

Product Proposal

Introduction and Statement of Purpose:

For my final product I want to create a programming language with a simplified syntax and semantics to make an introduction to coding easier for new coming programmers.. This product will align with my goal of spreading my passion for computer science. I believe that computer science overwhelms a lot of people since there is a steep learning curve to start learning to code. Most people cannot handle learning both the concepts of coding and the weird syntax of code at the same time. So such a product will allow people to break up the process, by first only requiring them to work with learning the concepts and not the actual syntax, instead working in a more natural language version of the syntax.

Review of Skills and Research:

First my research would need to be over previous examples of such languages (if there are any). This will help inspire me and help me understand the complexity of the designing and making a language. I will also need to research to find the best programming language to use while programming.

The skills I will use will involve critical thinking and problem solving, as I will have to primarily devise my own algorithm for the actual conversion. I will have to first layout the entire problem and try to devise an algorithm that can carry out the conversion, by understanding given instructions.

Methodology:

First I will define the concepts of computer science I want to integrate into my product. The realm of coding is like an ocean of concepts, and I have to pick out a few drops to integrate into my program. At the very least I want to integrate variable support, boolean logic, conditionals, and some form of loops. This step will also involve me determining what programming language I want to use.

Next, I will need to define design my language. This would include defining my syntax and semantics. These are very important as the goal of my language is to make an introduction to programming for new comers as easy as possible.

Next I would start actually working on the code, after determining what programming language to use. This step would be the longest one and would involve the most flexibility in terms of the process. Since I can't anticipate problems I might run into, this step would be the most vague at this time. This step would also have debugging involved into it as the program progresses.

The final step would be to implement the program as some form of an executable. I will keep this as a final step to work on if I have time remaining after the programming. Since the goal of the program is to make computer science more accessible to new comers, an executable program would be a good inclusion, but depending on the language I use, it could end up being a lot of work. This is why I will prioritize the completion of my program before moving onto this step.

Materials:

- My Laptop
- Programming IDE (Eclipse)
- Research Materials

Conclusions:

As a result of this product, I want to come out as a more experienced programmer; I want to learn more about the complexities of NLP and its intricacies; I want to be able to help a new generation of potential coders better understand computer science; And finally, I just want to inspire a love of learning by making it easier. By making this product I aim to further develop myself, and the community. If my product is successful, it could be used in computer science courses in school to help new kids learn more about computer science. It might act as a replacement of block coding, that is prevalent in introductory courses. It can also prove helpful to people who need to develop quick programs, but have no necessary knowledge of computer science to make one. Overall the product will just help people better understand computer science and make it easier to learn about the field.