

Types and Grammar

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Explicit and Implicit

[Link](#)

Type Coercion: Primitives

Built-ins

- `[[ToNumber]]`
- `[[ToString]]`
- `[[ToBoolean]]`

Any => Boolean

!!

[[ToBoolean]]

- Falsy values => false
 - NaN; +0, -0; undefined; null; “
- Others are true

Cases:

- Ternary Expression
 - If, for, while
 - || and &&
-

Boolean =>
Number

[[ToNumber]]

- False => 0
- True => 1

String $\langle == \rangle$
Number

+

→ If one of the operands is string
==> string

-, *, /

→ Coerces to number

Select Operators

[Link](#)

$a \ \&\& \ b \sim a \ ? \ b : a$

$a \ || \ b \sim a \ ? \ a : b$

Abstract comparisons

[Link](#)

==

→ $X == Y$

Abstract Comparisons

[Link](#)

Abstract Relational Comparisons

[Link](#)

Practice (GTU-primitives)

[Link](#)

Type Coercion: Reference Types

—

Reference \Rightarrow String |
Number

[Link](#)

Reference Type:

- Abstract Comparisons
- Abstract Relation Comparison
- $+$, $-$, $/$, $*$

[Link](#)

Practice (GTU-reference)

[Link](#)

JSON

(JavaScript Object Notation) is a lightweight data-interchange format

Date API

Research Work

