**PROJECT Part 5 – Full Project and Report**

This is the final submission of your project. It should include the last version of all the previous parts and a report that gathers the documentation for all phases. You can mostly take what you have already written and just modify / augment the information already provided.

**Report**

The document components of your submissions, including the design for Part 1 and documentation for Parts 2-4, should all be placed in a single document well organized according to the different components. Use the following structure, optionally preceded by a few words of introduction:

Section 1. GWL Language Design

Section 2. Lexical Analyzer

Include a description of the Literal Table here.

Section 3. Parser and Partial Static Semantics

Include a description of the Symbol Table here.

Section 4. GAWL Generator

Section 5. Testing

Ideally, for each GWL input, you provide all the corresponding output(s):

1. Lexer: input is the GWL program, output is the token stream, literal table, symbol table
2. Parser: input is the token stream, output is the Concrete Syntax Tree (CST), augmented symbol table
3. Static Semantics: input is the CST, output is the Abstract Syntax Tree (AST) and augmented symbol table
4. GAWL generator: input is the AST and output is the GAWL code

Note that 2 and 3 may be combined, but it would still be nice to see the CST output.

In the report itself, place one example that you can handle all the way through the 4 steps above, so that you show the general shape the outputs from the various phases. This is also where you would put any screenshots to add any other useful information.

The tests provided should cover as much of your language as you have been able to handle in the different phases of translation. These don’t all go in the report, but you should put in the report the names of the test files (see also below) and a brief description of what each test covers. If you don’t handle the input all the way through to GAWL generation, just say in the report where you stop handling that particular test (e.g., “test.gwl” goes through the lexer and parser but stops at static semantics).

Section 6. Reflection

In one or two paragraphs describe your design and development process, what was hard, how you could have done better/what would you do differently if you had more time.

For each of Sections 2-5, state how to run the corresponding code, including expected inputs, and what you did and did not manage to accomplish.

**Code**

For Parts 2-4, place the code in separate folders, so it is clear which part is which.

**Testing**

Have a separate Test folder where you put the GWL input and the output of the various phases. You should have a consistent way of naming your tests so that we can easily see which input goes with each output. E.g., if “test1.gwl” is input to the lexer, “test.lex” might be its output, “test.cst” can be the parser output, “test.ast” the semantic analyzer output, “test.gawl” the generator output.

**Team Captains & Team Captain Report**

Team captains for Part 5 are indicated with C5 in [this file](https://alakhawayn365.sharepoint.com/:x:/s/FA21SSECSC331501/ERydhtiYJLdKsPN86y5N5xQBiPuLJbsUr26H0M6PPwhKWg?e=aURq1D) in Teams. The report should indicate the team members and contain a paragraph (or more, if necessary) reflecting on team dynamics (successes, challenges, issues, etc.) for this delivery. Only the team captain writes the report.

**Submission & Grading**

**The team captain should submit to Jenzabar, on or before the due date, a zip or rar file.**

The entire project counts for 15% of your final grade. This delivery counts for 2% of your final grade, or 2/15of the project grade.

The grades on your previous parts will be adjusted as per the final submission. You will be able to recover a lot of points but, for fairness’ sake, you will not be able to get full points as if you had done it completely right when it was originally due.

|  |  |
| --- | --- |
| **CONTENTS** | **POINTS** |
| **Report** | **12** |
| Organized as requested | 2 |
| Documentation is clear | 5 |
| Documentation is complete | 5 |
| **Code Organization** | **3** |
| **Testing** | **5** |
| **TOTAL** | **20** |