TRIBHUVAN UNIVERSITY
INSTITUTE OF SCIENCE AND TECHNOLOGY

LEARNING OBJECT MODEL FOR OBJECT ORIENTED PARADIGM

Dissertation
Submitted to

Central Department of Computer Science and Information Technology

(For the Partial Fulfillment of the Requirement for the Degree of Master of Science in Computer Science and Information technology)

by
Suresh Khatiwada
December, 2010

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Student's Declaration

I hereby declare that I am only author of this work and that no sources other that the listed here have been used in this work

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Suresh Khatiwada

Date:……..

Supervisor's Recommendation

This is to certify that the thesis titled "Learning Object Model for Object Oriented Paradigm", submitted by Suresh Khatiwada in partial fulfillment of the requirement for the award of the degree of Master of Science in Computer Science and Information Technology has been carried out under the supervision of Prof. Dr. Shashidhar Ram Joshi. The thesis fulfills the requirement related to the nature and standard of the work for the award of Master of Science in Computer Science and Information Technology and no part of this thesis has been published or submitted for the award of any degree elsewhere in the past.

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LETTER OF APPROVAL

We certify that we have read this dissertation and in our opinion it is satisfactory in the scope and quality as a dissertation in the partial fulfillment for the requirement of Master's Degree in Computer Science and Information Technology.

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ABSTRACT

Though object-orientation is widely acknowledged as an area of computing, it is still considered difficult to study because of a lot misunderstanding concepts and principles. The principle themselves may not be very difficult to grasp but the deep understanding of the concepts needed to produce effective object-oriented solutions to problems is hard to achieve. This thesis applied Learning Object Technology to build a web-based environment for teaching and learning object-oriented programming. This research work describes an interactive teaching- learning system that can help students understand some basic concepts and principles of object-oriented programming related to classes and instances. The difference in basic concepts of C++ and Java is analyzed and suggested the learning techniques. Four learning objects covering all the contents are developed so that they can be used, re-used or referenced during object-oriented programming support learning. The proposed system is a combination using the educational material, which is transformed into reusable learning objects, created from basic concept of object-oriented programming.

ABBREVIATIONS

OOP	Object Oriented Paradigm
E-Book	Electronic Book
Q&A	Question and Answer
HTML	Hypertext Markup Language
XML	Extended Markup Language
ADL	Advanced Distributed Learning
IMS	Instructional Management System
ARIADNE	Alliance of Remote Instructional Authoring and Distribution Networks of Europe
SCORM	Sharable Content Object Reference Model
LMS	Learning Management System
SCO	Sharable Content Object
LCMS	Learning Content Management System
CMS	Content Management System
LO	Learning Object
API	Application Programming Interface

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