

Unlocking Ruby's Hidden Magic



Paolo Perrotta

Developer, Author

@nusco | www.paoloperrotta.com

Design Time and Runtime

Design Time
Write the code

Compilation

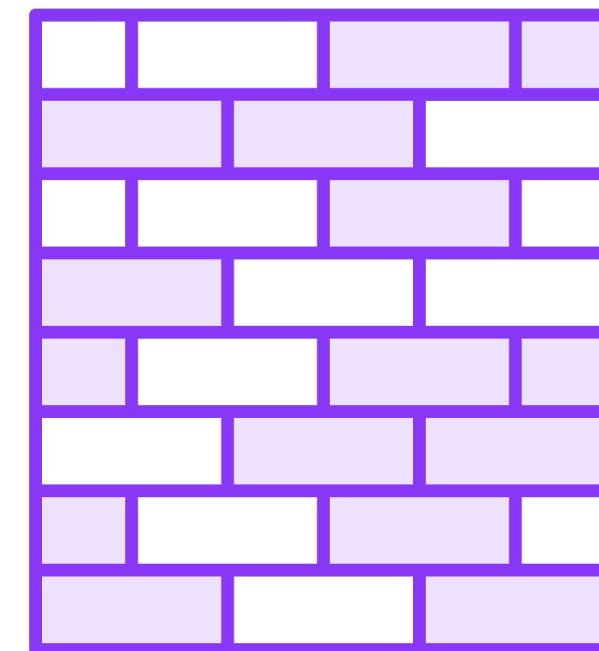
Runtime
Execute the code

Design Time and Runtime

Design Time

Write the code

You can define
classes and methods



Runtime

Execute the code

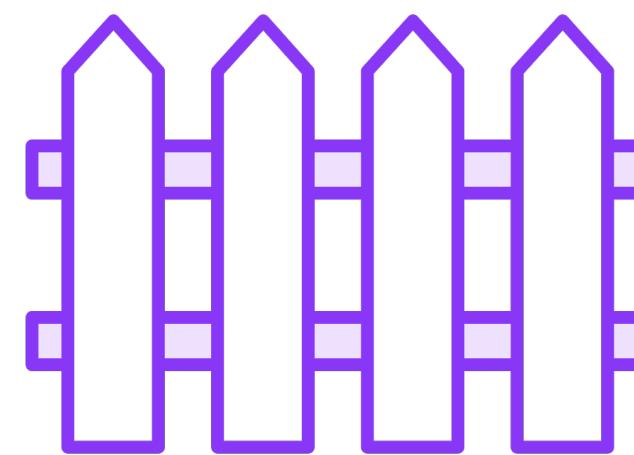
You can *use*
classes and methods

Design Time and Runtime

Design Time

Write the code

You can define
classes



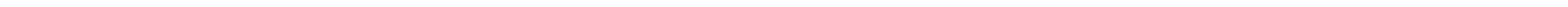
Runtime

Execute the code

You can also
define classes

Metaprogramming

Writing “code that writes code” – that is, code that modifies the constructs of the language at runtime.





A Metaprogramming Example

Peeking into the Database

reviews

	id	author	rating	text	movie_id	created_at	updated_at
	...	Filter	Filter	Filter	Filter	Filter	Filter
1	1	Paolo Perrotta	4	Hilarious and thoughtful.	1	2020-09-11...	2020-09-11...
2	2	Alberto Lompo	3	A smart little movie.	1	2020-09-11...	2020-09-11...
3	3	Paolo Perrotta	5	A modern classic that surprises you multiple times.	3	2020-09-11...	2020-09-11...

movies

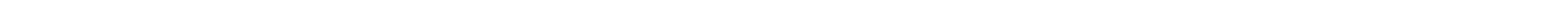
	id	title	year	director	created_at	updated_at
	...	Filter	Filter	Filter	Filter	Filter
1	1	Sword of Trust	2019	Lynn Shelton	2020-09-11...	2020-09-11...
2	2	Shoplifters	2018	Matsuzaki Kaoru	2020-09-11...	2020-09-11...
3	3	Parasite	2019	Bong Joon-ho	2020-09-11...	2020-09-11...



Domain Specific Languages

Domain Specific Language

A language that's specialized to a particular application domain, as opposed to a general-purpose language.



Ruby Is Great for DSLs Because...

...it has a flexible syntax

You can bend the syntax to look
like a different language

...it has metaprogramming

You can pack some interesting
tricks into a Ruby program



Too Much Power?

Metaprogramming is great
and dangerous.