ABSTRACT

Nowadays, the development of drug which available in society becomes larger and more varied. This is one reason that it is almost impossible to remember all the information that drug has. Beside that, there is lack of drug information repository which is flexible and can accommodate many kinds of data, even it will continue to add more data everytime it has new kind information. This is often causes the consumer to consume drug without knowing the effect of drug interactions.

One way to build a flexible data storage and scalable is by using ontology method. By ontology, it makes easier to update data if there is a change and it also can give the appropriate result fastly from searching. Ontology data modelling will be built by using OWL language amd with UPON Methodology. This ontology data modelling will also be developed by using tools Protégé 3.4.8.

In this final project, there will be a design for ontology data modelling which can be flexible and scalable. This ontology data modelling will be used in an application that will be built by using JENA API and JAVA Programming Language. For testing the speed of retrieve, this data modelling will be tested by using SPARQL *query*.

Keyword : JENA, Data Modelling, Drug interactions, Ontology, OWL, UPON, SPARQL.