

Bilkent University
Computer Engineering Department
CS 315 - Programming Languages

Spring 2016

Project Part II

Due Apr 27, 2016 23:59

Street Network Definition and Querying Language

In Part II, we ask you to develop BNF grammars for your languages (one for the street network definition language and one for the street network query language) and implement them using yacc (there will be two parsers, one for the definition language and one for the query language). The parsers will either accept a given input program (a definition or a query) as correct, or output a list of erroneous lines.

Deliverables

- (20 pts.) The BNF grammars (one for the street network definition language and one for the street network query language).
- (35 pts.) The parsers (including code + Makefile) (one for the street network definition language and one for the street network query language).
- (10 pts.) 3 sample street network definitions and 5 sample street network queries that are correct (your parsers should produce no errors for these).
- (10 pts.) Sample erroneous street network definitions illustrating 5 different kind of errors (your street network definition parser should produce errors for these).
- (10 pts.) Sample erroneous street network queries illustrating 5 different kind of errors (your street network query parser should produce errors for these).
- (10 pts.) The output from your parsers for the all the sample programs.
- (5 pts.) A report describing the challenges you have faced and how you addressed them.

Logistics

Once you are done, put your deliverable under a directory named `group<GroupNo>_proj2` and make an archive from that directory. It is important that your code should compile

without any issues using the `make` command. Once complete, it should output executables called `'definition_parser'` and `'query_parser'`, that can be used to parse your sample inputs (street network definitions and street network queries). For example, the following Unix commands could be used:

```
mkdir group<GroupNo>_proj2
cd group<GroupNo>_proj2
  mkdir code      # contains Makefile, lex, yacc, and C code
  mkdir samples   # contains the program samples
  mkdir documents # contains the report
  #(edit and test your files)
  ...
cd ..
tar -cvzf group<GroupNo>_proj2.tar.gz group<GroupNo>_proj2
```

Then e-mail this newly generated file (named `group<GroupNo>_proj2.tar.gz`) to your TA.

Reports in formats other than `.pdf` and `.txt` are not accepted.