DESIGN AND IMPLEMENTATION OF SERVICE ORIENTED ARCHITECTURE (SOA) BASED SOFTWARE USING WORKFLOW ON INVENTORY DOMAIN FOR ENTERPRISE RESOURCE PLANNING

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Abstract

Inventory system is a key factor in a company business process development, because it describes the performance of the company. Every company needs inventory settings in order to control the inventory goods kept in it, so that they won’t be in the surplus or deficit state. The result of the data management in the inventory system then used and managed by the other domains in the Enterprise Resource Planning (ERP) system for making critical decisions related to each domain. Another problem arises when companies at this stage should have started to consider so the cost aspects of the company can be used effectively, which also reduces the system’s maintenance costs.

In this Final Project, a program that controls the inventory system which covers goods transactions recording, calculation of goods available, and also estimation of inventory goods is implemented. The application is implemented by using Service Oriented Architecture (SOA) with Software as a Service (SaaS) concept, and also Model-View-Controller (MVC) system with Workflow for .NET.

The result of this Final Project is an application which is able to record purchase requests transactions from vendors and goods delivery to customers, calculate number of goods available in the warehouse, and calculate the goods quantity condition so that they will always be in the safety stock zone. The result of all data
calculations above will be managed by other domains in the ERP system to fulfill the company’s needs.

Keywords: Inventory, SOA, Workflow.