

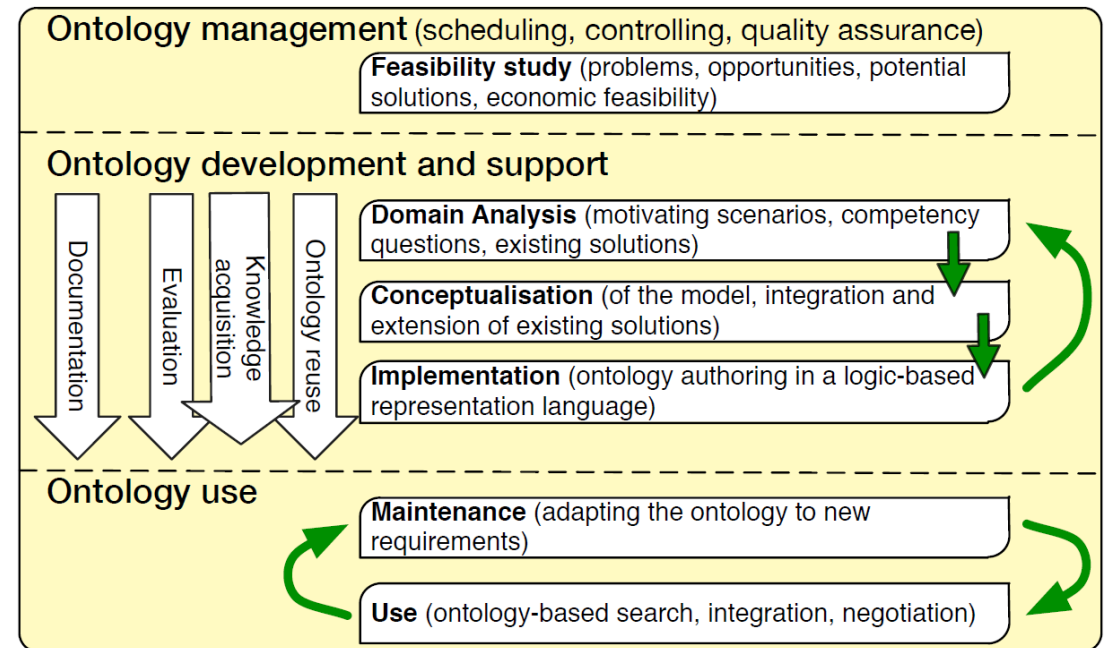
SALI India Extension

Apurv Dube

Extension work

- Iterative process involving:
 - **Domain experts:** *Legal team*
 - **Ontology designers:** *Us*
 - **Users:** *Law firms, government*
- Design work carried out using OWL API in Java.
- Ontology design is tedious and a slow process when done manually.

• Tasks in ontology engineering



Automating bulk additions to OWL ontology

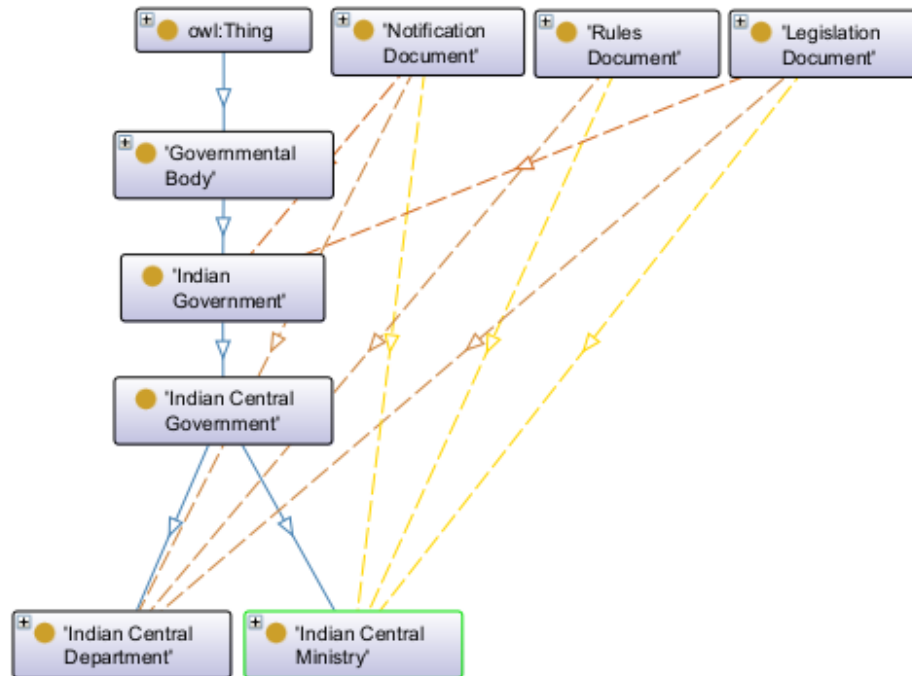
- **Java code using OWL API** was written for the purpose of making these current and future additions (900+ lines):
- Including a library for
 - Creating class structures
 - Adding object & data properties
 - Adding annotation properties
 - Asserting basic axioms
 - Searching etc.

Why?

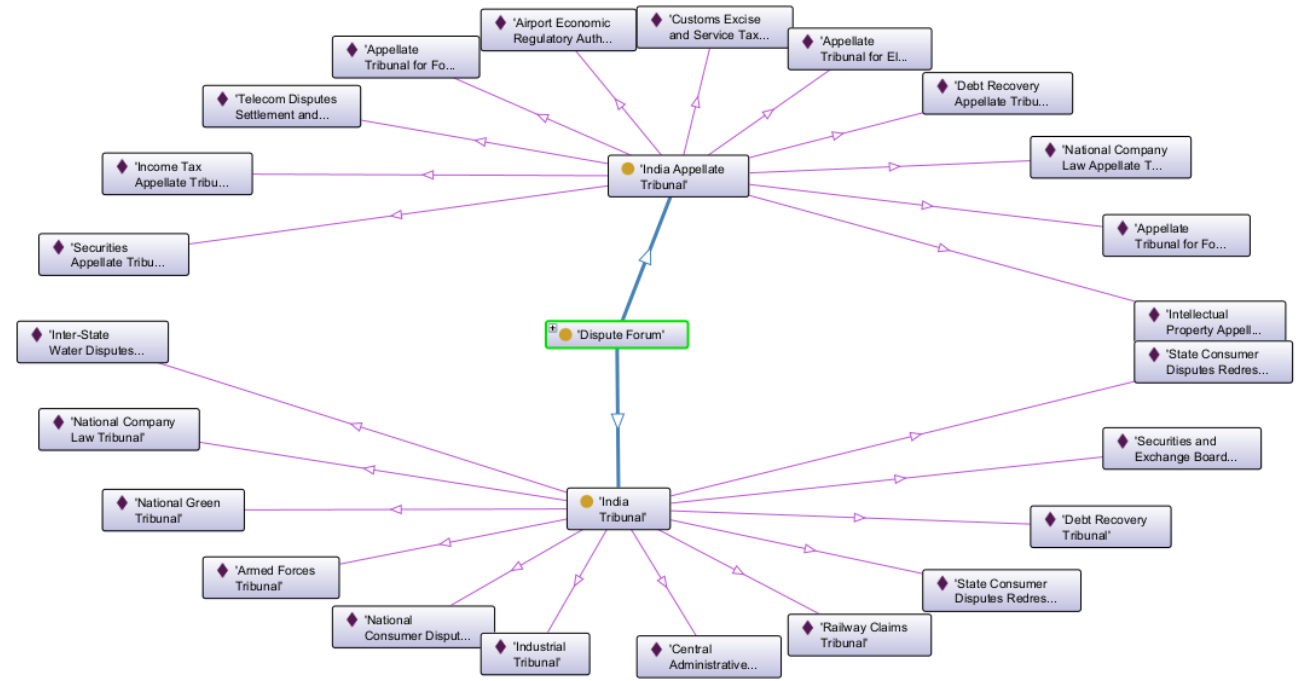
- **Volume of additions** means visual tools like Protégé can't be used.
- Data about **25** high courts and roughly **688** district courts was added.
- **104** Ministries and departments
- **Location data** states, districts, cities for India.

Simple additions: Ministries & Tribunals

53 Union ministries & 51 Departments

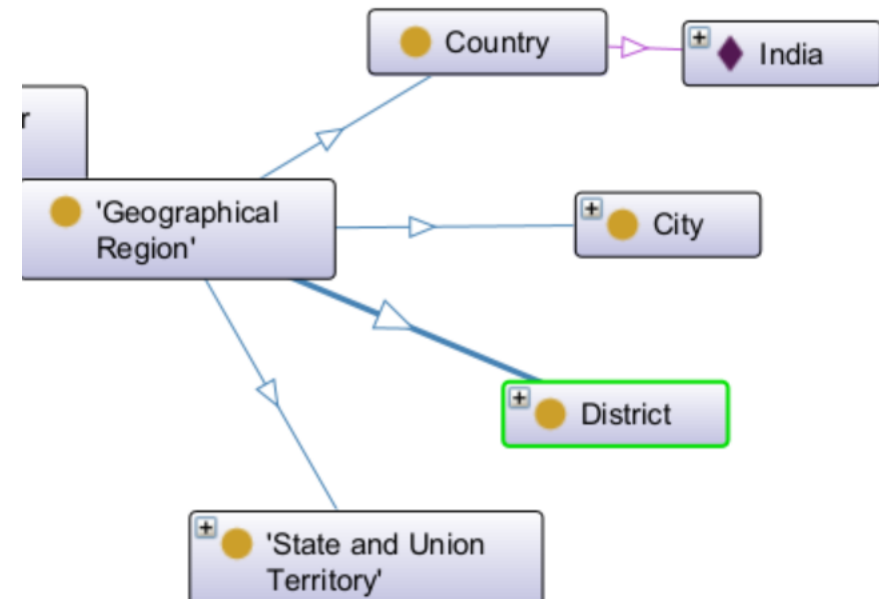


Indian tribunals



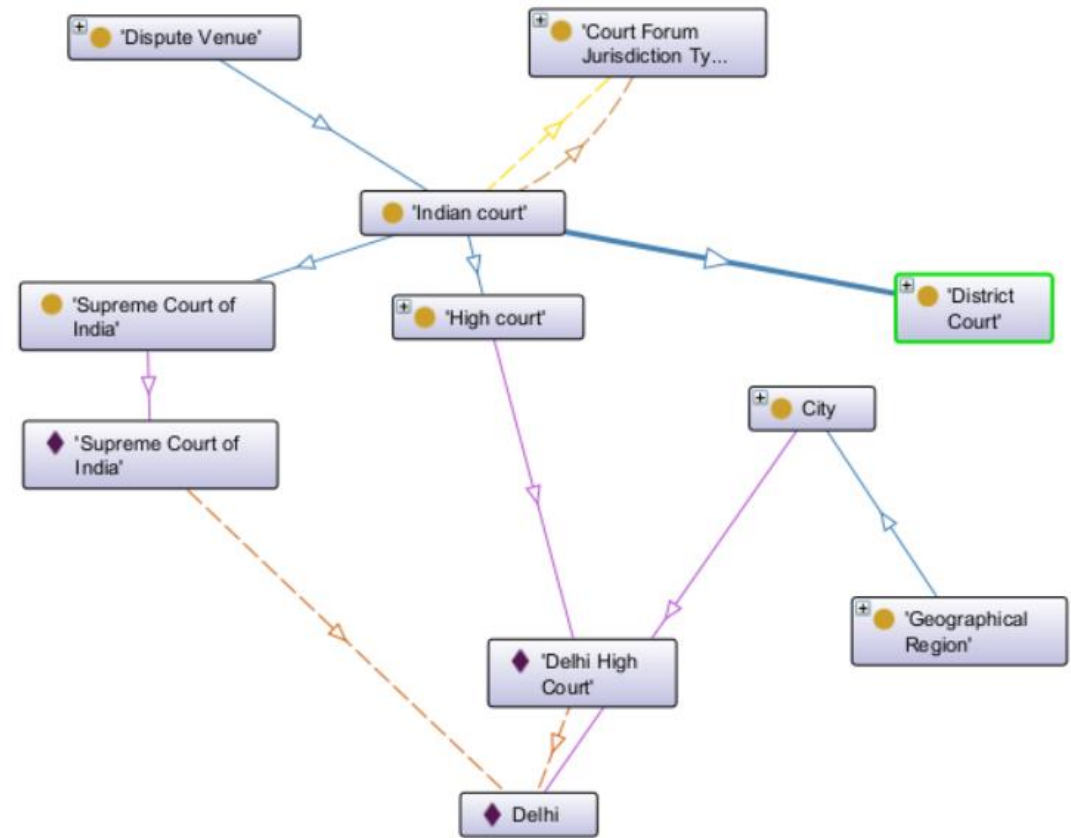
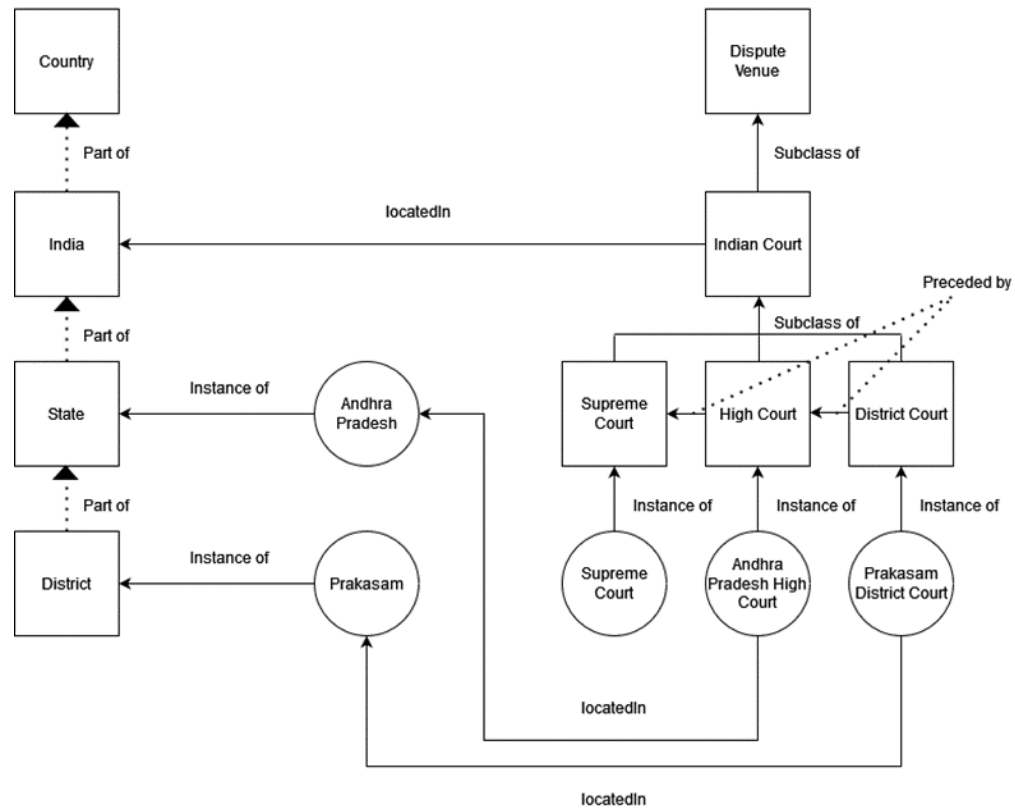
Addition of location data

- SALI has a non-standard method of representing locations. We used our own approach.
- Extracting information from GeoNames web API:
 - Administrative divisions at level 1 (states and union territories)
 - Level 2 (districts)
 - Some cities
- Integrating GeoNames location instances with SALI India.



Modelling & addition of courts

Courts hierarchy



Tying up courts to location data

- Indian courts have a different hierarchical structure than the US courts.
- For instance, a District court in a state would be coming under the High court of that state which in turn come under the Supreme court of India.

The screenshot displays a web application interface for exploring the usage of the 'Allahabad High Court' entity. The interface includes a header with the entity name and a URL, followed by tabs for 'Annotations' and 'Usage'. The 'Usage' tab is active, showing a list of entities that precede the 'Allahabad High Court'.

Usage: Allahabad High Court

Show: ☒ this ☒ different

Found 159 uses of 'Allahabad High Court'

- Agra District Court**
 - Agra District Court' precededBy 'Allahabad High Court'
- Allahabad High Court**
 - Individual: 'Allahabad High Court'
 - Allahabad High Court' Type 'High court'
 - 'Allahabad High Court' rdfs:label "Allahabad High Court"
 - Allahabad High Court' precededBy 'Supreme Court of India'
 - 'Allahabad High Court' geonames:locatedIn Prayagraj
- Aligarh District Court**
 - Aligarh District Court' precededBy 'Allahabad High Court'
- Ambedkar Nagar District Court**
 - Ambedkar Nagar District Court' precededBy 'Allahabad High Court'
- Amethi District Court**
 - Amethi District Court' precededBy 'Allahabad High Court'

Description: Allahabad High Court

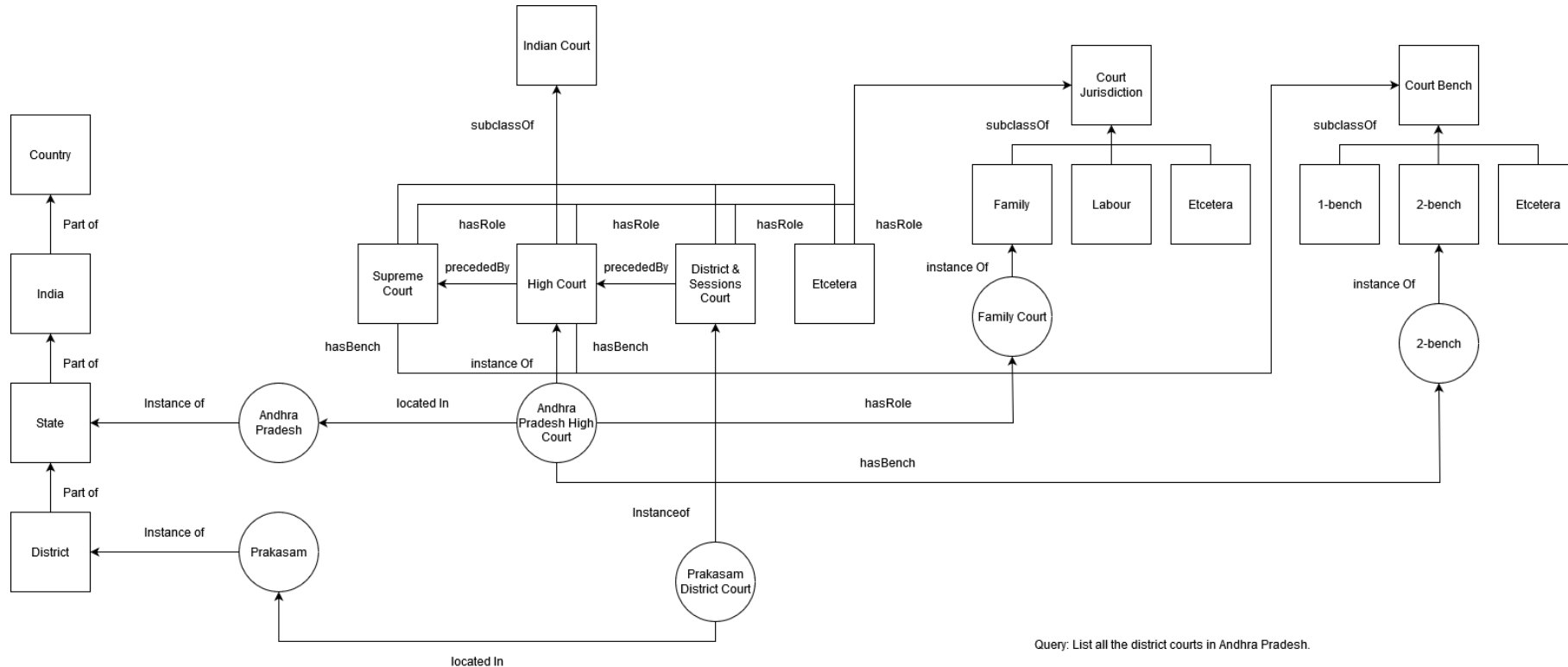
Types:
● 'High court'

Same Individual As:

Property assertions: Allahabad High Court

Object property assertions:
● geonames:locatedIn Prayagraj
● precededBy 'Supreme Court of India'

Structure of courts & benches: Proposed & partly implemented



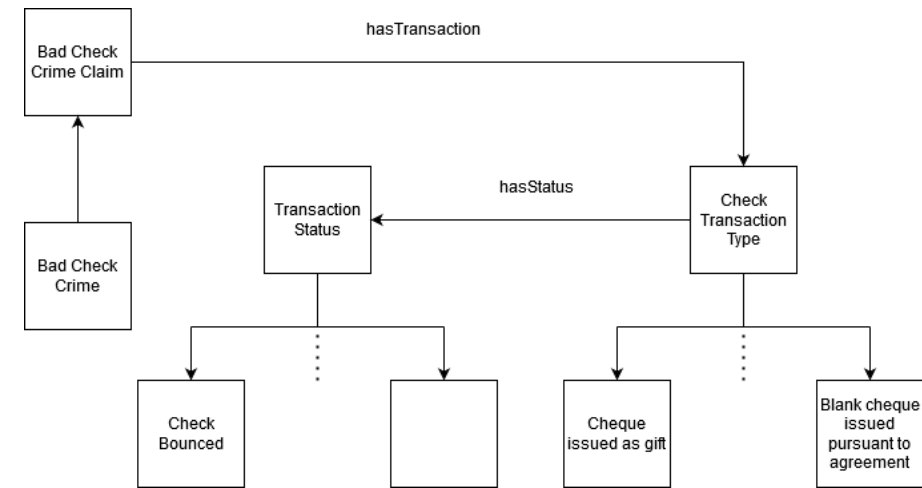
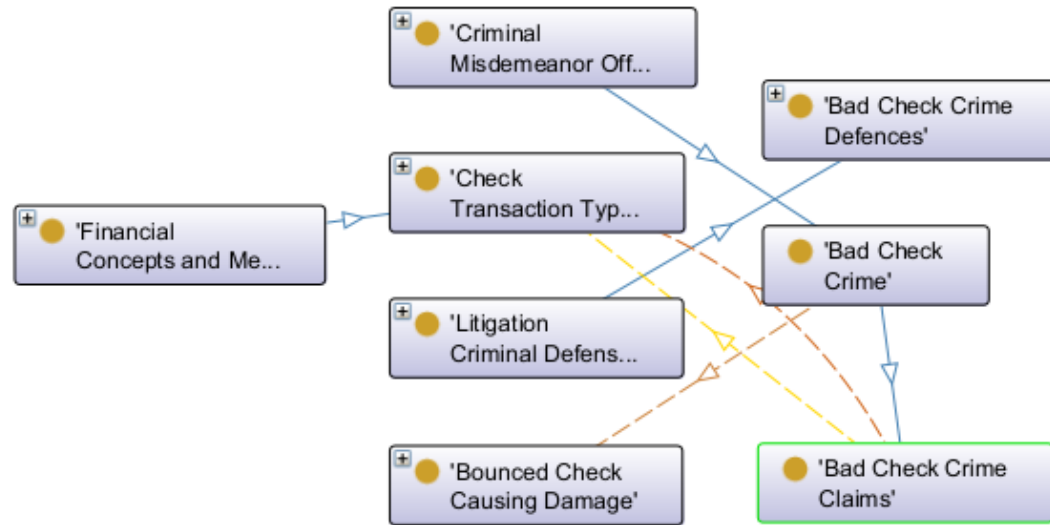
Query: List all the district courts in Andhra Pradesh.

We could simply find all instances under district courts which have a located In property with value which is a district that is a part of Andhra Pradesh.

Query: How many division benches does the Allahabad High Court have?

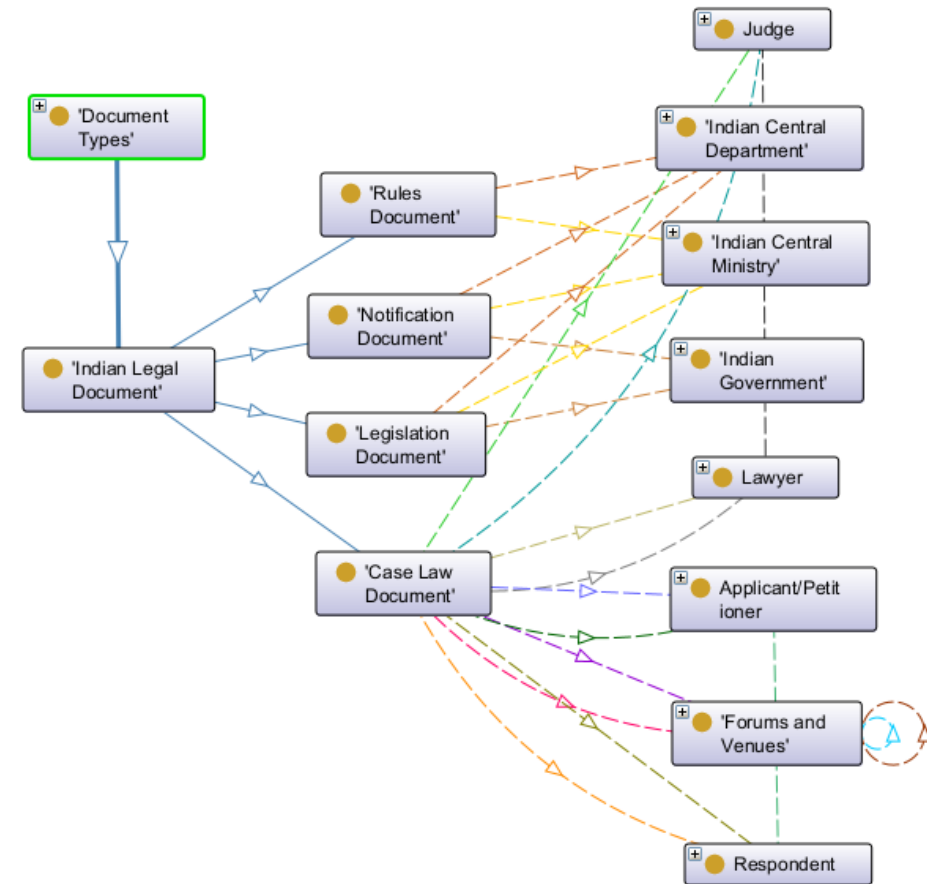
We could look at all division benches instances that are associated with Allahabad High Court instance.

NIA: Check bounce cases (Partial view)



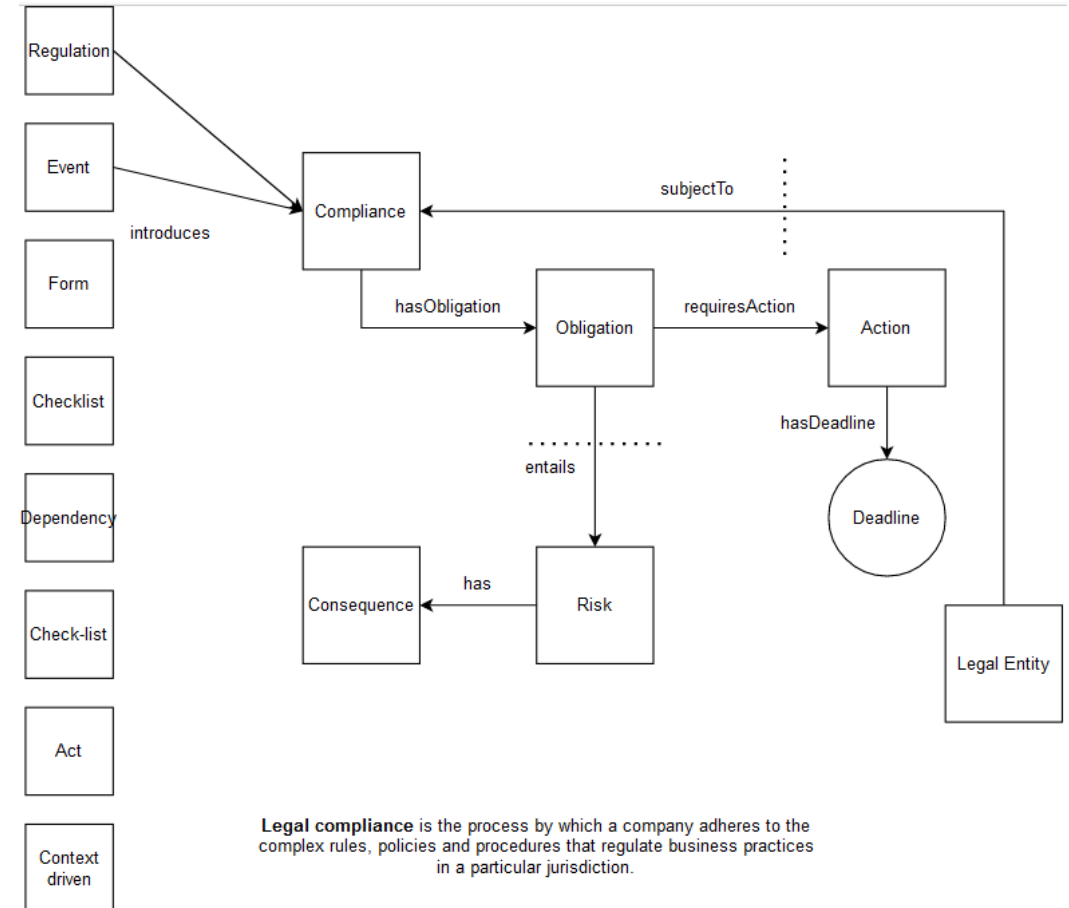
Addition of legal document types

- Four documents types for Indian context.
- They share some object & data properties.



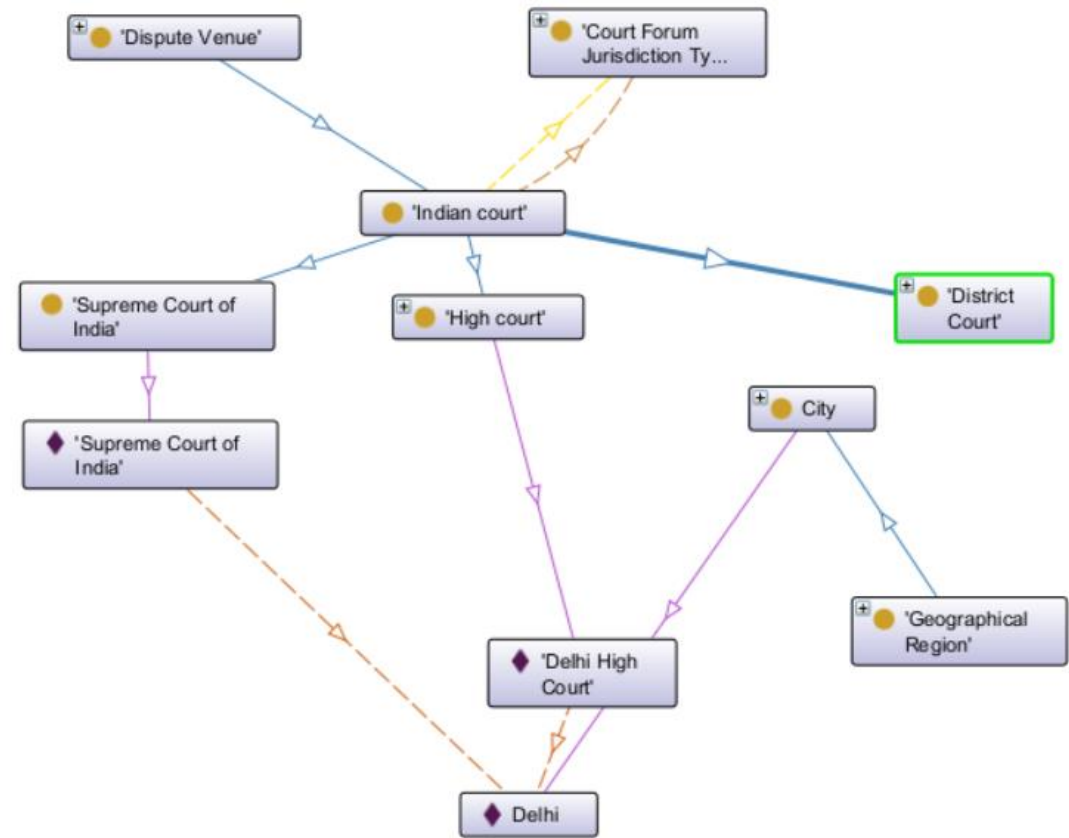
Proposed outline for compliance handling (partial)

- **Legal compliance** is the process by which a company adheres to the complex rules that regulate business practices in a jurisdiction.



Example additions

- Indian Courts, Tribunals, Ministries & their Departments
 - Creating a hierarchical representation of the court system in India
 - Data about 25 high courts and roughly 688 district courts was added
- Extracting information from GeoNames for administrative divisions at level 1 (states and union territories) and level 2 (districts) and cities.
- Additions for India specific regulations began with the Negotiable Instruments Act.
 - Claims, defenses, rules of evidence etc.
- Current work involves handling compliance information.



Example additions

Courts

◆ Allahabad High Court — <http://lmss.sali.org/afaef862-081d-47cb-b86d-93ca045a4284d2f893c2-f862-43fd-a975-4>

Annotations Usage

Usage: Allahabad High Court

Show: ☒ this ☒ different

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Description: Allahabad High Court

Property assertions: Allahabad High Court

Types

- ◆ 'High court'

Same Individual As

Object property assertions

- ◆ geonames:locatedIn Prayagraj
- ◆ precededBy 'Supreme Court of India'

Locations

