



**SHRI VILEPARLE KELAVANI MANDAL'S
DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING**
(Autonomous College Affiliated to the University of Mumbai)
NAAC ACCREDITED with "A" GRADE (CGPA : 3.18)



DEPARTMENT OF INFORMATION TECHNOLOGY

COURSE CODE: DJ19ITL801

DATE: 05/03/2024

COURSE NAME: Semantic Web Technology Laboratory

CLASS: Final Year B Tech

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EXPERIMENT NO. 6

CO/LO: Model ontologies using Resource Description Framework (RDF) and Web Ontology Language (OWL)

AIM / OBJECTIVE:

Design any domain specific ontology in Protégé using OWL.

THEORY:

The Web Ontology Language (OWL) is a family of knowledge representation languages for authoring ontologies. Ontologies are a formal way to describe taxonomies and classification networks, essentially defining the structure of knowledge for various domains: the nouns representing classes of objects and the verbs representing relations between the objects.

Ontologies resemble class hierarchies in object-oriented programming but there are several critical differences. Class hierarchies are meant to represent structures used in source code that evolve slowly (perhaps with monthly revisions) whereas ontologies are meant to represent information on the Internet and are expected to be evolving almost constantly. Similarly, ontologies are typically far more flexible as they are meant to represent information on the Internet coming from all sorts of heterogeneous data sources. Class hierarchies on the other hand tend to be static and rely on far less diverse and more structured sources of data such as corporate databases.

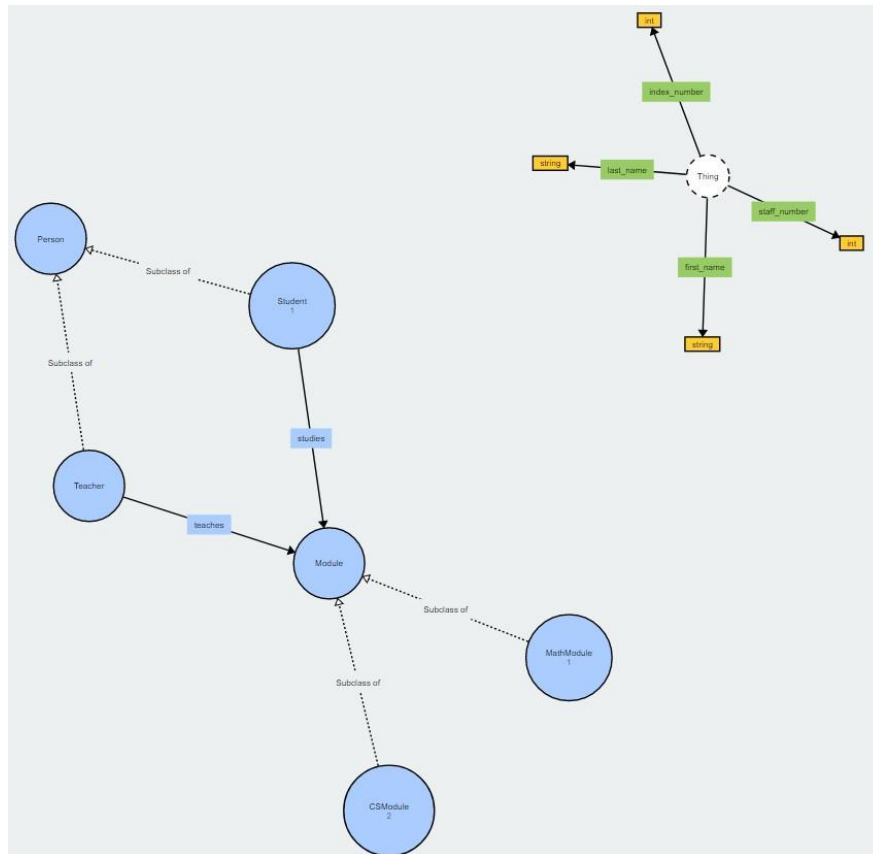
Protégé is a free, open-source ontology editor and framework developed by Stanford University for building intelligent systems. Protégé is supported by a strong community of academic, government, and corporate users, who use Protégé to build knowledge-based solutions in areas as diverse as biomedicine, e-commerce, and organizational modeling.



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OUTPUT:



CONCLUSION:

Thus, we designed an education ontology using OWL in Protégé.

BOOKS AND WEB RESOURCES:

1. <https://cambridgesemantics.com/blog/semantic-university/learn-owl-rdfs/>
2. <https://medium.com/@vindulajayawardana/ontology-generation-and-visualization-withprot%C3%A9g%C3%A9-6df0af9955e0>
3. <https://service.tib.eu/webvowl/>