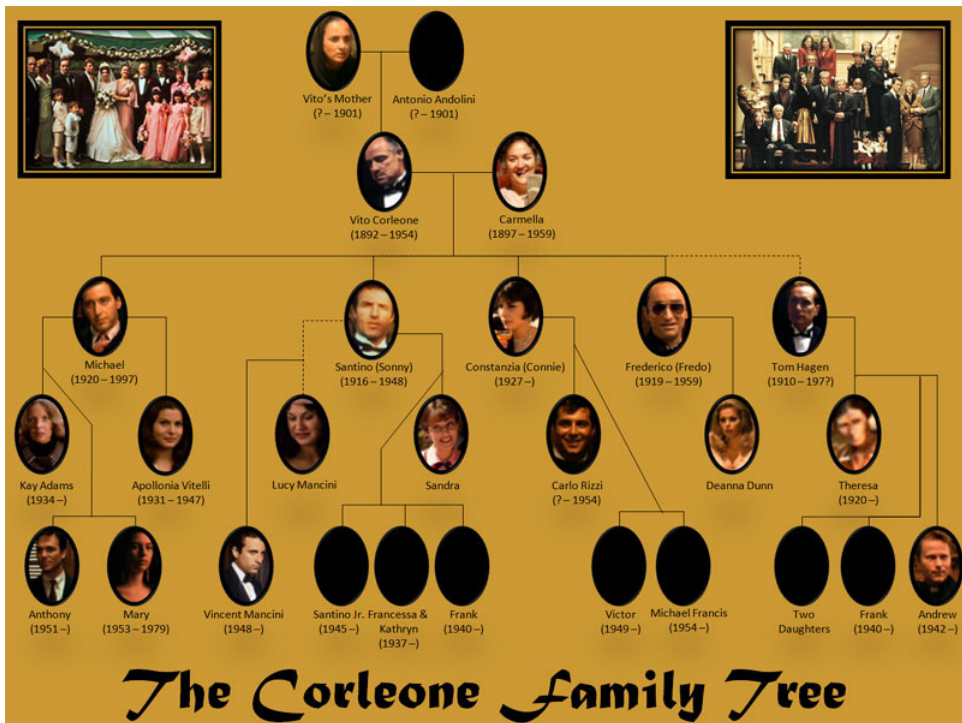


Ontology for Don Corleone's Family



Ontology editing and reasoning tools

- **Protégé**, a free, open source ontology editor, can be downloaded from

<http://protege.stanford.edu/>

where you can also find

- a library of ontologies
- documentation, Protégé Wiki
- tutorials explaining how to use Protégé; see also

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- built-in ontology ‘reasoner’ **HermiT**

<http://hermit-reasoner.com/>

Building an ontology: basic notions



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Mafioso, **Man**, **Mother**, **Person**, ...

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- **individuals** represent objects in the domain: **Vito, Carmela, Sonny, Michael, ...**
- **classes** (**concepts**) represent groups of individuals with common characteristics
Mafioso, Man, Mother, Person, ...
- **properties** (**relations**) describe how individuals are related to each other
husbandOf, parentOf, childOf, spouseOf, ...

Represent the following information in Protégé

- Don Corleone is a mafioso

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- Mary, Carmela and Connie are women
Vito, Fredo, Michael, Sonny and Vincent are men

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 - Don Corleone and Vito are actually the same person
- (what about the others?)

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- Husbands are men; wives are women; children are persons

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the **transitive** closure of **parent of**
- Can you define an **aunt** and a **cousin** ?

Querying ontology

- Find all the **men** and the **women**

Querying ontology

- Find all the **men** and the **women**
- Find all **Vito**'s children and grandchildren

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- Find **Vincent**'s **grandmother**

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- Find **Vincent**'s **grandmother**
- Find all **cousins** and **aunts**