

DOMAIN SPECIFIC LANGUAGES

WHAT IS A DSL?

“a thin veneer of linguistic abstraction on top of an underlying semantic model”

WHAT IS A DSL?

“a thin veneer of linguistic abstraction on top of an underlying semantic model”

wut?

GENERAL PURPOSE LANGUAGES

A programming language that is capable of creating all types of programs.

Powerful & Flexible, But Complex.

C++, Java, Python, etc.

SO WHAT *IS* A DSL?

It's a language suited to solve problems for a specific domain. It is designed around concepts and structures of domain.

It focuses on set of tasks or describe set of objects from domain. It tries to abstract away the complexities of a GPL.

WHEN DO I NEED A DSL?

Your target domain has its own keywords and concepts.

A DSL is a good way to develop a language to be used by non-programmers with domain expertise.

Make language concepts highly intuitive and accessible.

DSL IN GAMES



SECOND[®]
LIFE

LSL

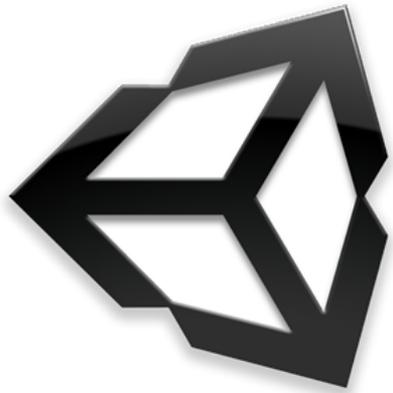






UNREAL
DEVELOPMENT KIT

UnrealScript



unity



**YOU'VE BEEN USING DSLs AND
PROBABLY DIDN'T EVEN KNOW IT!**

UNIX TOOLS

- RegEx
 - sed
 - grep
 - awk
- vi (viscript)

QUERY LANGUAGES

- SQL
- LDAP
- LINQ
- XPath
- Xquery
- YQL

QUERY LANGUAGES

- SQL
- LDAP
- LINQ
- XPath
- Xquery
- YQL

CONFIGURATION

- Make
- Ant
- Maven
- Rake
- Puppet
- Chef
- *rc Files

**I'M SOLD. HOW DO I MAKE MY
OWN DSL?**

THE EASY WAY

- Repurpose dynamic scripting languages as Domain Specific Languages.
- Saves you the trouble of creating your own language.
- Essentially “rewire” a language.

THE EASY WAY



THE HARD WAY

- Want more flexibility? write your own everything!
 - Grammar Lexer, Parser, Tokenizer
- Same way you would create a GPL
- Use a compiler compiler

THE HARD WAY



Flex & Bison

JavaCC



ANTLR



beaver

FIN.