

ECE 458: Engineering Software For Maintainability
Senior Design Course
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Evolution 1 Analysis

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1 Introduction

In this project, we worked in a team of four to develop an integrated development environment (IDE) based on the Logo computer programming language designed in 1967. Our design allows users to develop complex scripts combining conditionals, loops, variables, and other commands that execute on a “Turtle”, which moves around a space and draws lines and other graphical elements. Our program also provides a robust User Interface that allows users to view the state of the environment and interact with the turtle through a variety of different means.

After looking back on the last five weeks, I feel like I have improved greatly on my project and team management skills. Most importantly, however, I feel my software design techniques have improved significantly. In particular, I feel I was able to successfully encapsulate objects and separate objects behavior from their implementation, which was especially important when it came to separating the Model and the View. I also feel I was able to design a consistent, powerful, and complete API that was open to new extensions when it came to the complete implementation phase.

Overall, I am fairly satisfied with our end result. Although I do see much room for improvement, I do feel I have improved significantly from where I was on Cell Society and am starting to gain a strong grasp on good design practices.

2 Project Plan

2.1 Design Goals

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2.2 Language Choice

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2.3 Timeline

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2.4 High-Level API

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3 Design Review

3.1 Status

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3.2 Design

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3.3 Alternate Designs

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4 Next Steps

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