JSON

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/](http://json.org/) has more information

Example

```json
{"firstName": "John",
"lastName": "Smith",
"age": 25,
"address": {
  "streetAddr": "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
- Arrays are wrapped by square brackets

The BNF is simple

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[Diagram of JSON BNF]

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### 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*