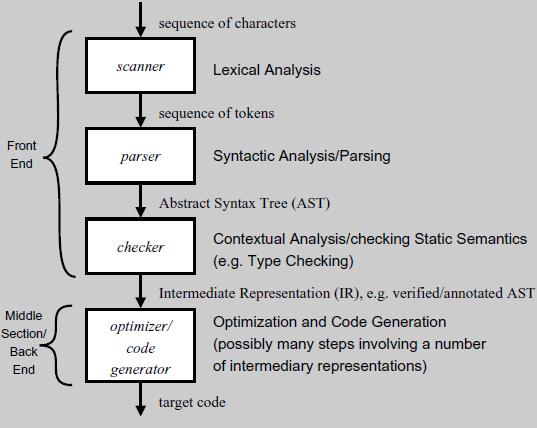
## Project wiki: what and why we do this project

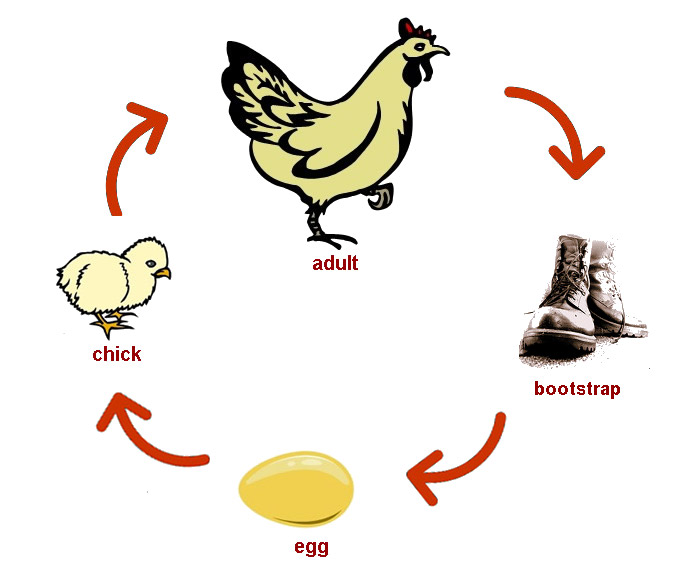
1. How does a compiler work?

Basic introduction



1. Our part: Bootstrapping

We can use C to write a compiler for java, then use what to write the compiler for C?



1. Introduction of F2J

fcore

lamda calculation

Give some equations here

In functional programming, a parser combinator is a higher-order function that accepts serveral parsers as input and returns a new parser as its output. We will try to find and apply several theories in building parser combinators in F2J, which is a functional programming language targeting JVM with support for full tail-call elimination (TCE). Inorder to make a selfhosting compiler, in other word, a bootstrapped compiler for F2J, we will need a parser combinators library. In this process, we could also build a combinators library for pretty printing with a similar approach, which is a reversed process of parsing. Our project will going to apply existing methods, such as monadic parser combinators and Pacrat parser combinators, with optimizations based on common mechanisms and with special language features in F2J, such as full tail-call elimination (TCE). The basic target is that the library would have comparable performance than Scala's.

1. Parser and Pretty Printer

Monadic Pacrat

Group layout

## Project method

1. Materials
2. Method
3. Additional work

## Project outcome

1. Important result
2. Conclusion

## Acknowledgement and Contact