

DECLARATION

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma of the university or other institute of higher learning, except where due acknowledgment has been made in the text.

Signature:

Ashish Tripathi

05/SE/2009

CERTIFICATE

This is to certify that Project Report entitled “**Customized element & code generator UML designing Tool based on xuml**”. which is submitted by **Ashish Tripathi** in partial fulfillment of the requirement for the award of degree M. Tech. in COE Department Delhi Technological University Delhi, is a record of the candidates own work carried out by them under my supervision. The matter embodied in this Project is original and has not been submitted for the award of any other degree.

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ABSTRACT

This Thesis is divided into mainly two parts one convert is convert java code to uml class diagram and second part is convert uml diagram to usable java code. Thesis is mainly based on technology runnable uml and Java Technology. One important feature is added to deliverable is to customize uml element by user itself. User can draw a new type of element (e.g. actor, class, package symbol) just by writing small java code. A batch compilation and run is used in this project to run your written code for new element.

The Unified Modeling Language (UML) is evolved as a de facto industry standard for modeling software. Due to this reason, generating code from UML models is desirable. This work focuses on rules for generating skeleton method bodies from UML behavioral models. Generation of code skeletons from class diagrams is supported by most UML CASE tools.

This thesis depict a set of rules for mechanically generating code skeletons from UML diagram consisting of activity diagrams, class diagrams and collaboration diagrams. The elementary models for deriving skeleton method are collaboration diagrams. They nail down the interactions among objects. The set of rules deliver in this thesis allows generating code from collaboration diagrams that contain challenging structures, such as multi objects and compound messages. Activity diagrams are help to provide important information needed to yield skeleton method bodies and the changes of variables. Java is main targeting language.

Second important aspect of this thesis is generating UML diagrams foam Java source code. Deriving the structure of source code as an UML diagram is quite well understood. In contrast, deriving high-level UML diagrams from source code is still an open issue. This Thesis proposes to use fuzzy pattern detection techniques for the recovery of UML diagrams from source code. The approach is based on a knowledge base of basic data types and of generic collection classes and of code clichés for Java beans and of fuzzy patterns for object structure look-up and modification clichés. We deal the runtime efforts for cliché detection using a sophisticated inference mechanism based on generic Fuzzy reasoning nets.

We deal the variety of code clichés by organizing them in an object-oriented hierarchy factorizing important common properties and by relaxing exactness requirements for cliché detection with the help of fuzzy knowledge.

Next another part of thesis is generating new type of element for any UML diagram. This aspect added for advance users who are really innovative and wand to design a new type of UML model. Deriving a new type of element is done by just writing few lines of java code. User need bit knowledge of java graphics.

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