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## **Studienarbeit**

### **“System Activity Monitor for SWoM”**

Web Services based on the service-oriented architecture framework serve as the foundation for modern distributed, heterogeneous applications. They are perfectly suited as the function layer of the two-level structure programming model that is characteristic for workflow-based applications.

Workflow-based applications are composed of two distinct pieces: a process model that describes the sequence in which the different activities making up the process model are being carried (programming in the large) and the individual components that implement the various activities (programming in the small). In the Web services environment, process models are described using the Web Services Business Process Execution Language (WS-BPEL).

The purpose of a workflow management system (WFMS) implementing the WS-BPEL specification is to manage the life cycle of business processes, to navigate through the associated process models, and to invoke the appropriate Web services. The Stuttgarter Workflowmaschine (SWoM) partially implements the appropriate WS-BPEL standard.

Whenever a severe error occurs during execution of a process instance, appropriate information must be written to a table in a relational database so that corrective actions can be taken. The administration interface is then used for displaying the collected information.

The purpose of this Studienarbeit is to write a system activity monitor that help collecting the appropriate information upon requests from other components of the SWoM. The system activity monitor is written as a stateless EJB using EJB 3.0 annotation running in IBM WebSphere® application server and stores the information in IBM DB®. The component for querying/maintaining the system activity monitor trace needs to be integrated into the systems management bean of the administration component.

Expected are good to very good J2EE and database skills.

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