

CLOUD COMPUTING APPLICATIONS

Cloud Services

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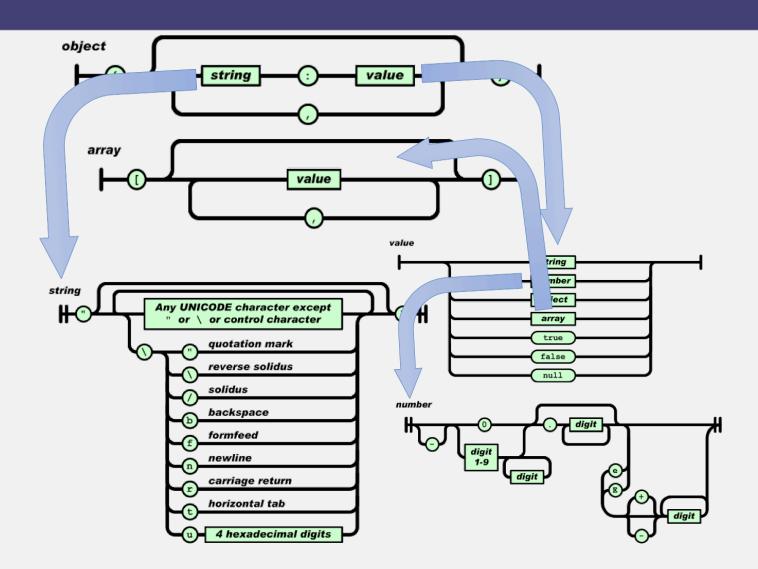
JSON - What Is It?

- "JSON (JavaScript Object Notation) is a **lightweight data interchange format**. It is easy for humans to read and write. It is easy for machines to parse and generate."
 - JSON.org
- Importantly: JSON is a subset of JavaScript

JSON - What Does It Look Like?

```
"firstName": "John",
                                       Name/value pairs
"lastName": "Smith",
"address": {
    "streetAddress": "21 2nd Street",
                                                           Child
    "city": "New York",
                                                            properties
    "state": "NY",
    "postalCode": 10021
"phoneNumbers": [
                                                       Number data
    "212 <u>555-1234</u>",
                                      String array
                                                       type
    "646 555-4567"
```

JSON Data Structures



JSON vs. XML

JSON	XML
Data Structure	Data Structure
No validation system	XSD
No namespaces	Has namespaces (can use multiples)
Parsing is just an eval •Fast •Security issues	Parsing requires XML document parsing using things like XPath
In JavaScript you can work with objects – runtime evaluation of types	In JavaScript you can work with strings – may require additional parsing
Security: Eval() means that if the source is not trusted anything could be put into it. Libraries exist to make parsing safe(r)	Security: XML is text/parsing – not code execution