

Sprint 5 Plan

Go Compiler

May 2 - May 16

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Task listing, organized by user story

Sprint 5

(28)User Story 1: As a user, I would like global variables to be changed at the global scope level when updating them inside a function's scope

Assigned: Kyle

Tasks:

- **(1)Kyle:** Add unit test to check for changing a global variable
- **(15)Kyle:** Research how to modify global variables at Truffle time
- **(3)Kyle:** Create the global materialized frame in the GoContext
- **(3)Kyle:** Create the Truffle read and write nodes for the global variables.
- **(3)Kyle:** Create a writer visitor file following the visitor pattern for global variables
- **(3)Kyle:** Identify if a variable is global at assignment time

(27)User Story 2: As a user, I would like my Go program to typecheck correctly to keep language consistency and provide with meaningful error messages.

Assigned: Petar

Tasks:

- **(8)Petar:** Function calls are type checked in the parameters with the function being called.
- **(7)Petar:** Non primitive types check before accessing and writing to the type
- **(12)Petar:** Type check binary/Unary operations and expressions

(25)User Story 3: As a developer, I would like structs to be a subclass of the Truffle Object model.

Assigned: Trevor

Tasks:

- **(3)Trevor:** Read how to implement a Truffle Dynamic Object, how the Layout works, and what the Shape property corresponds to.
- **(2)Trevor:** Structs assigns new struct objects during assignments
- **(20)Trevor:** Implement Struct Dynamic Object
 - **(10)**Allow struct fields to be added in as properties during initial type declaration, Create write property nodes

- **(10)**Assign new struct objects to variables which can only read and write from properties, not create new properties, create write and read from property nodes

(22)User Story 4: As a user, I would like to declare a inline function without a name (Anonymous function / Function literal).

Assigned: Vince

Tasks:

- **(5)Vince:** Create and change necessary files for the func lit node (Update truffle, IRVisitor, create IR funclit, truffle funclit)
- **(7)Vince:** Make sure the func lit node can be assigned correctly to a variable and called from it. Additionally, make sure the func lit node can be called straight from callexpr without any assignment.
- **(10)Vince:** Make sure the funclit can behave like closures (Access variables if in scope).