Tutorial 5
AST Generation from ANTLR

Question 1.

Download the Exercise code, unzip it, and open file node.py in your favorite editor to discover the code. Try to run it by typing "python node.py". Based on its code, write function **sum(root)** that calculates the total of all nodes in the tree.

Question 2.

Download the initial code of Assignment 2, unzip it and test whether it works well. In the folder src/main/mp/astgen, make a class named Count like class ASTGeneration in file count.py. Class Count performs counting all nodes in a parse tree generated by ANTLR. Modify TestUtils.py and add CountSuite.py to test your code.

Question 3.

Add one more testcase for ASTGenSuite.py with the following input:

```
a. input = """
   function_foo(): integer;
   begin end
   """
```

Remind that the name of the tests must be meaningful and suitable to the test.

Question 4.

Change the rule in MP.g4 so that it can accept a procedure/function with many statements in its body. Modify ASTGeneration.py so that it can generate AST in this case. Add some more testcases in ASTGenSuite.py to test your code.