Buffalo: An Aspect Oriented Programming Framework for C#

by

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Supervised by

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The project “Buffalo: An Aspect Oriented Programming Framework for C#” by Wei Liao has been examined and approved by the following Examination Committee:

Prof. James E. Heliotis
Professor
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Associate Professor

Prof. Matthew Fluet
Assistant Professor

Dedication

To Jackson and Evan

Acknowledgments

I am grateful for my advisor Prof. Heliotis, whose insightful advices, guidance and support from the initial of the project to the final completion enabled me to a better understanding of the project.

I am also grateful for Prof. Kazemian and Prof. Fluet for being on my committee.

Lastly I want to thank my wife Michelle, for all the support and encouragement during my years at school. If it was not for her I might not have even gone on this adventurous journey.

Abstract

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Supervising Professor: Prof. James E. Heliotis

This should be a short description of the work and the results: a paragraph or two summarizing your project. Note that abstracts are meant to be read independently from the rest of the project report so you cannot cite your paper or other papers in it. It would be useful to examine other abstracts in the papers you have read to understand what an abstract really is.

Contents

List of Tables

List of Figures

Chapter 1

Introduction

- Background: should be sufficient for the reader understand the rest of the report, but perhaps not too long to put the reader to sleep.
- Basic problem definition and motivation
- Approaches used to solve the problem (related work)
- Hypothesis: what you think the problem is and how your solution approach will address the problem
- Roadmap: how the rest of your report is laid out

And yes, this is how you cite a book by Silberschatz [5] or a paper by Dumont [2].

And here are examples of how to include figures and tables in the text. Please note that the captions go below for figures and above for tables.

Table 1.1: The Dog Table is Below

tag	breed	age
13	Fido	2
14	Fifi	4

For both tables and figures, the optional argument controls placement as shown:

- h is Here, i.e., the position in the text where the table environment appears.
- t is Top, i.e., the top of a text page.

Figure 1.1: The CS Logo is Above

- b is Bottom, i.e., at the bottom of a text page.
- p is Page of floats, i.e., on a separate float page, which is a page containing no text, only floats.

Anyway, you can find some easy tutorials on LaTeX.

Chapter 2

Design

- How you designed your solution
- Rationale for decisions
- Compare and contrast design with other approaches (related work)

Chapter 3

Implementation

(Note: this chapter may be merged with Chapter 2 to have a combined Design and Implementation chapter, if more appropriate.)

- Software details (use as many section as needed for class design, database tables, middleware, etc.)
- Make sure you present and comment on any interesting issues about your implementation that you are proud of or unhappy with
- Skip code listing and specific UML diagrams, etc. to an appendix

Chapter 4

Analysis

- How did you analyze your hyptothesis? Experiments, what did you think were worth measuring, etc.
- Based on your measurements and qualititative analyses, how well did your approach work out?
- Use graphs, tables, and other diagrams to illustrate your analyses.
- Based on your analyses, how well does your implementation or approach match your hypothesis?
- What do you deduce from this effort? How would you change or tweak your hypothesis?

Chapter 5

Conclusions

The conclusions chapter usually includes the following sections.

5.1 Current Status

5.2 Future Work

5.3 Lessons Learned

Since I need to illustrate several items in the bibliography, I'll do a cite for these references [1, 2, 3, 4, 5].

Bibliography

[1] Jessica Bayliss, Rajendra K. Raj, and Jamie Cromack. Using and assessing games and robotics to teach introductory computing concepts. In *SIGCSE '08 Workshop*, New York, NY, USA, 2008. ACM.

[2] M. Dumont, I. Tewksbury, J. Bayliss, and R. Raj. Games or robots? restoring excitement to introductory computing. In *Robotics: Science and Systems Workshop on Research in Robots for Education*, Atlanta, GA, 2007.

[3] Ramez Elmasri and Shamkant B. Navathe. *Fundamentals of Database Systems (5th Edition)*. Addison-Wesley Longman Publishing Co., Inc., Boston, MA, USA, 2006.

[4] Barbara Ericson, Mark Guzdial, and Maureen Biggers. Improving secondary cs education: progress and problems. *SIGCSE Bull.*, 39(1):298–301, 2007.

[5] Abraham Silberschatz, Henry Korth, and S. Sudarshan. *Database Systems Concepts, 5th Ed.,*. McGraw Hill College Division, 2005.

Appendix A

UML Diagrams

This is an optional appendix and can be eliminated if you don’t have anything to share here.

Appendix B

Code Listing

This is an optional appendix and can be eliminated if you don’t have anything to share here.

Appendix C

User Manual

This is an optional appendix and can be eliminated if you don’t have anything to share here.