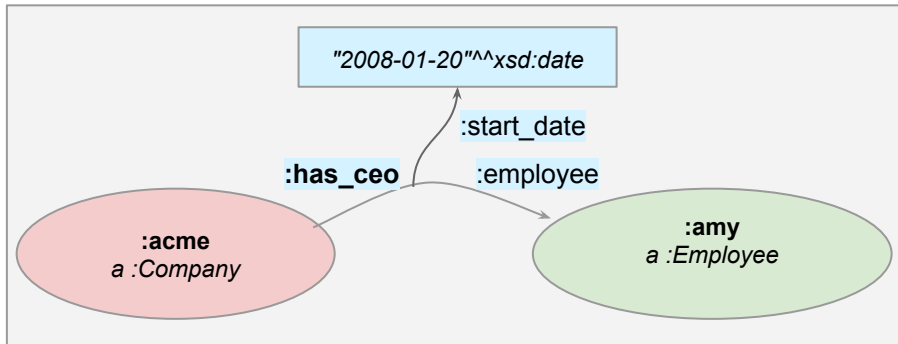


1. Lack of standard n-ary relations

- RDF triples are binary relations
- Workarounds described in 2006:
<http://www.w3.org/TR/swbp-n-aryRelations>
- No standard RDF representation!
- Tools cannot recognize them

Representing n-ary relations

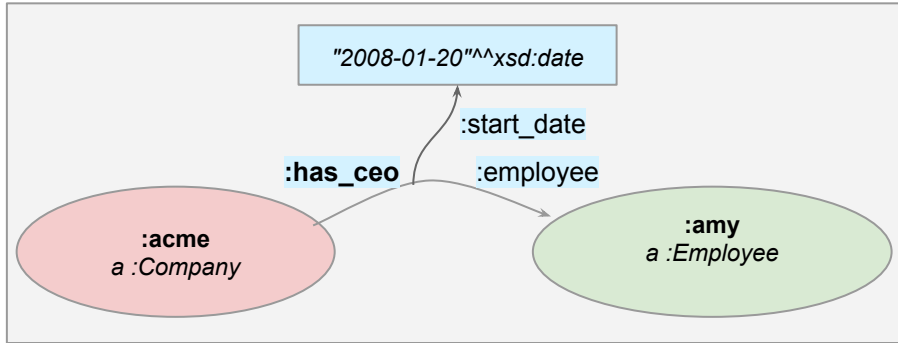
N-ary relation conceptually



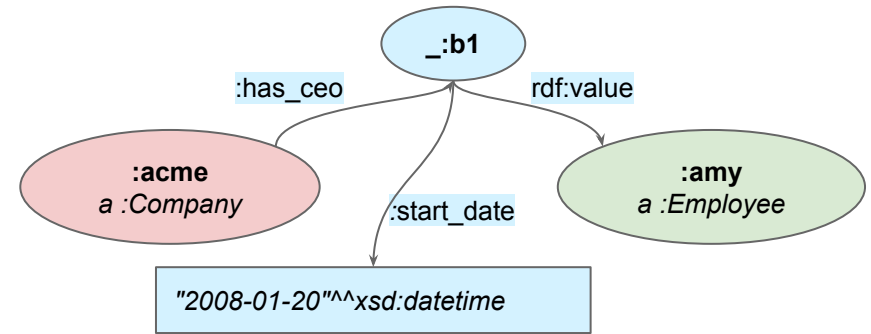
Relation between a Company,
Employee and start date

Representing n-ary relations

N-ary relation conceptually



In RDF, extra node `_:b1` represents the n-ary relation itself



Ways to represent n-ary relations

- Singleton subProperty
`:has_ceo_1 rdf:subPropertyOf :has_ceo .`
- Tag the instance
`_:b1 a rdf:NaryRelation .`
- Tag the class
`:Ceo rdf:subClassOf rdf:NaryRelation .`

Basically, need a way to tag an n-ary relation node