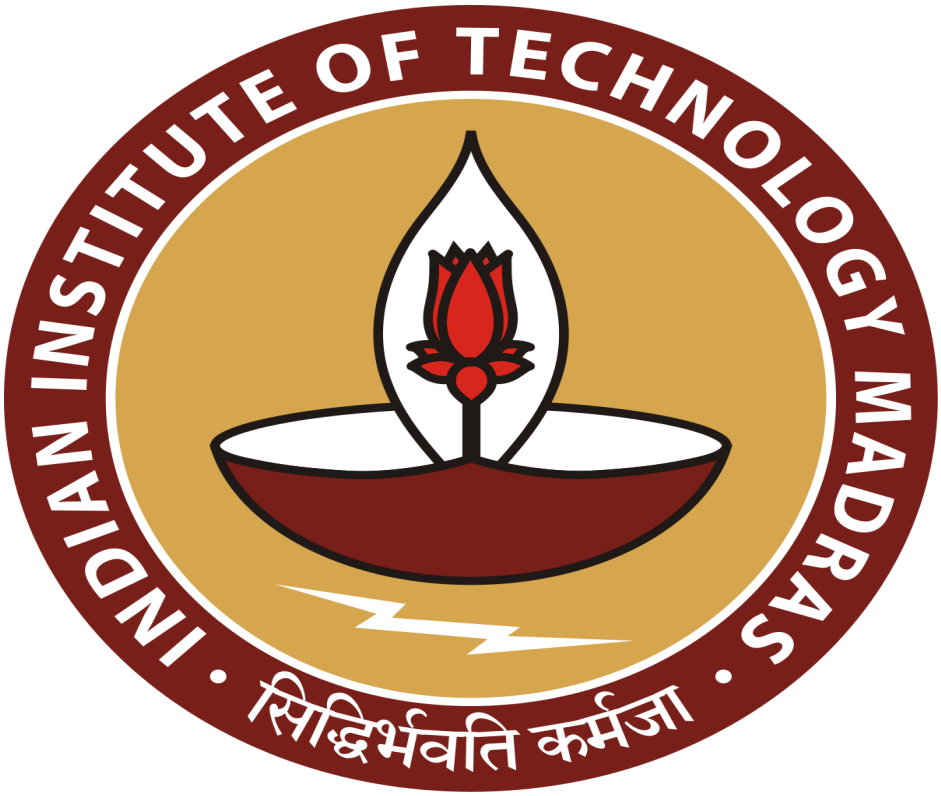
CS6852 : Theory and Applications of Ontologies

Domain: Movies (Group 8)
Assignment 3: Ontology Development



Submitted to: Prof. P Sreenivasa Kumar

Submitted By Group 8 Team Members

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Problem Statement:

➔ Each team is required to produce an OWL Ontology using Protege for the semantic model designed in Assignment 2. The developed ontology needs to be checked for consistency before submission.

➔ In this assignment we have created, visualized and checked the consistency of the ontology for our domain movies. We have used 4 tools for visualization.

Tool used for building Intelligent System:

➔ **PROTEGE (5.6.1)**:
It is a free, open-source platform that provides a suite of tools to construct domain models and knowledge based applications with Ontologies. It is a powerful tool for preparing our data for the Semantic Web.

Tools used for Visual Representation:

➔ **OWLViz:**
It can be used for visualizing the class hierarchy on protege. It enables class hierarchies in an OWL Ontology to be viewed and incrementally navigated, allowing comparison of the asserted class hierarchy.

➔ **OntoGraf:**
It is a visualization tool on protege. It allows visual, interactive navigation of the relationships in OWL ontologies.

➔ **WebVOWL:**
It is a web application for the interactive visualization of ontologies. It implements the Visual Notation for OWL Ontologies (VOWL) by providing graphical depictions for elements of the Web Ontology Language (OWL) that are combined to a force-directed graph layout representing the ontology.

➔ **OWLGrEd**:
It is a free UML style graphical editor for OWL ontologies. It ha additional features for graphical ontology exploration and development, including interoperability with Protege.

Readme:

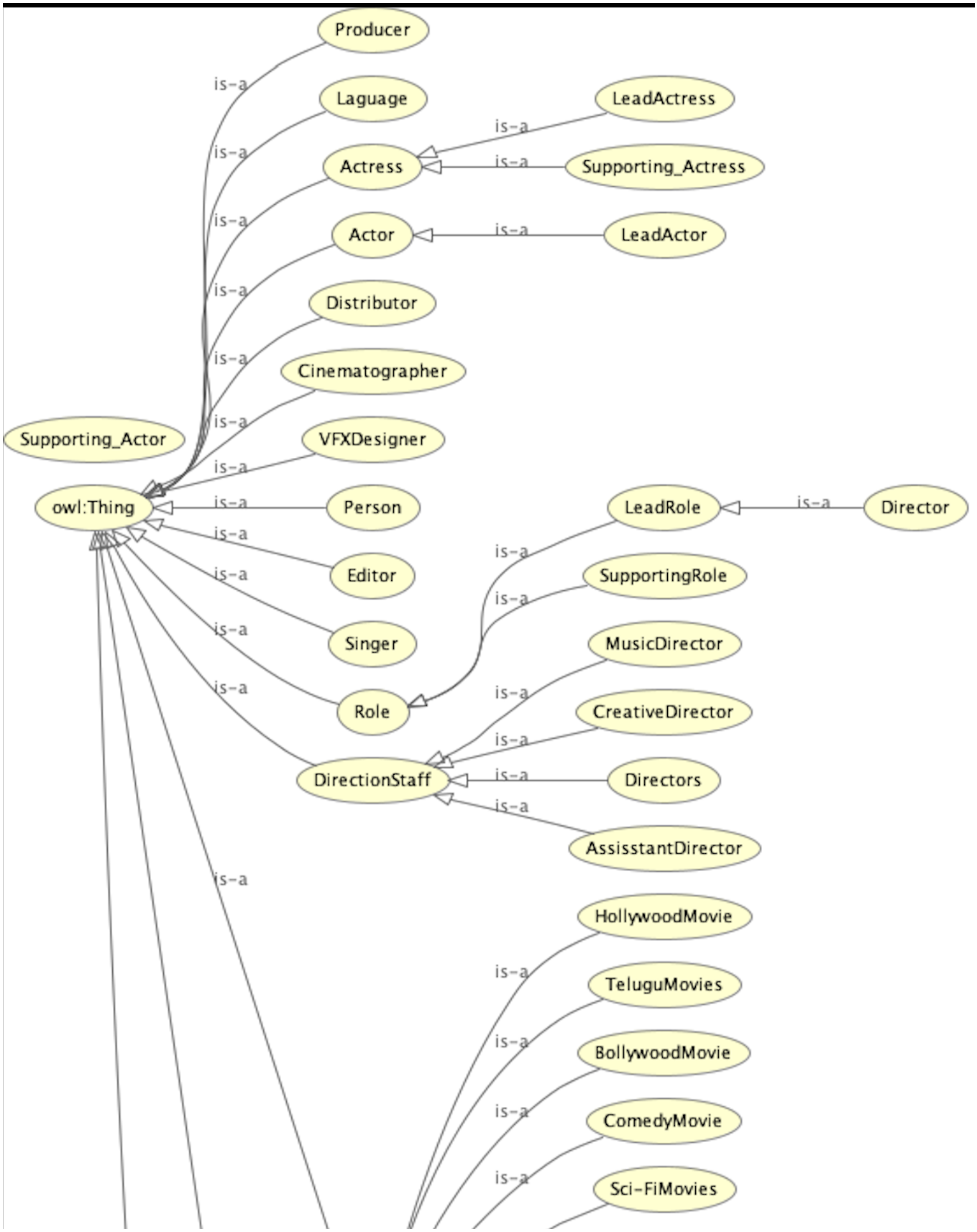
- For Visualization in **“OWLVIZ”** tool:
  Please open the Ontological Design (.owl) file in a Protege editor (5.6.1)

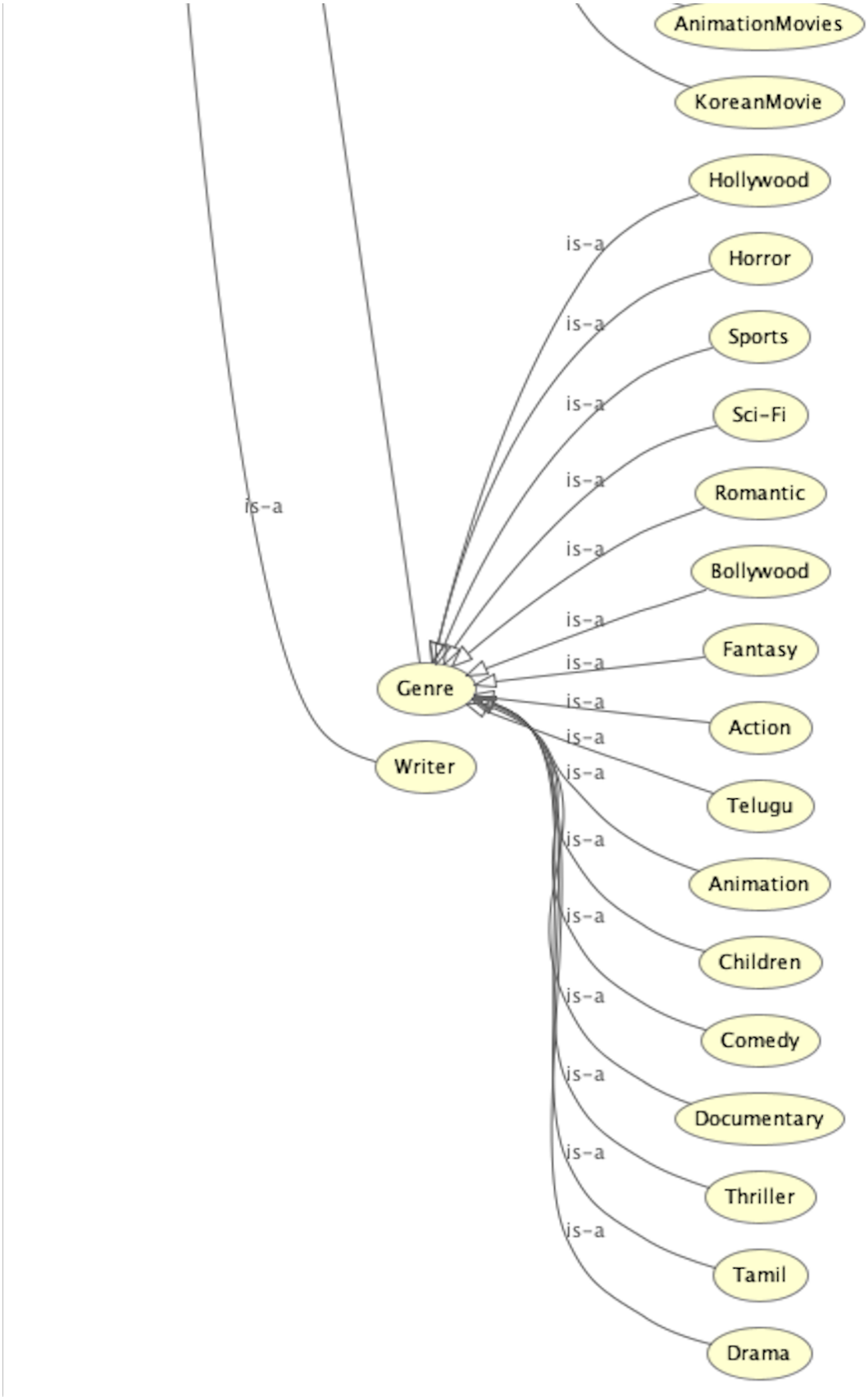
- For Visualization in **“OntoGraf”** tool:
  Please open the Ontological Design (.owl) file in a Protege editor (5.6.1)

- For Visualization in **“WebVOWL”** tool:
  Please go to https://service.tib.eu/webvowl/ and click on “ontology” then upload the .owl file for visualizing the generated ontology.

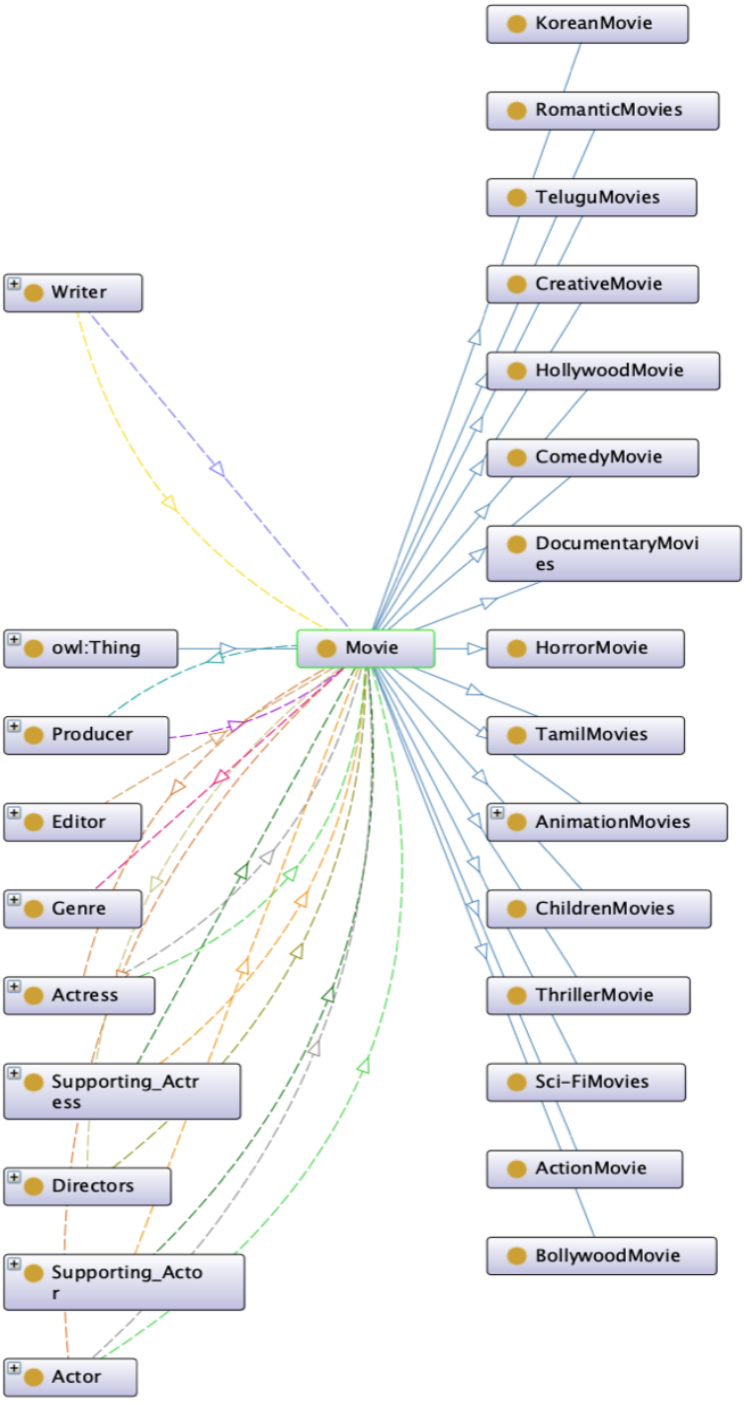
- For Visualization in **“OWLGrEd”** tool:
  Please go to http://owlgred.lumii.lv/online_visualization and click on “Visualize your ontology” then upload the .owl file for visualizing the generated ontology.

The graph obtained from “OWLViz” tool:


Producer
Laguage
LeadActress
Actress
Supporting_Actress
Actor
LeadActor
Distributor
Cinematographer
Supporting_Actor
VFXDesigner
owl:Thing
Person
LeadRole
Director
Editor
SupportingRole
Singer
MusicDirector
Role
CreativeDirector
DirectionStaff
Directors
AssisstantDirector
HollywoodMovie
TeluguMovies
BollywoodMovie
ComedyMovie
Sci-FiMovies
is-a

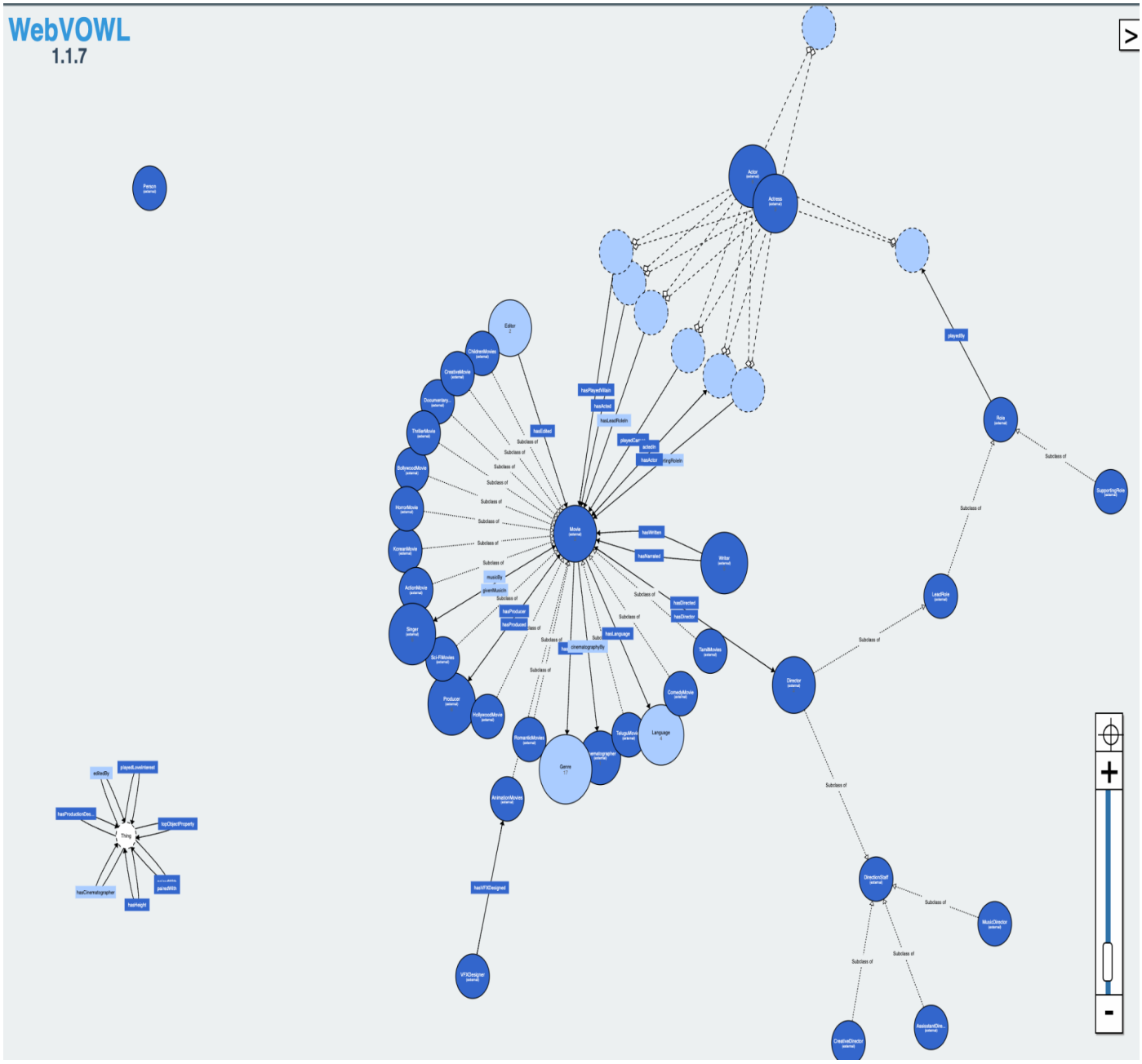

AnimationMovies
KoreanMovie
Hollywood
Horror
Sports
Sci-Fi
Romantic
Bollywood
Fantasy
Action
Telugu
Animation
Children
Comedy
Documentary
Thriller
Tamil
Drama
Genre
Writer
is-a

The class hierarchy of the Ontology from “OntoGraf” tool:



 # The class hierarchy obtained on "Protege":

The obtained graph of the Ontology from “WebVOWL” tool:



The obtained graph of the Ontology from “OWLGrEd” tool: