GEO: Shapes that Matter

THE GEO TEAM

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Introduction

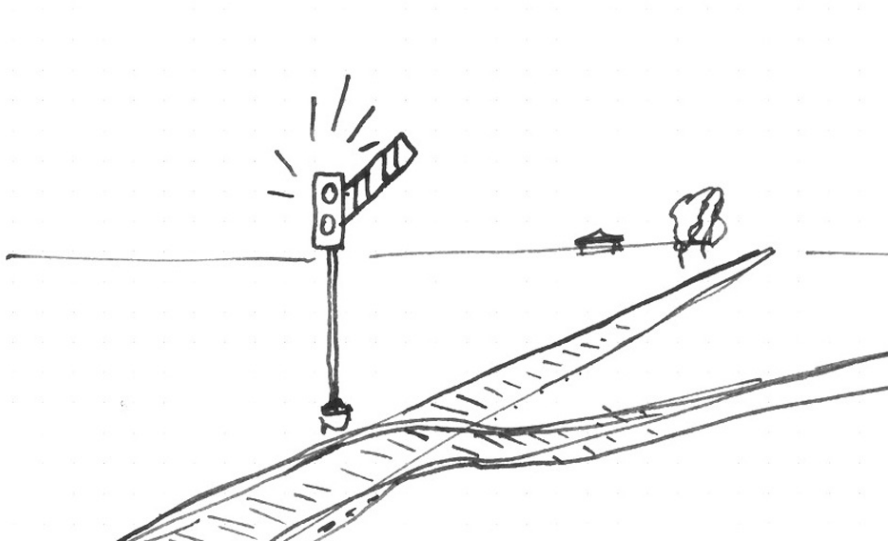
Hello World

```
> printf("Hello World")
```

```
> printl("Hello World")
```

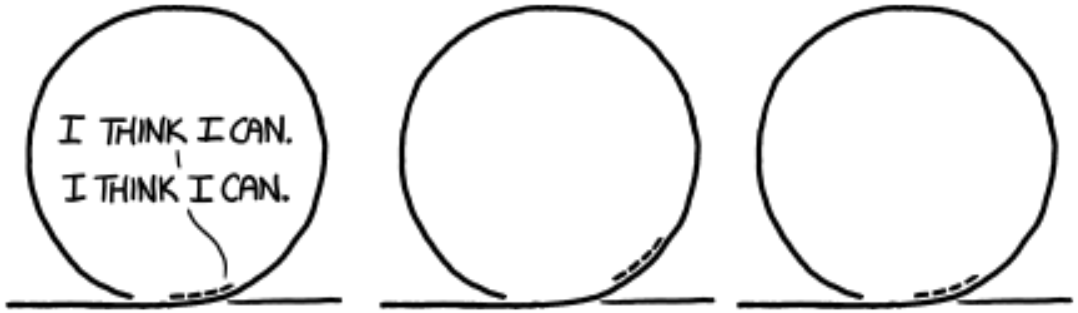
if (you like GEO)

```
> string you := “person”
> if (you = “guy”)
    printl(“You like GEO!”)
  ef (you = “girl”)
    printl(“You still like GEO”)
  el
    printl(“Everyone likes GEO”)
  end
```



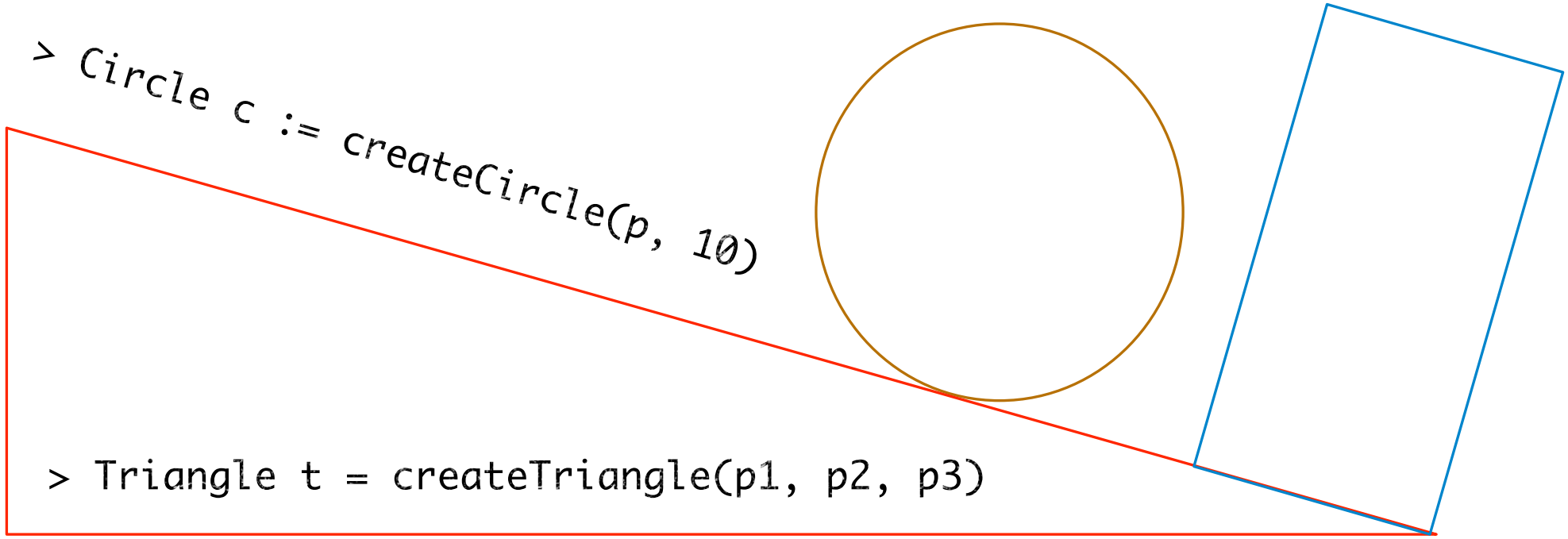
But, for how long?

```
> int age := 21
> while (age < 120)
    printl("GEO, I'm lovin' it!")
    age := age + 1
  end
```



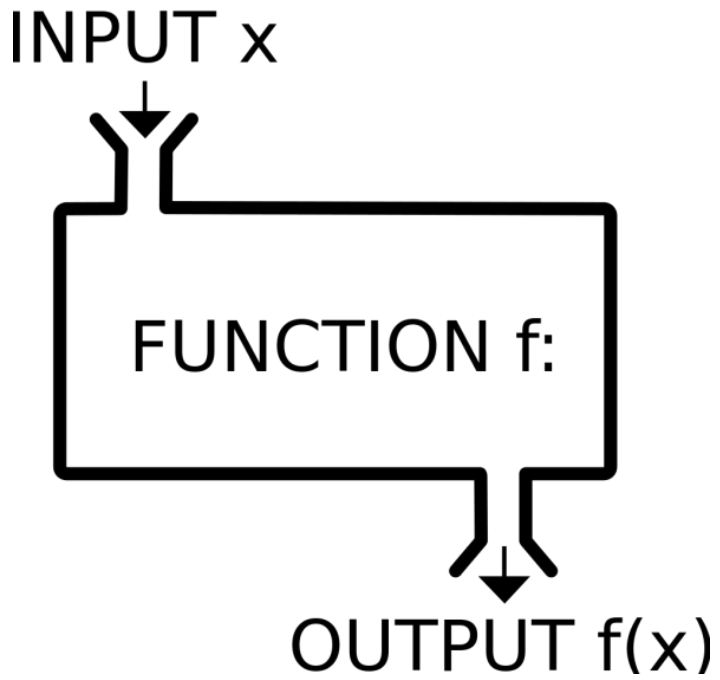
Give me a shape

```
> Rectangle r := createRectangle(p1, p2)
```



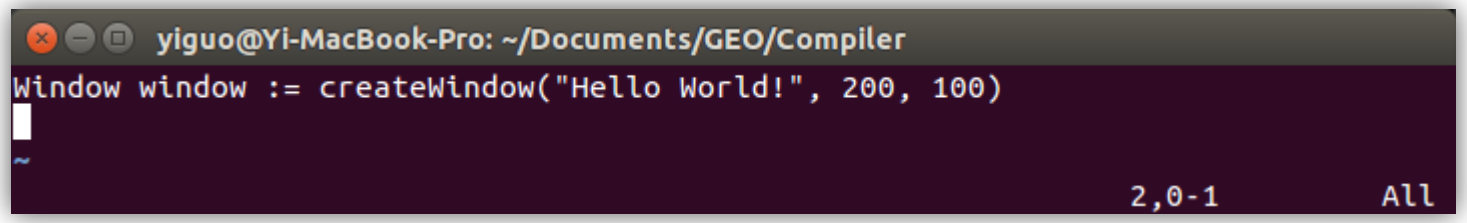
It's MAGIC!

```
> int fib(int a) := b
    if (a = 1 || a = 2)
      b := 1
    el
      b := fib(a - 2) + fib(a - 1)
    end
  end
```

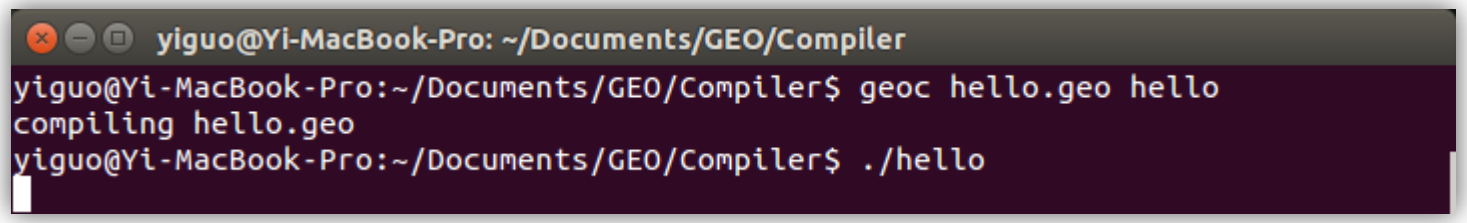


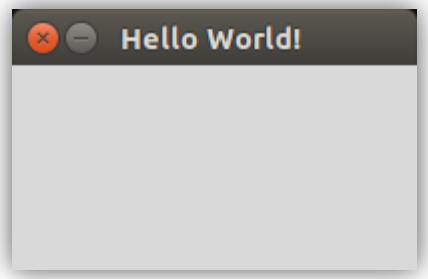
Hello World, Again!

1. Create a .geo file



2. Issue the command

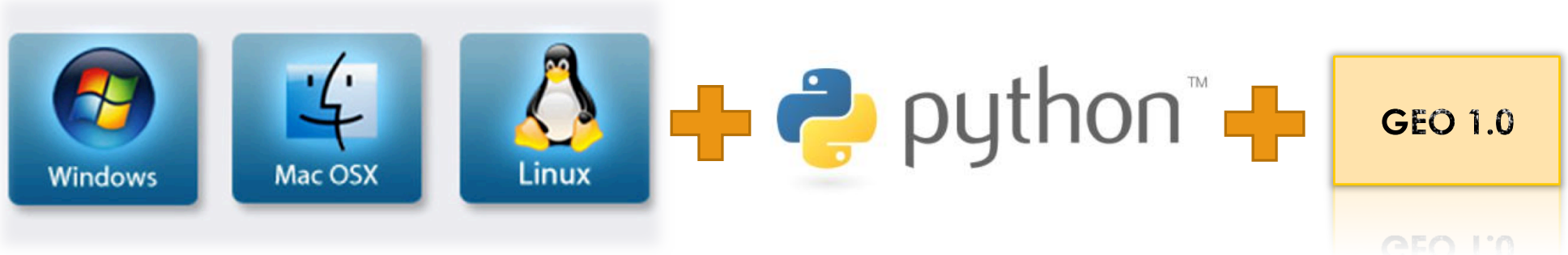




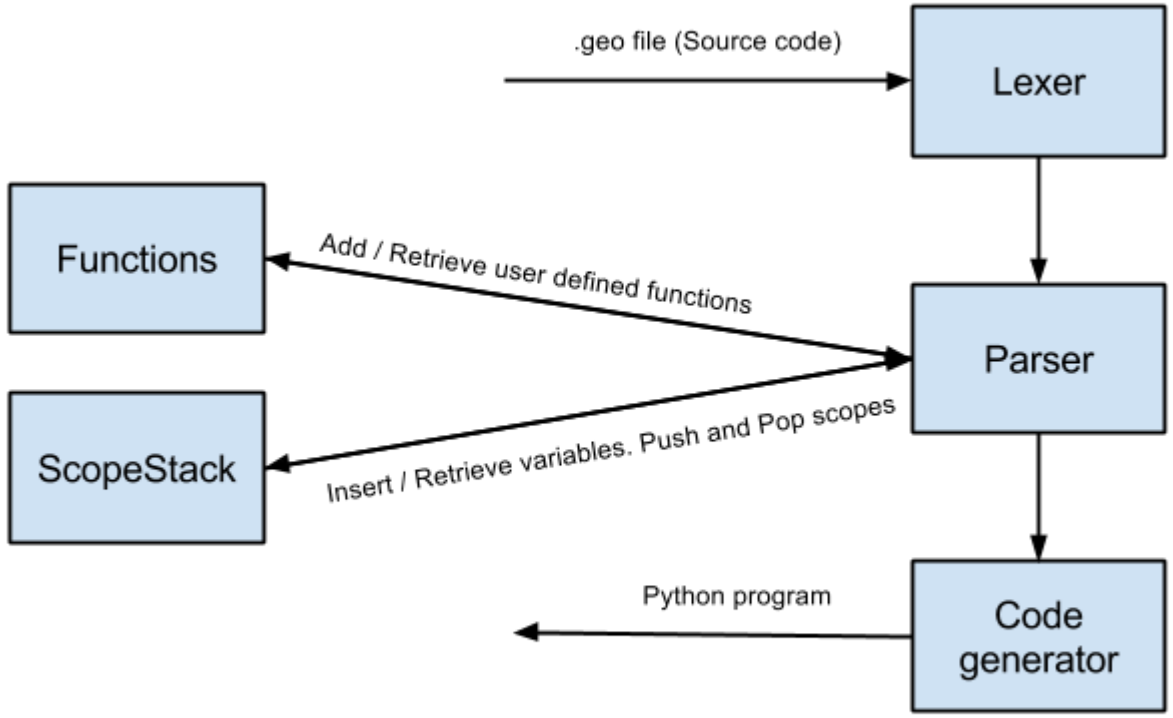
Environment

- Development Environment

- Runtime Environment



Compiler Architecture



Scope Stack

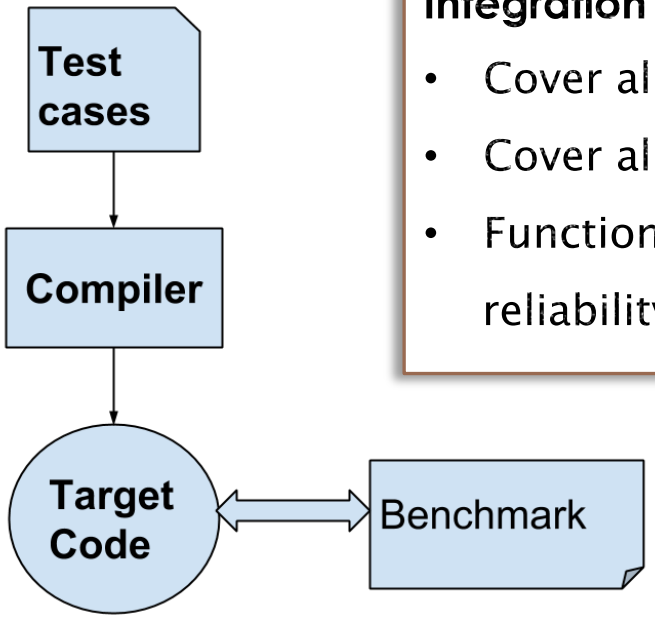
```
> int a := 0
  int b := 10
  while (a < 5)
      int b := a
      a := a + 1
  end
  println(str(b))
  a := 0
  while (a < 5)
      b := a
      a := a + 1
  end
  println(str(b))
```

```
> a_1 = 0
  b_1 = 10
  while (a_1 < 5):
      b_2 = a_1
      a_1 = a_1 + 1
  println(str(b_1))
  a_1 = 0
  while (a_1 < 5):
      b_1 = a_1
      a_1 = a_1 + 1
  println(str(b_1))
```

Test

Unit Test:

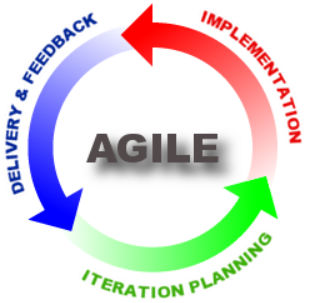
- Test all the built-in functions
- Isolate smallest testable parts
- Return FALSE if any built-in functions malfunctions.



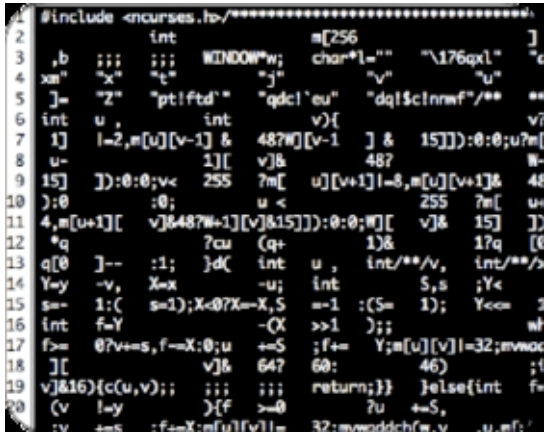
Integration Test:

- Cover all the grammar
- Cover all the basic workflow
- Functionality, performance, & reliability

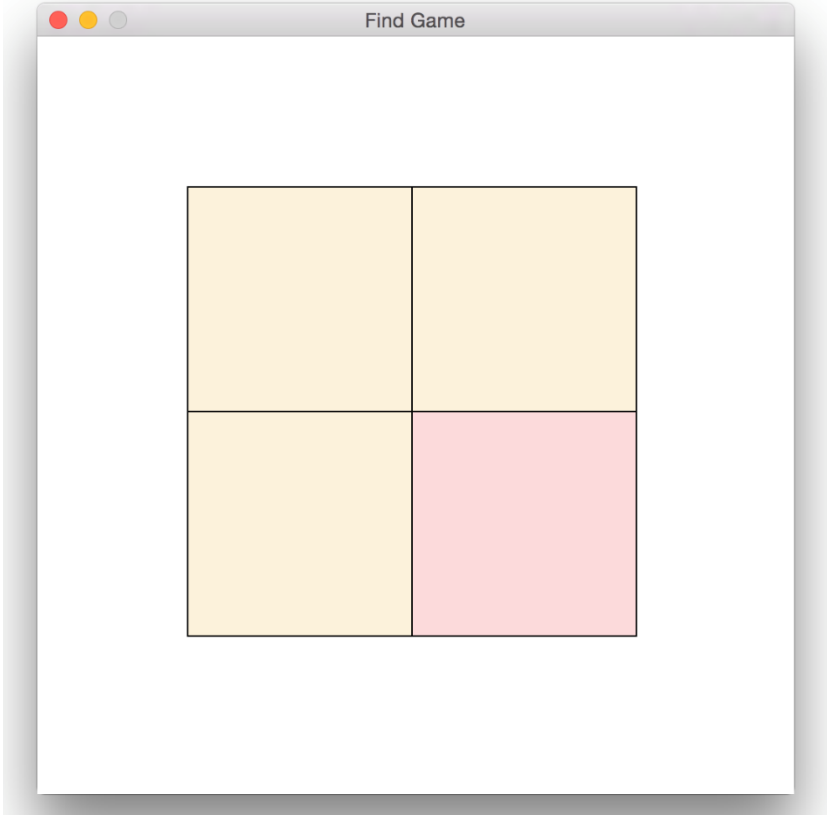
Project Management



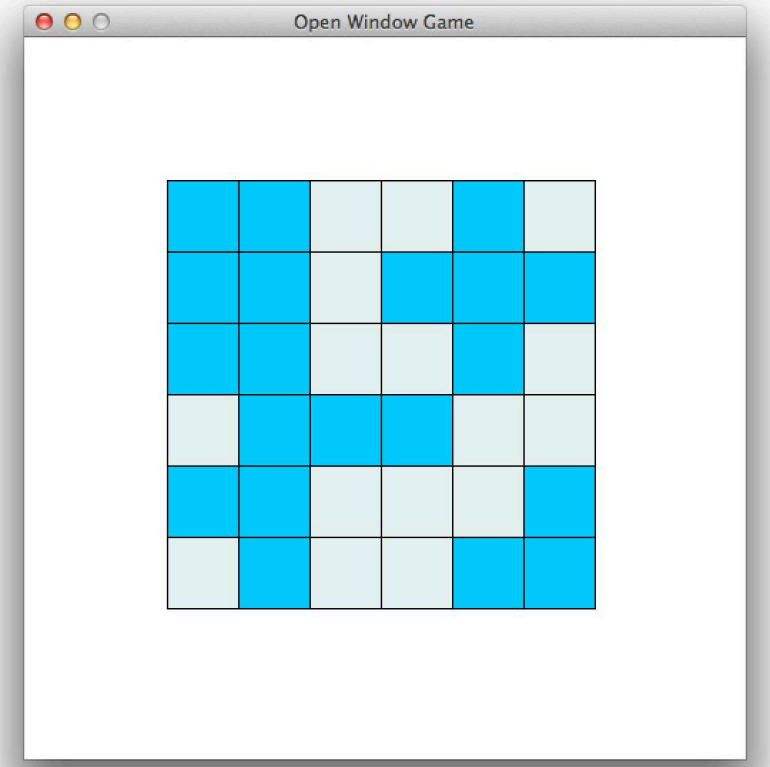
What have we learned?



Find Difference



Open Window



Tic Tac Toe