

Tutorial Code Generator

Question 1.

Try with the original initial code (initial.zip), modify CodeGenerator.scala and some other files so that it can print out a real number? Please use AST as input to test your code.

Hint: You will need to add **case class FloatLiteral** and **object FloatType** into AST.scala. You also add **visitFloatType** and **visitFloatLiteral** into Visitor.scala and BaseVisitor.scala. Method **visitFloatLiteral** also is added into CodeGenerator.scala and **Symbol(putFloatLn)** is also put into init() of this file. You also need to add one line into method **getJVMType** of Emitter.scala.

Question 2.

Modify CodeGenerator.scala and some other files so that it can print out a simple binary expression over integer or float numbers and some operators like +, -?

Hint: You will need to add **case class BinaryOp** into AST.scala and some corresponding visitor methods into Visitor, BaseVisitor and CodeGenerator.scala.

Question 3.

Modify CodeGenerator.scala and some other files so that it can generate code for a local variable declaration and please make sure that the corresponding Symbol will be added into the environment?

Hint: You will need to add **case class VarDecl** into AST.scala and some corresponding visitor methods into Visitor, BaseVisitor and CodeGenerator.scala (genMethod, visit-VarDecl)