

Sprite

Dave Smith, Dan Benamy,
John Morales, Monica Ranadive

Introduction

- * Why is Sprite the best language ever?

Motivation

- * Video game development is hard
- * JavaScript is hard
- * Deployment is hard

Sprite

- * Address those three problems, therefore is the best language ever.

Quick Tutorial

```
<< simple program  
print("Hello world")
```

* Comments & print statements

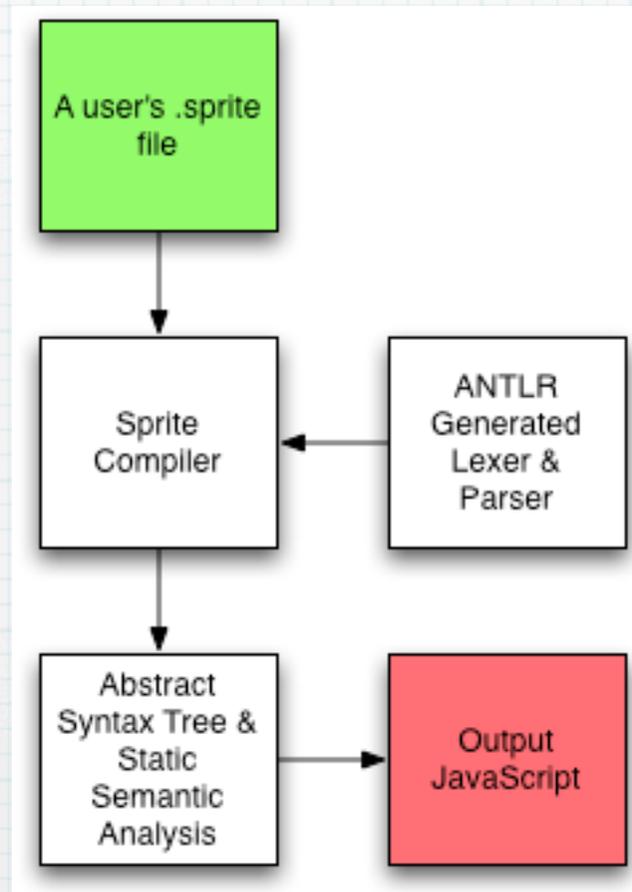
```
obj person {
  firstName = "Jane"
  lastName = "Doe"
  age = 23
  free_time = "lots"
  id = 0
}
jane = new person
func marriage(wife, husband){
  wife.lastName = husband.lastName
  husband.free_time = 0
}
john = new person
john.firstName = "John"
john.lastName = "Smith"
marriage(jane, john)
```

```
i = 0
func MoveBall() callevery(10) {
  i = i + 1
  sprite("Ball.jpg", 1, i, i)
}
```

Sprite Compiler

- * ANTLR used to develop the lexer and the parser for our language
- * Java was used to implement the abstract syntax tree as well as the static semantic analysis

Architectural Design



AST & SSA

- * AST
- * SSA
- * Symbol Table

Types, Namespaces, and Bindings

- * One namespace
- * Static binding
- * Weak typing
- * Dynamic typing

Testing

- * Script that iterated through tests and then printed out percent that performed as expected (along with error messages if they didn't)

Conclusion

- * Sprite is valuable to both new/seasoned programmers -- it makes image manipulation in JavaScript so much easier

Lessons Learned

- * Mostly technical
- * Good team dynamics, vision
- * Schedule