



Tutorial 6

AST Generation from ANTLR

Question 1.

Download the Exercise2 code, unzip it, go to folder q1/src and try to run it by typing "python run.py gen". Typing "python run.py test ASTGenSuite" to see all the testcases failed.

- Open q1/src/main/mp/MP.g4 to see the grammar and q1/src/main/mp/AST.py to see the data structure of AST. Modify q1/src/main/mp/astgen/ASTGeneration.py to generate the AST such that all the testcases passed.
- Change the right hand side (RHS) of rule **exp** into "(term ASSIGN)* term;", the RHS of rule **factor** into "operand (ANDOR operand)*;" and modify the corresponding methods in ASTGeneration.py so that all the testcases passed.

Question 2.

Go to folder q2/src, typing "python run.py gen". Typing "python run.py test ASTGenSuite" to see all the testcases failed.

- Open q2/src/main/mp/MP.g4 to see the grammar and q2/src/main/mp/AST.py to see the data structure of AST. Modify q2/src/main/mp/astgen/ASTGeneration.py to generate the AST such that all the testcases passed.
- Change the right hand side (RHS) of rule **arraytype** into "arraytype dimen | primtype dimen;", remove rule **dimens** and modify the corresponding methods in ASTGeneration.py so that all the testcases passed.