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English 12

Mrs. John

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### Senior Thesis Reflection

I absolutely loved this project and I am glad I was given such an opportunity. I assigned myself to create a Lisp programming language interpreter that reads in Lisp source code, evaluates it, and yields a result. I have long yearned to create an interpreter, so this project was perfect for me. In addition to the interpreter, I read a book about Lisp and did research on Lisp and on how programming languages work. As stated in my book review, the book was both hilarious and informative, making it a great choice. As for the research, it was very edifying and interesting. My project culminated in a presentation that included a demo of my interpreter, an explanation of Lisp, an explanation of my interpreter, and an explanation of how programming languages work. Since this was for my English class, I simplified the information for a mainstream audience that lacks a computer science education.

This project had numerous benefits for me, all related to the fact that it was a major learning experience. First and foremost, I learned how to make a language interpreter and such tools work. In the past, I tried making an interpreter, but unfortunately never finished. Now I can claim to have made an interpreter and to understand how it works. This is immensely rewarding for me, as I hope to one day work in the field of programming language design. The second thing I learned was Clojure, a Lisp programming language. Beforehand, I had not learned a new programming language for two years. I tried learning new ones in that two year span but always

found myself giving up since I had little incentive when the other languages I knew satisfied my needs. This project provided great incentive and I am glad I stuck it out because I finally learned a new language. The final skill I learned was how to convey complicated ideas to an unfamiliar audience. This stemmed from my self-imposed challenge to explain everything that I learned to my English class. I often find myself speaking in tongues, even to other computer science aficionados. Hopefully this presentation has given me the skills and practice I need to explain ideas more clearly. The same skills are useful in the workplace when securing grants or contracts. Employees must explain the broad implications of complex ideas to potential customers. Overall, I used this project as a learning experience to develop my skills and I am happy to say that it was very rewarding in the end.

The only major drawback of this project is the flipside of one of its major benefits: explaining my thesis to a general audience. While this can be very rewarding, at the same time it is possible, if not likely, that an audience with a computer science background would be more interested in, appreciative of, and impressed by my work. Ultimately there are disadvantages to presenting in front of either audience since the benefit of the other is not realized.

One improvement I would have liked to have made would be adding additional functionality to my interpreter and language. I am not distraught that I did not do this, and it would have required more time, but it nonetheless would have improved the quality of my overall work.

As a whole, the project was exceedingly excellent and a great way to wrap up my senior year.