GENERALIZED MANIPULATION OF PORTLETS:

A CASE ON UNIVERSITY PORTAL SYSTEM

MSC IN COMPUTER SCIENCE

SOFTWARE SPECIALIZATION

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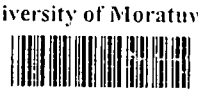

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GENERALIZED MANIPULATION OF PORTLETS: A CASE ON UNIVERSITY PORTAL SYSTEM

This dissertation was submitted to the
Department of Computer Science and Engineering,
University of Moratuwa in partial fulfilment of the requirements for the Degree of MSc
in Computer Science
specializing in Software Engineering

by

B.K.P. FERNANDO

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June 2007

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DECLARATION

The work submitted in this dissertation is the result of my own investigation, except where otherwise stated.

It has not already been accepted for any degree, and is also not being concurrently submitted for any other degree.

B. K. P. Fernando

We endorse the declaration by the candidate.

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Abstract

Portlets based portal technology is gaining quite a momentum for the past years providing range of different high-level services for their users such as personalization, single sign-on (SSO), aggregation and customization features. It is also gaining attention among the majority of the people due to its ease in development, richness in functionality, customization of interface and pluggable architecture.

Today we can find several open and close source portal and portal frameworks that address most of our required portal functionality with set of new features and functionalities. So it is important to get the state of the art technology advantage over the existing portal solution to gain the above mentioned benefits.

In this research project, it addresses the requirement of the university wide portal and designs a portal solution covering the entire university. It also implements the portal site for the Department of Computer Science and Engineering while providing enhanced set of features and functionality over the existing department portal site.

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The current research work focuses on developing a communication channel to make the inter portlet communication possible between different portlets according to the JSR-168 guidelines. It also discusses some of the issues faced in the development and running the portal site and possible future implications.

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List of Symbols, Notations, Abbreviations and Acronyms

API	Application Programming Interface
AS	Application Server
CMS	Content Management System
Email	Electronic Mail
HTTP	Hyper Text Transfer Protocol
HTTPS	Hyper Text Transfer Protocol Secure
IPC	Inter Portlet Communication
J2EE	Java 2 Enterprise Edition
J2SE	Java 2 Standard Edition
JCP	Java Community Process
JSP	Java Server Pages
JSR	Java Specification Request
LDAP	Lightweight Directory Access Protocol
LGPL	Lesser General Public License
LMS	Learning Management System
MVC	Model View Controller
ORM	Object-Relational-Mapping
RMI	Remote Method Invocation
SOA	Services Oriented Architecture
SOAP	Simple Object Access Protocol
SSO	Single Sign-On
UML	Unified Modelling Language
WAR	Web Archive
WSRP	Web Services for Remote Portlets
XML	Extensible Markup Language
XSL	EXtensible Stylesheet Language
XSLT	XSL Transformations
WSRP	Web Services for Remote Portlets

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