

Team dynamic

We did not assign task explicitly to anyone. However, we are always keeping a backlog of task remaining and the dependencies between the tasks. Therefore, when a person has time, he can simply pick a task that does not have any open dependencies and work on it. We also try to have very descriptive git commit messages so that every team member is always aware of the current state of the project.

Compiled Language

We chose to compile GoLite into C++ for multiple reasons. First, it's a fairly low-level language which means the performance should be better compared to higher level languages. Second, it is a very mature language that is widely used. Third, C++ offer more functionalities that C does not, some of which makes the final code generation phase much easier.

Syntactic checks deferred to the weeding phase

Short variable declaration

For short variable declarations, we use an expression list, which is supposed to be a list of identifier instead of an id list. We will postpone checking it's indeed an id list.

Matching number of lval and rval in an assignment

In an assignment, whether it's part of a declaration or a statement, we do not check if the number of lvalue and rvalue match.

Verify whether `break` and `continue` are inside loops

We simply allow `break` and `continue` wherever a statement is allowed, and check for its validity in the weeding phase.

Verify whether there's only one `default` case and it's inside a switch statement

Allow all type expression to be used when a type is required

For the moment, a type expression is both used to declaring a type and representing a type. This means that it contain

Verify left part of assign is a valid lvalue

For the moment, in the grammar we don't check the expression list on the left side of '=' is a valid lvalue. We'll postpone the checking of valid lvalue until weeder and the type of lvalue until type checking.

Defer the support for alias type cast until after parsing

Since our grammar couldn't distinguish between function call and alias type cast, so we will postpone checking whether a function call is actually an alias type cast after the parsing phase.