**A Review on Web Application Development –**

**a study on UML Web Application Extension**

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**Abstract**

The complexity of Web sites are increasing and transforming into Web applications that contain business logic, interactivity, transaction handling and states. This phenomenon forces the Web developers to adapt more traditional software engineering techniques to keep the Web applications error free, maintainable, reusable, well documented etc.

The purpose of this research paper was to see if the use of a more traditional software engineering technique, namely the Unified Modeling Language with the newly added Web Application Extension, resulted in a Web application with good design regarding the maintainability of the application.

**Introduction**

Here UML WAE is used to model in case study. WAE, an extension to UML, was developed by Jim Conallen; the Web Modeling Evangelist at Rational Software Corporation. The extension is specified in the book *Building Web Applications With UML.* [Conallen]

Author has used the UML WAE to analyze and design a Web shop that sells products online.

When they model with UML WAE they used some of the model elements from the standard UML notation in addition to those model elements that the Web Application Extension offers.

**Main Body**

UML stands for Unified Modelling Language and is a model on how to analyze and design in a system development process. This process can be RUP driven because RUP is especially well suited for the use of UML. UML uses an Object-Oriented approach and is suited for Object-Oriented programming languages e.g. Java and Delphi.

For the use of UML in a Web application development process Jim Conallen have constructed the WAE. The extension adds stereotypes, constraints and tagged values to be used in the modelling.

To evaluate UML WAE author has modelled a Web application using UML WAE as modelling language. During the development work they analyzed the resulting design. The aspects they focused on are how the model solves the maintainability; by this it mean that documentation, reusability, and the ability to extend the application.

**Conclusion**

**The use of UML for Web application development will result in good design, regarding to maintainability.**

Extensibility was supported through low coupling, high cohesion and the possibility to create generalization/specialization hierarchies.

Reusability was supported by the ability to apply white-box reuse. This thesis was unable to resolve whether UML WAE supports black-box reuse.