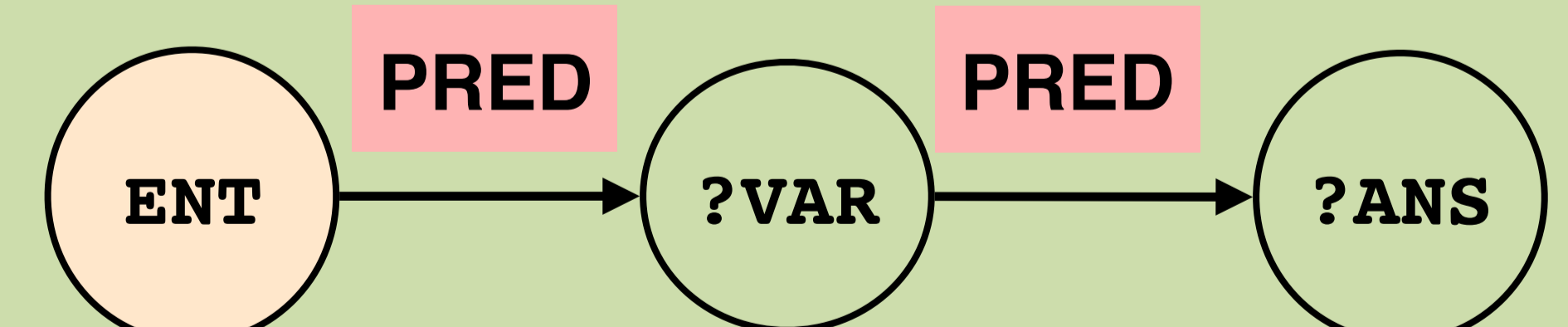
Training Query



Question Template



Query Template



References

A. Abujabal, M. Yahya, M. Riedewald and G. Weikum. *Automated Template Generation for Question Answering over Knowledge Graphs*. WWW 2017
 Demo URL: <http://bit.ly/2xGHyCL>



MAX-PLANCK-GESELLSCHAFT

