Project Proposal

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There are some really bizarre programming languages developed just for fun, rather than for practical reasons, such as the language brainfuck, DNA, chicken and so on. In this project, we plan to implement *OLA (OneLineArt)* --- a small and simple programming language, which is totally designed to be funny/interesting. For instance, we plan to define Text Faces[1] as tokens to implement varieties of functions.

In order to do this, we will first decide the basic outline of the language, then working on writing the compiler for this language with a non-trivial set of functionality. And if time allows, we will define additional features to it.

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Time Budget:

Approximately 25 to 30 hours per person.

Timeline:

Week 3 (Jan. 23 - Jan. 27):

Researches on references, and discuss on the interesting features/functions of our language. (>6 hrs)

Week 4 & 5 (Jan. 30 - Feb. 10):

Implementing the lexer/parser;

Implementing the interpreter;

Week 6 - 8 (Feb. 13 - Mar. 3):

Finishing up the compiler and add testcases. Probably add more features to it.

Week 9 (Mar. 6 - Mar. 10):

Project Presentation: Slides and in-class presentation. (2-3 hrs)

Week 10:

Write final report. (4 hrs)

Risks:

We are a group of four, and only one of us has experience in implementing a compiler, so this project makes it a great learning process from others, and we will focus on the tokenizer. And the challenging part is that we need to design a simple but interesting language of our own. Since we have plenty of time yet, we could accomplish our goal if we start early and follow the schedule. So the risk of our project will be whether it is interesting or not. (Maybe we will do a quick survey on how many students think it's interesting, and set a target at 10?)

Reference:

[1] https://textfac.es/