ABSTRACT

The Semantic web allows the data not only to be understood by humans as the reader but also in order to be processed and understood by machines or computers. Ontology is semantic web technology that allows it happen. Ontology describes data on the web and relations between data on the web. As the increase used of ontology, heterogeneity is a problem that most commonly occurs in ontology on the semantic web, for example there are two ontologies with different names, different structure or defined in different ways although both of them describe the same knowledge. As problem shown up, there found Ontology matching, which is a process for comparing two ontologies and finding the relationship between the two ontologies. Ontology matching aims to reduce heterogeneity problem in ontology. One of the techniques used to solve the problem of heterogeneity is Instance-based ontology matching (IBOM). The IBOM techniques used in this final project is influenced by Top N and Similarity Threshold parameters which contributes in Instance enrichment process. The combination of these two parameters provide optimal results of the performance of ontology matching process. The IBOM uses the instance with its large number of information so that the processs of ontology matching produces accurate results to determine the relations between the two ontology.

Keywords **:** *semantic web, ontology, ontology matching, heterogeneity, Instance-based ontology matching, Instance enrichment.*