

Assignment 0

Problem

Describe the source language for your compiler in the BNF or Extended BNF syntax. You have already chosen a base language and you are free to borrow its grammar from its language specification (from the internet). You will have to delete syntax (of features that you don't want to implement) and add new syntax (for features that the base language does not support but you want added to your language), thereby, arriving at the syntactic description for YOUR language. Your project will be eventually evaluated against this specification; if a program feature is allowed in this specification but does not compile correctly, you will be penalized. Also, you should make sure that you select an imperative language with at least one functional or object-oriented language construct.

The project requires you to survey the constructs allowed in your base language as well as programming language features available in other modern programming languages. Hence, you should start on this project early as it will decide the course of the project over the next four months.

Details

You will have to submit a PDF file for your language specification. Your PDF file should contain the following sections:

1. The names, roll numbers and email ids for your group members; no change to this group will be allowed further.
2. The T-diagram of YOUR compiler; no change will be allowed further.
3. The syntax for your language in BNF (or EBNF); new syntactic rules added to the grammar should be colored in blue.
4. The syntactic rules deleted from your base language.
5. Semantic description of the new constructs added. You need not use a formal notation; you can describe them in words with example code snippets illustrating their use.
6. The tools that you will use for the project (like lexer/parser generators).

All members of the group will have to submit this document separately.