

Abstract

Due to the fact of platform-independence and worldwide accessibility, the popularity of the Web leads to countless Web applications. In the course of this work, a possibility for an automated generation of Web applications based on a MDA (Model-Driven Architecture) is introduced.

This work is concentrated on the definition of a meta-model for modeling Web applications based on the principles of the MVC (Model-View-Controller) pattern. The main task is the automated generation of modeled Web applications. Models of Web applications contain information about graphical user interfaces on Web pages and the pageflow within the Web application. Hence the defined meta-model specifies the syntax and structure of Models. Furthermore the meta-model serves for validating models.

The primary aim is the automated generation of the layout and structure of Web pages, hence the View of the MVC pattern. Furthermore an XML file is generated that serves as input for the Controller that controls the pageflow. For the time being the developer is responsible for the Model of the MVC pattern. Therefore a methodology for dealing with generated and manually written code is developed in order that the manually written code does not become overwritten in a subsequent generator run.

To prove our approach of generating Web applications based on a MDA, a prototype is introduced. This prototype is a JSF (JavaServer Faces) Web application for the Apache Tomcat Web server.