Abstract

This paper describes a natural language-based tool which aims at supporting the Analysis stage of software development in an Object-Oriented framework. This Natural Language Processing technique is to analyze software requirement texts written in English and build an integrated discourse model of the processed text, represented in a Semantic Network. This Semantic Network is then used to automatically construct an UML diagrams such as Class Model representing the object classes mentioned in the text and the relationships among them & sequence diagram of the dynamic model. Requirement analysis determines the user expectation for the application. We propose a method to extract the diagrams from requirement analysis with strong semantic support. The tool can also convert the user modelling information into the blocks of programming source code; Code generation is made available in Java. The aim is to demonstrate the use of NLP (Natural Language Processing) techniques for the extraction of UML diagrams with code template generation in JAVA by implementing a prototype tool that uses the NLP techniques.
NLP based Object Oriented Analysis and Design from Requirement Specification

References

- Mohd Ibrahim, Rodina Ahmad, 2010. Class diagram extraction from textual requirements using Natural language processing (NLP) techniques. In proceedings of the Second International Conference on Computer Research and Development.

Index Terms

Computer Science Software Engineering

Keywords

Requirement Specification Semantic Analysis Ontology Pos (part Of Speech) Tagger

Nlp (natural Language Processing)

Requirement Analysis