UTILIZATION OF JAVA REFLECTION
IN DETECTING OBJECT CONCEPT SIMILARITIES

A master project submitted to the Graduate School of in partial
fulfillment of the requirement for the degree of
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by

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ABSTRAK

This project is about developing a Java reflection application. It utilizes the reflection features in the system package `java.lang.reflect` of Sun Microsystems’ JDK version 1.2 and above. Reflection, also named as Introspection, has the ability to “look inside” a class or an object (Lemay, 1996). It uses to explore the content of the class tiles. With the help of the analyzer engine, the developed application is capable to produce similarity object’s information between the inputs without referring to the source code. The Object-Oriented Methodology, specifically the Object Modeling Technique, is used to develop this Reflection Application. There are four stages involving analysis, system design, object design, and implementation that are followed in this methodology. The input is the Java object files, and the output contains of similarity information of those object files. The object’s information is divided into five categories including Modifier, Interface, Field, Method, and Constructor. The system address the similar information for each category between two object files to the user, which including the similar used and declared category. The similar items’ frequency will also be an element of the system’s detail output. As a conclusion, this application is an alternative tool to compare a group of object files in fast mode with readable result in application’s output. The example of the application usage is as a contributing tool to help lecturers to evaluate student assignments with an ideal model answer with constant evaluating criteria requirements. It is also suitable to be used in determining student plagiarism.
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Chapter One

Introduction

This project uses Java technology, a platform-independent\textsuperscript{1} application, developed by Sun Microsystems. The Java programming offers "reflection" features, which is capable to examine or interpret Java compiled codes, and turns them into actual uses of classes, method and so on. The main technology applied in this project is the Java’s reflection feature that uses it to reflect the similarities of object concepts.

\textsuperscript{1} Refer to Appendix E: Glossary, page 79.
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Bibliography


