

CHAPTER 5

Conclusion and Future Works

Conclusion

Nowadays, object oriented programming became the most popular developing method. Many programming languages support the object oriented paradigms, such as: c++ and java.

However, there is hidden factor play the main role in determine the budget, cost and development plan, which is the “Design”. In software engineering, design phase is known as the most consuming factor of the project effort, because bad design will lead to implementation problems and rise the need to re assess the design again and more again.

Now, the primary question here is how to evaluate the design before going to the next step? So software engineers come up with a “Design Metrics”, which can examine and evaluate a given design in order to detect bad programming behaviors.

In this project, we design and implement a tool that automates the metrics measurement. It gives the user the ability to assess the design static and dynamic behaviors. This tool gives the user the ability to add design project UML diagrams and design metrics, execute them and return the result in different views.

There is post extraction method, which provide user with different design detection and assessment criteria.

The main distinguish factor in this tool is that it includes the dynamic UML diagrams such as state and activity and it gives the user to evaluate the given design.

DEMOS is so flexible and scalable due to its implementation which is based on Xquery. This allows future improvements.

Future Work

- **Expand this tool to handle reverse engineering**

Many developers can obtain the design from the code by applying the reverse engineering approach to their existed project. This can be very helpful in re assessing the quality of legacy system or when we want to developing, maintains or reusable some of its parts.

As a future work I suggest to allow the tool to accept a source code and produce an equivalent design diagrams to be measured.

The tool should be able to accept any Object Oriented programming source code, such as: java and c++.

- **Involve this tool in empirical analysis study to assess the effect of Object Oriented static and dynamic features.**