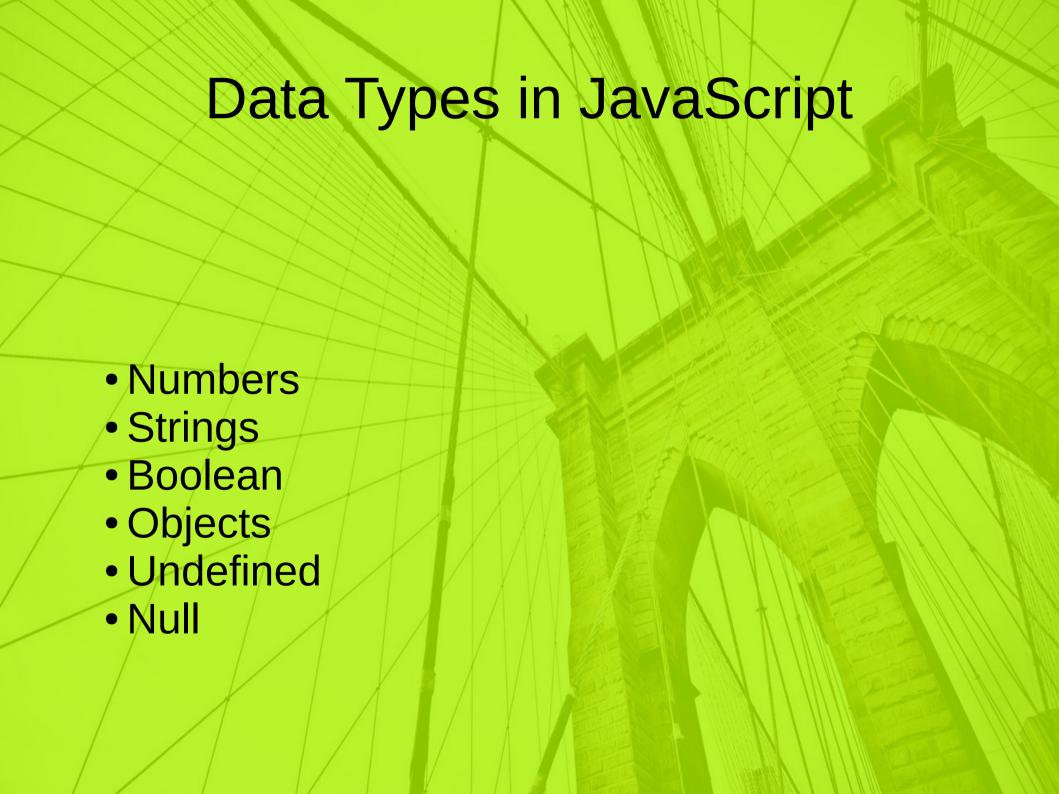# Couple-O-Points

- JavaScript is a "loosely typed" or "dynamic" language.

- So we don't have to declare type of a variable ahead of time.

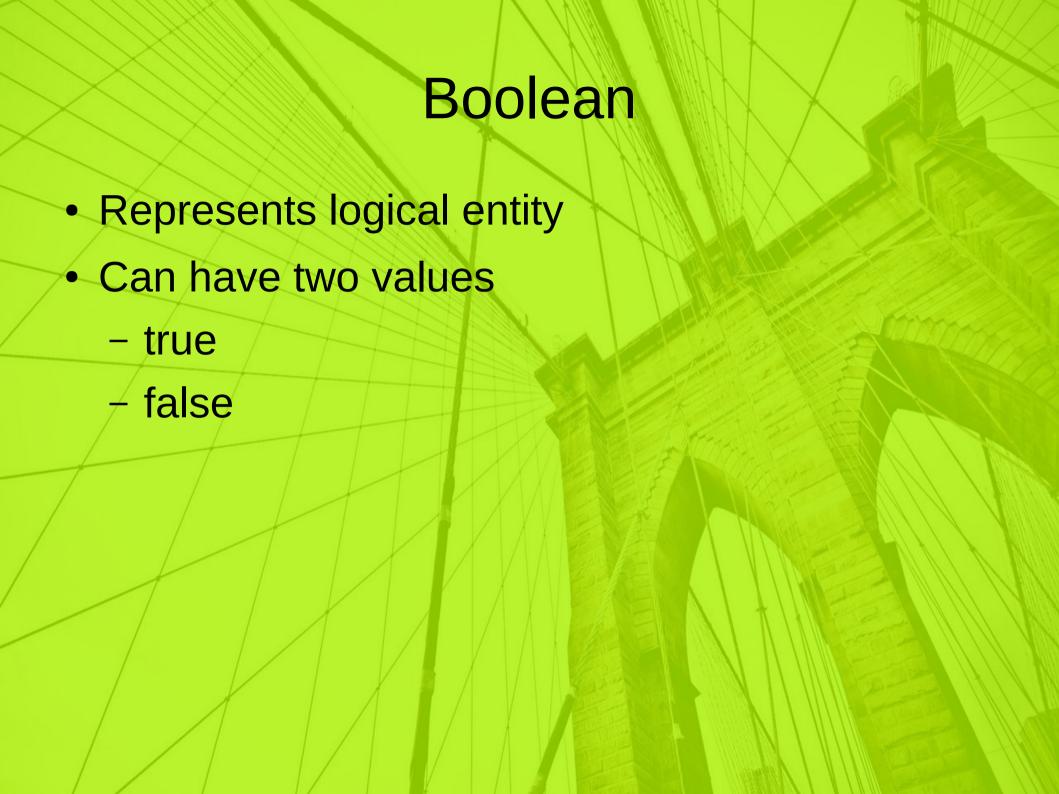- You can check the type of any variable using 'typeof' operator

Data Types in JavaScript

- Numbers
- Strings
- Boolean
- Objects
- Undefined
- Null

Numbers

- JavaScript has single number type
- It is represented as 64-bit floating point
- No separate type of Integer (like Java etc.)
- 2e3 means 2000 i.e 2 multiplied by 10 raised to the power after 'e' symbol.
- In addition, Number type also has three symbolic values
  - Infinity
  - -Infinity
  - NaN

Strings

- Set of "elements" of 16-bit unsigned integer values.
- Each element in the String occupies a position in String
- Strings are immutable
- Strings have methods, useful ones, like:
  - length()
  - ToUpperCase()
- New strings can be made using concatenation ('+') operator. Interesting case:
  - 'r' + 'a' + 'j' === 'raj'

Boolean

- Represents logical entity
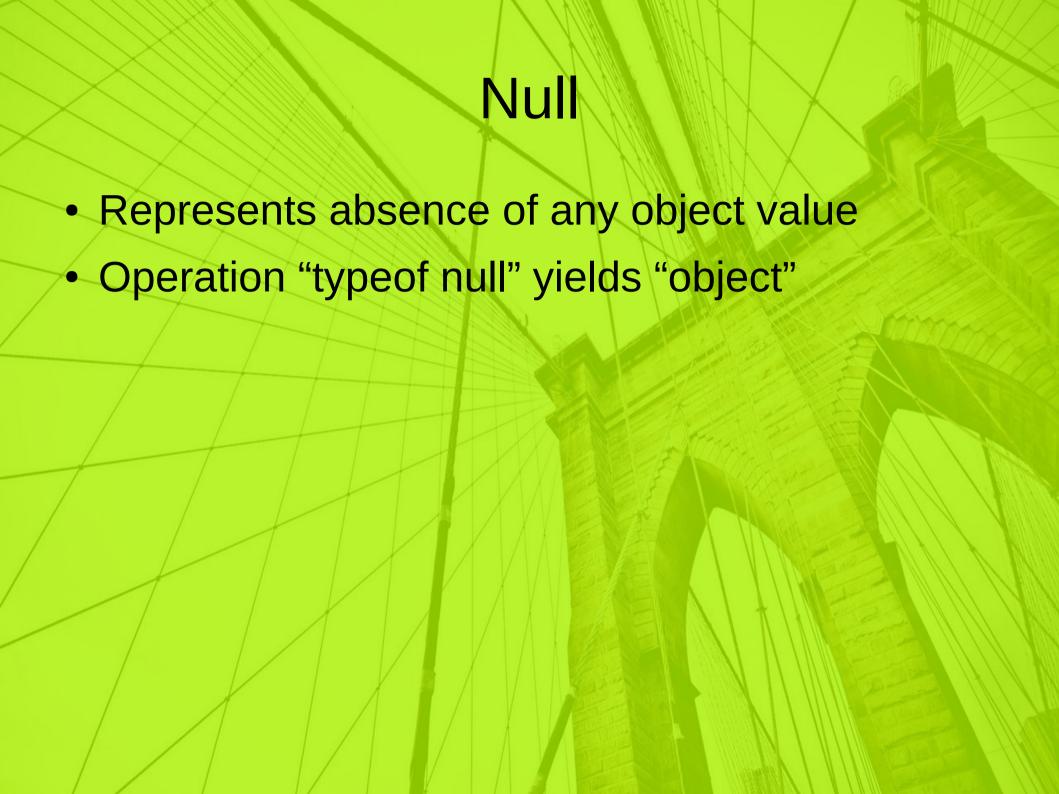- Can have two values
  - true
  - false

Objects

- Objects are collection of properties

- Properties can be removed and added, after object has been created

- Object is a mapping between keys and values

  - A key value is either a symbol or string value

  - Values can be of any type i.e Number, Boolean, Object etc

- Objects are mutable.

Undefined

- It's a property of global object

- A variable that has not been assigned a value is of type undefined.

- A function returns undefined if a value was not returned.

Null

- Represents absence of any object value
- Operation "typeof null" yields "object"

Exercise

- What are the differences between "null" and "undefined"?

- How would you test that a variable is defined and has a non-null value?

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- How would you test that a variable is defined and has a non-null value?