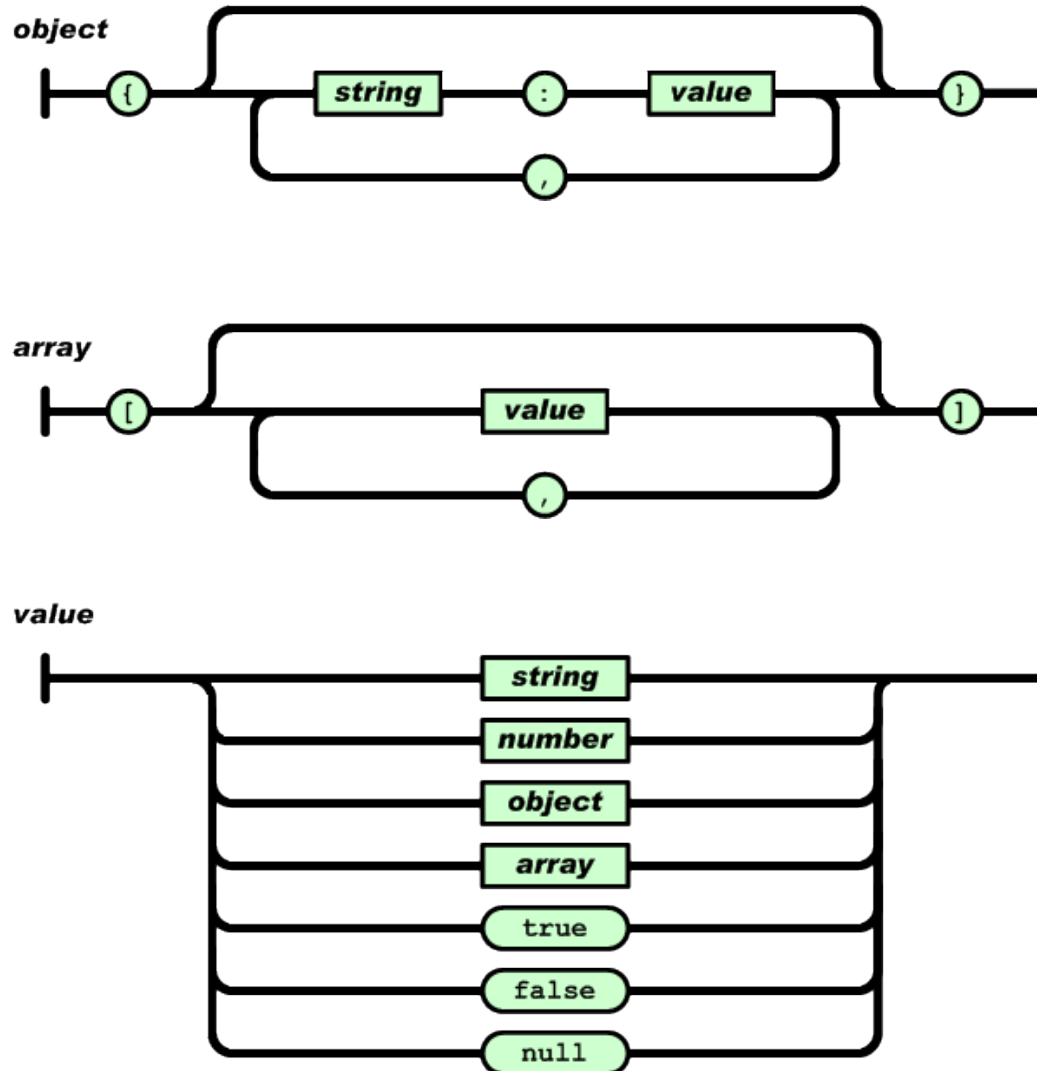# JSON

JSON as an XML Alternative

- JSON is a light-weight alternative to XML for data-interchange

- JSON = JavaScript Object Notation

  - It's really language independent

  - most programming languages can easily read it and instantiate objects or some other data structure

- Defined in RFC 4627

- Started gaining tracking ~2006 and now widely used

- http://json.org/ has more information

Example

```
{"firstName": "John",
 "lastName" : "Smith",
 "age"        : 25,
 "address"   :
   {"streetAdr" : "21 2nd Street",
    "city"        : "New York",
    "state"       : "NY",
    "zip"         : "10021"},
 "phoneNumber":
   [{"type"  : "home",
     "number": "212 555-1234"},
    {"type"  : "fax",
     "number" : "646 555-4567"}]
}
```

- This is a JSON object with five key-value pairs
- Objects are wrapped by curly braces
- There are no object IDs
- Keys are strings
- Values are numbers, strings, objects or arrays
- Ararys are wrapped by square brackets

The BNF is simple

Evaluation

- JSON is simpler than XML and more compact
  - No closing tags, but if you compress XML and JSON the difference is not so great
  - XML parsing is hard because of its complexity
- JSON has a better fit for OO systems than XML
- JSON is not as extensible as XML
- Preferred for simple data exchange by many
- Less syntax, no semantics
- Schemas? We don't need no stinkin schemas!
- Transforms? Write your own.
- [Worse is better](#)