

# ConsVISor

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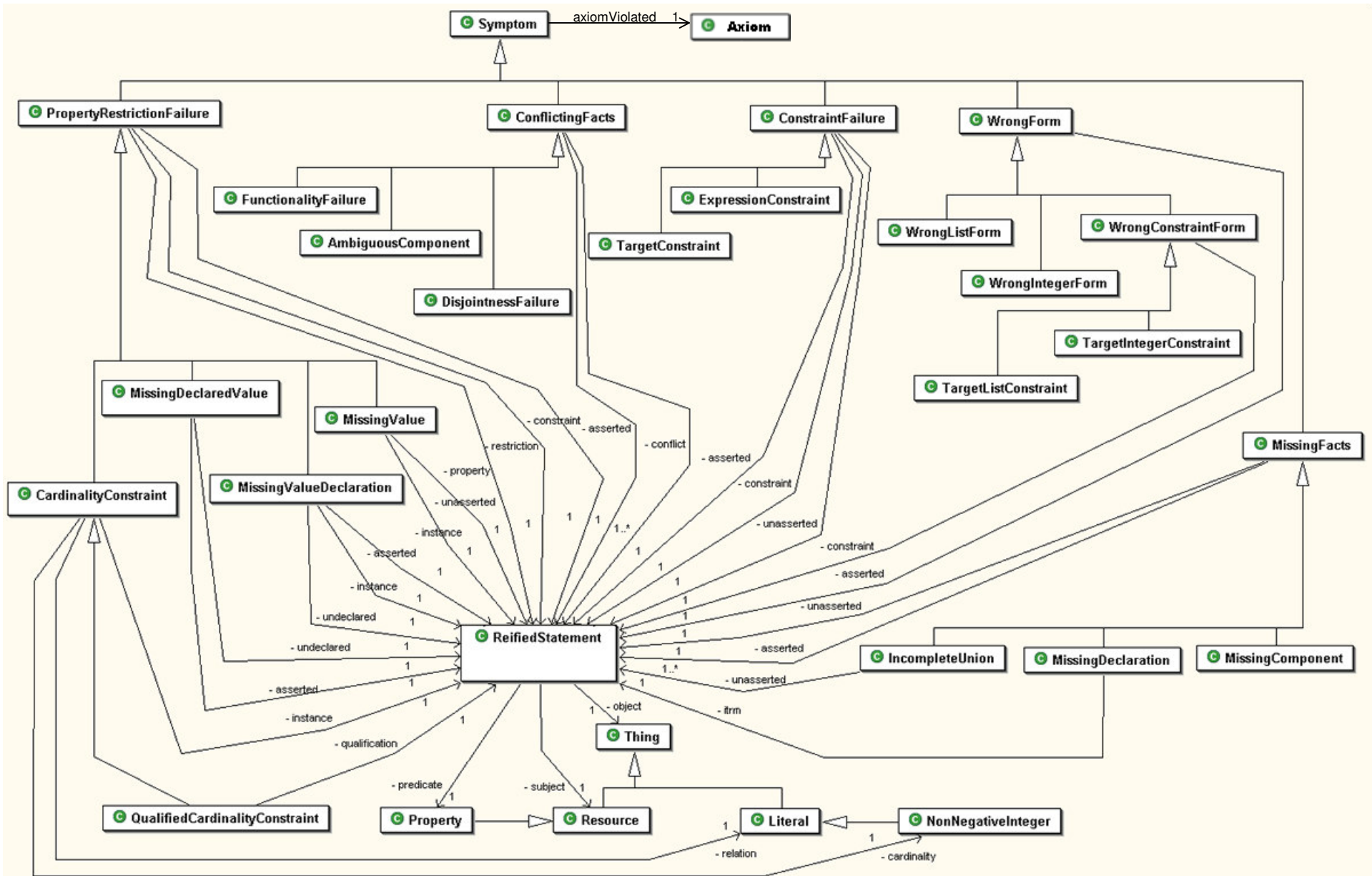
*Western New England College*



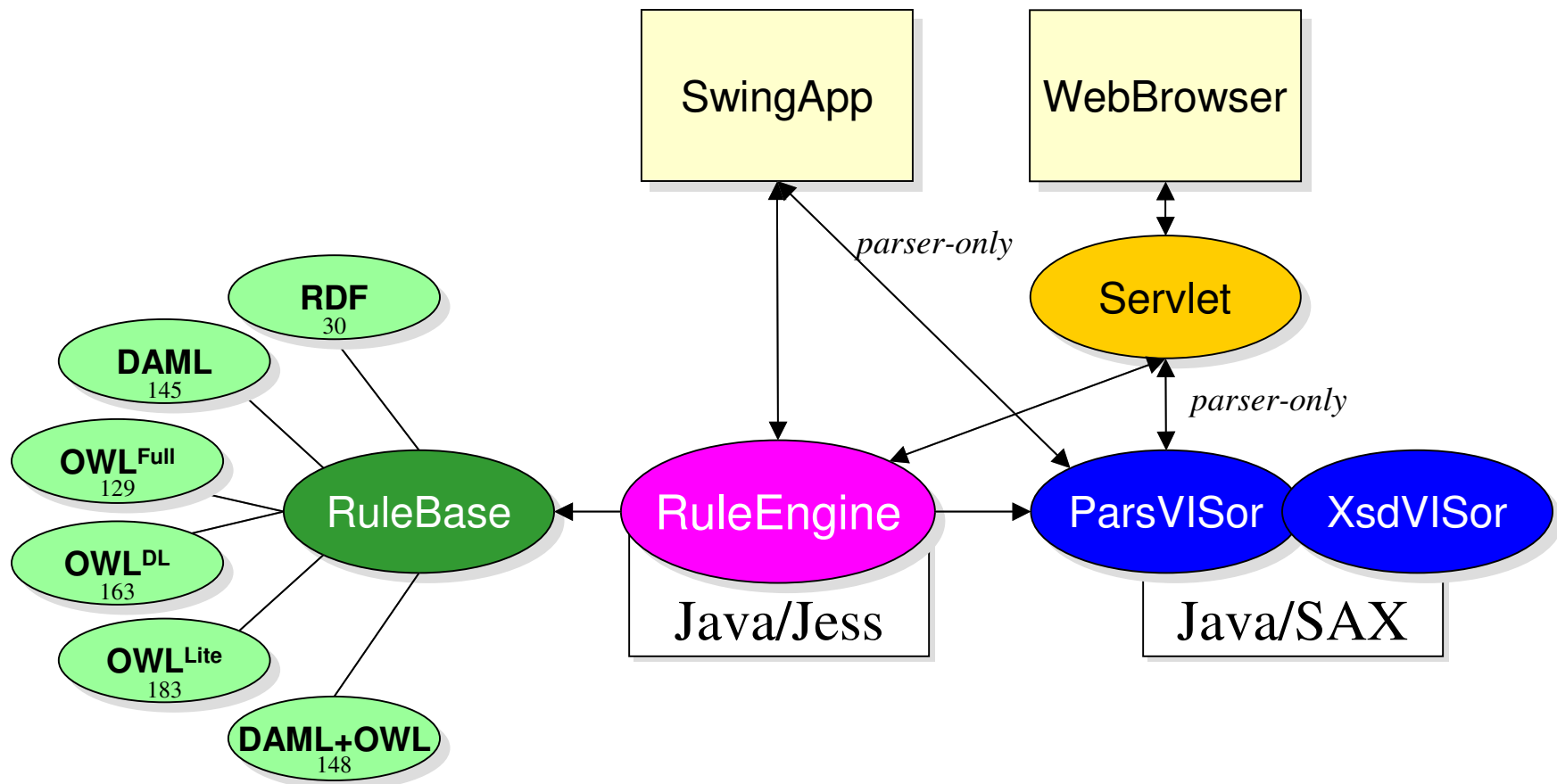
# ConsVISor Overview

- Goal: OWL Full, DL & Lite Consistency Checker
  - Primary Author: Dr. Ken Baclawski
  - Focus on providing useful feedback to ontology developer
  - Pre-alpha Version based on earlier DAML Checker (Prolog)
- Approach:
  - Parse doc into triples and then progressively “improve” ontology
  - Based on VIS’s parser (*ParsVISor*)
    - Full support for XML Schema part II
  - Rule based reasoning using Jess
  - Provides useful information even if it cannot prove consistency or inconsistency
- Output:
  - HTML in stand alone GUI or Web Browser
  - OWL output based on **Symptom Ontology**

# Symptom Ontology



# ConsVISor Architecture



# OWL Case Test Results

- Pre-Alpha Version
- Focus on “Approved” Consistency and Inconsistency Test Cases for Full, DL & Lite
- Results:

Result	# Tests	Percent
Pass	127	71%
Unknown	51	29%
Fail	0	0%

# Implementation Challenges

- Biggest Challenges:
  - Handling literals
    - 3 Languages: XML Schema, RDF, OWL
    - Specs changed frequently and were not always in-sync
  - Dealing with multiple language levels
    - Tracking multiple levels at same time
    - Definite split between Full and DL; Lite restriction of DL
  - Handling complexities of restrictions
    - Some are simple while others are quite hard
    - Defined two groups of rules (simple vs hard) and defined rules for determining which class a particular restriction falls into

# Implementation Challenges

- Additional challenges and issues:
  - Mixing of syntax and semantics
    - Developed two groups of rules, one for “syntactic” and the other for “semantic” rules
  - Semantics of Annotation Properties unclear
  - OWL API would have been very helpful
  - Test Cases invaluable for debugging and disambiguating portions of spec