The Evergreen State College - Olympia, WA 98505

THE STUDENT'S OWN EVALUATION OF PERSONAL ACHIEVEMENT

Medley	Kurt	D	A00208986
Student's Last Name	First	Middle	ID Number

Computer Science Foundations
Program or Contract Title

26-SEP-2011	16-DEC-2011
Date Began	Date Ended

Kurt Medley
Self Evaluation
Computer Science Foundations
Fall 2011

What did I expect from the program?

Having a limited background in computer science, I was a bit intimidated by the idea of learning a new computer language by which I would be forced to use an array of technical abilities to solve complex algorithmic problems. Conceptually, I've always had a hard time deriving "practical application" from complex and abstract mathematical systems. The blend of the specific *discrete* mathematics, programming, seminar readings, and digital logic had a profound effect on this perception of advanced calculation within the practical development of software, circuitry, etc. Although fast paced at times, I found CSF to be just the infrastructure I needed to delve deeper into more theoretical and sophisticated systems.

What sorts of things did I learn from the program?

Specific things I learned included interpretation of binary, hexadecimal, and decimal calculations; how to construct circuit boards using lecture and text book-based knowledge of logic gates, Haskell manipulation of arithmetic calculation and problem solving. Using higher order functions broken into smaller parts to construct scripts that solved complex problems. Constructing combinational and sequential logic blocks, orienting registers on a self-made, virtual breadboard that performed register transfer. Combining all of my learned knowledge of this logic, mathematics, and programming skills, assembling the SAP-1, which was my first ever, programmable computer that performed simple arithmetic operations. Within discrete mathematics, topics included deriving closed form solutions to recurrence relations, graph theory, algorithm interpretation, proving solutions by mathematical induction and iteration, equivalence relations, set theory, and boolean algebra.

What aspects of the program did I find enjoyable/difficult?

After familiarizing myself with the tools necessary to begin work in the functional programming language, Haskell, I found myself enjoying each chapter that we were assigned. Later chapters proved to be more difficult to comprehend but resources were always available for utilization. The tutoring sessions were immensely helpful and Sherri sent speedy responses to the questions I had about specific problems. Neil and Richard were both friendly and accommodating. My professors' vast knowledge and experience within their fields was evident in their teaching styles, and I found myself retaining much of what was instructed. The collaboration of my professors and their related subjects in the program aided greatly with my comprehension. I found myself wanting more lecture time devoted to Haskell and Digital Logic, (especially Haskell) as these were the threads I was most interested in. Haskell was the most difficult thread in the program by far, because as Sherri explained, we were learning a "foreign language" and also learning how to use it to solve problems simultaneously. I felt an enormous workload toward the end of the quarter which was stressful but necessary. This taught me how to multitask a multitude of complex problems.

Student's Signature

11-JUN-2013
Date

Faculty Member's Signature (optional)

Date

Shulman, Sheryl J. - Lab I

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What bits of lecture stuck in my mind?

Interestingly enough, our seminar discussions seemed to glue all our threads together. *Where Mathematics Comes From* was the most intriguing of the texts assigned, and inadvertently generated an interest in cognitive science. Sherri gave a visual representation of "greater infinite" by mapping the real numbers to natural numbers via a 1 to 1 correspondence on two separate number lines which ended a confusion about the set theory that I had been pondering for years. Another notable moment of clarity came when Richard showed visual representations of domain, co-domain, and range and the function manipulation of those sets; His lecture bestowed everlasting understanding with only a few sentences.

Concerning my future, where do I see myself going with this program?

Ideally I'd like to continue through this year as a sponge, absorbing as much knowledge as I can. I've already learned so much this quarter and I feel like I've only scratched the surface of the enormous computer science world. Eventually I could see myself developing software or chipsets independently or for an aspiring company. The future seems very promising for a computer science major and I'm excited to have found a passion within the field.

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