CHAPTER 2

REVIEW OF LITERATURE

2.1   Paper 1

Model-driven engineering many transformation tools are available. The free and open source software tools are available to create Unified Modeling Language (UML) class diagram and transform code. The features in Existing tools are:

- Java support with many language specific elements.
- Simple and easy to use user interface.
- Source code generation.

The issues in existing transformation tools i.e. code generation tools are:

- Supports only class diagram of the standard UML diagram types.
- UML Diagrams are able to generate only structural code.
- Most of the tools requires internet for the usage [3].

2.2   Paper 2

The aim of the proposed system is an approach for code generation from UML models able to generate structural code. In our approach, system applications are modeled using a UML class diagram to give a structural view. From the class diagram, structural code is generated.

From each class, a Java code is generated, describing its attributes and methods, and including the constructor method with attributes initialization passed by parameter. It will consider relationship between classes or interfaces as well as it generates get and set methods. In case if there is an inheritance including an interface or an abstract class, methods defined by them are generated as methods into the code of its immediate concrete subclass.

2.3   Comparative analysis

Table 2.1: Comparison between Existing tools and proposed tools

Tools	Implementation Language	O/P Code	Features	Limitations
Code Cooker	JavaScript	C, C++	Provides Easy GUI, Click & Drop, Structural Diagram.	Do not provide Behavioral Diagram, exporting pdf format .
GenMy Model	Html5, JavaScript	Java, SQL	Supports Exporting into pdf format, Structural Diagram.	Requires internet, GUI is not User Friendly.
Class Builder	Java	C++	Supports Structural Diagram only, User friendly GUI.	Do Not Support Behavioral Diagram Compatible with Win2k n XP only
Code Maestro	C#	Java	User-friendly GUI, Supports Structural and Image.	Does not provide Behavioral Diagram. Generates only Partial code.

In the referred paper, the main drawback identified was that the existing tools supports only Class Diagram which translates it into partial java code and some are compatible with windows XP only. In our proposed tool, it translates class diagram into structural code and activity diagram into behavioral code as well as can save diagrams in image format. CoDraw can create jar file of a particular diagram.