Abstract

Requirement specification is one of the most crucial steps in Software Development Life Cycle (SDLC). Well-written requirement documents include expressive keywords such as names of classes, attributes and methods to be used in software design. Knowledge extraction from these documents may be helpful in order to design conceptual model for Object Oriented (OO) systems. Recently, automatic text-to-UML (Unified Modelling Language) transformation applications are used widely used in software engineering. These automatic modelling systems make the work of software team easier and reduce total cost of software development process. This paper presents a CASE tool called AutoClass which extracts class diagrams and generates C# source code from the requirement documents. Natural Language Processing (NLP) techniques and rule-based model are used to implement automatic concept identification model in the study. The experimental results indicate that the proposed system is more accurate in terms of extracting class diagrams when it is compared to other studies. Moreover, it has an accuracy rate that is over 90%. 

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References

Index Terms

Computer Science

Information Systems

Keywords

Software Requirement Analysis, OO based concept identification, Automatic text to UML transformation process.