Grading for Assignment #1

- Out of 100 points
- points off for not following directions

-4

- Name in wrong place
- Wrong dimensions in image or html
- no name, weird links
- Linking to whatever page had a picture on it

-35

- Bad link

- late penalty

Grading for Assignment #1

#	%	Answer Option
0/34	0%	Freshman (1st year)
0/34	0%	Sophomore (2nd year)
9/34	26%	Junior (3rd year)
21/34	62%	Senior (4th year)
4/34	12%	Post-Senior Undergrad (5th or more years)
0/34	0%	Grad Student
0/34	0%	Other
34/36	94%	*# of responses to this question*

4. What department are you in?

4.1.

#	%	Answer Option
9/36	25%	Computer Science
22/36	61%	Informatics
5/36	14%	Other
36/36	100%	*# of responses to this question*

Grading for Assignment #1

5. Are you fulfilling a requirement by taking this class?

#	%	Answer Option
29/36	81%	Yes
6/36	17%	No
1/36	3%	Don't Know
36/36	100%	*# of responses to this question*

8. I love programming.

#	%	Answer Option
5/36	14%	Strongly Disagree
3/36	8%	Disagree
8/36	22%	No Opinion
12/36	33%	Agree
8/36	22%	Strongly Agree
36/36	100%	*# of responses to this question*

9. I own or have owned a domain name.

#	%	Answer Option
18/36	50%	Yes
18/36	50%	No
0/36	0%	Don't Know
36/36	100%	*# of responses to this question*

Grading for Assignment #1

6. I have previously worked in a job related to technology?

#	%	Answer Option
6/36	17%	No
10/36	28%	A little (part-time)
14/36	39%	Some (< 2 years)
4/36	11%	A Lot (>= 2 years)
2/36	6%	I have worked previously full-time, but not in technology
36/36	100%	*# of responses to this question*

7. I am currently

7.1.

#	%	Answer Option
1/36	3%	Working a full-time job in addition to class
13/36	36%	Working a part-time job off-campus in addition to class
7/36	19%	Working a part-time job on-campus in addition to class
10/36	28%	Not working
5/36	14%	Other
36/36	100%	*# of responses to this question*

Grading for Assignment #1

- The next level of web 2.0. To me, web 3.0 is the generation of cloud computing, the combination of both online and offline world. Our personal electronics no longer have to rely heavily on its own but on bigger servers available through internet. Web 2.0 set the ground work of enhancing web environment and 3.0 is what brings the net to system level.

- The next "evolution" of the web where what you can do what you natively do on your computer (using the full capacity of your computer) on a web browser. I think it will be embraced when developers can have a fully functional IDE running completely through the web browser.

- I think that, instead of humans creating user-generated information (as in Web 2.0), Web 3.0 is about computers creating information.

11.1. C

#	%
1/35	3%
3/35	9%
6/35	17%
3/35	9%
6/35	17%
16/35	46%
35/36	97%

11.2. C++

#	%
3/36	8%
0/36	0%
8/36	22%
4/36	11%
8/36	22%
13/36	36%
36/36	100%

11.3. Java

#	%	Answer Option
14/36	39%	Very Comfortable
12/36	33%	Comfortable
3/36	8%	Okay
5/36	14%	A little uncomfortable
2/36	6%	Uncomfortable
0/36	0%	Absolutely no clue
36/36	100%	*# of responses to this*

Grading for Assignment #1

11.4. Python

#	%
0/35	0%
1/35	3%
4/35	11%
8/35	23%
4/35	11%
18/35	51%
35/36	97%

11.5. Javascript

#	%
1/36	3%
6/36	17%
4/36	11%
10/36	28%
3/36	8%
12/36	33%
36/36	100%

11.6. PHP

#	%	Answer Option
2/36	6%	Very Comfortable
4/36	11%	Comfortable
6/36	17%	Okay
5/36	14%	A little uncomfortabl
6/36	17%	Uncomfortable
13/36	36%	Absolutely no clue
36/36	100%	*# of responses to th*

11.7. HTML

#	%
8/36	22%
8/36	22%
10/36	28%
6/36	17%
2/36	6%
2/36	6%
36/36	100%

11.8. CSS

#	%	Answer Option
9/36	25%	Very Comfortable
2/36	6%	Comfortable
7/36	19%	Okay
6/36	17%	A little uncomfortable
1/36	3%	Uncomfortable
11/36	31%	Absolutely no clue
36/36	100%	*# of responses to this question*

Grading for Assignment #1

12. I have written a web page using a text editor before.

#	%	Answer Option
30/36	83%	Yes
6/36	17%	No
0/36	0%	Don't Know
36/36	100%	*# of responses to this question*

13. Google Maps is an example of AJAX

#	%	Answer Option
20/36	56%	Yes
0/36	0%	No
16/36	44%	Don't Know
36/36	100%	*# of responses to this question*

14. When I see the term "x= initXMLHTTPRequest();" I get freaked out.

#	%	Answer Option
3/34	9%	Strongly Disagree
13/34	38%	Disagree
11/34	32%	No Opinion
3/34	9%	Agree
4/34	12%	Strongly Agree
34/36	94%	*# of responses to this question*

Grading for Assignment #1

21. I have a smart phone.

#	%	Answer Option
29/36	81%	Yes
7/36	19%	No
0/36	0%	Don't Know
36/36	100%	*# of responses to this question*

24. I have a laptop.

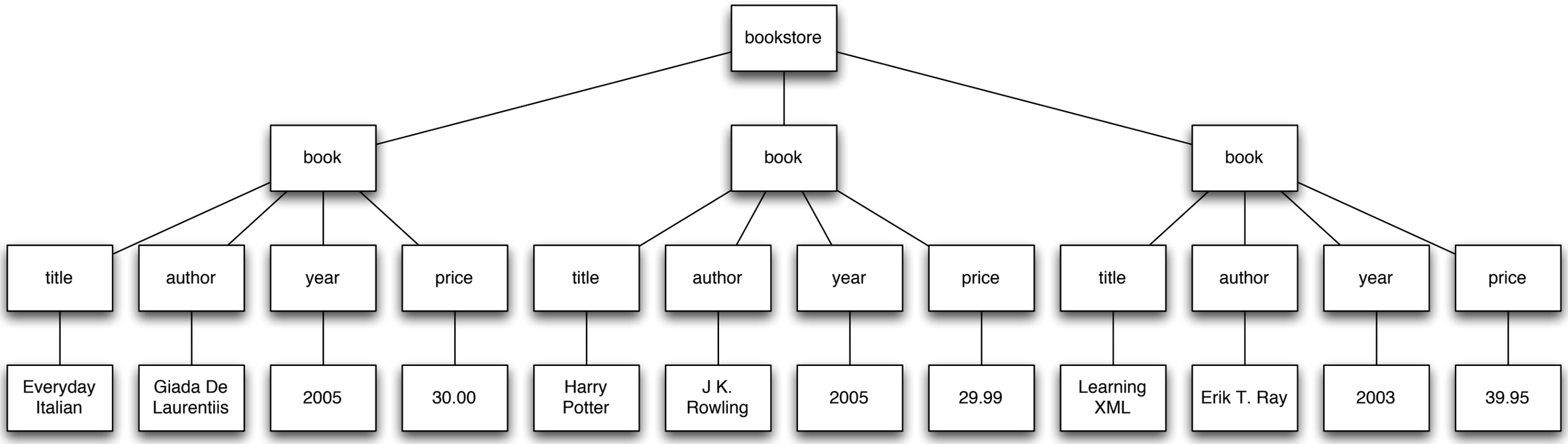
#	%	Answer Option
36/36	100%	Yes
0/36	0%	No
36/36	100%	*# of responses to this question*

User Interaction: XML and JSON

Asst. Professor Donald J. Patterson
INF 133 Fall 2011

- HTML, XML and JSON
  - Structured Data Formats that evolved with the web
  - Text with a syntax applied
  - They can represent a huge variety of information
  - They enable data transport
    - Different systems and technologies and programming languages depend on the syntax being standardized

```
<?xml version="1.0"?>
<note>
    <to>Tove</to>
    <from>Jani</from>
    <heading>Reminder</heading>
    <body>Don't forget me this weekend!</body>
</note>
```



- How is XML extensible?

JSON

- JSON
  - also structured text
  - also with a syntax applied
  - it can also represent a huge variety of information
  - It also enables data transport
    - Across systems, languages, and networks
- So what does JSON look like?

JSON


```
{
   "place":[
      {
         "suggestion":"at home",
         "meta":{
            "id":"null",
            "index":0
         },
         "size":"20.0"
      }
   ],
   "activity":[
      {
         "suggestion":"working",
         "meta":{
            "id":"null",
            "index":2
         },
         "size":"10.558333333333334"
      },
      {
         "suggestion":"sleeping",
         "meta":{
            "id":"null",
            "index":3
         },
         "size":"10.0"
      }
   ],
   "other":[
      {
         "suggestion":"(do not disturb)",
         "meta":{
            "id":"null",
            "index":1
         },
         "size":"10.0"
      }
   ],
   "error":[
      "false"
   ]
}
```

JSON

- What is JSON?
  - JSON stands for “JavaScript Object Notation”
  - JSON was designed to pass data around between browsers and servers
  - JSON has no tags, only data
  - JSON has no meta-data

JSON

- JSON also does not DO Anything
  - It is a data format
  - A program must be written to manipulate the data
    - To search the data
    - To display the data
    - To change the data

JSON

- JSON was developed by people who thought that the meta-data in XML was
  - unnecessary
  - too big
  - too hard to maintain
  - not that valuable

JSON

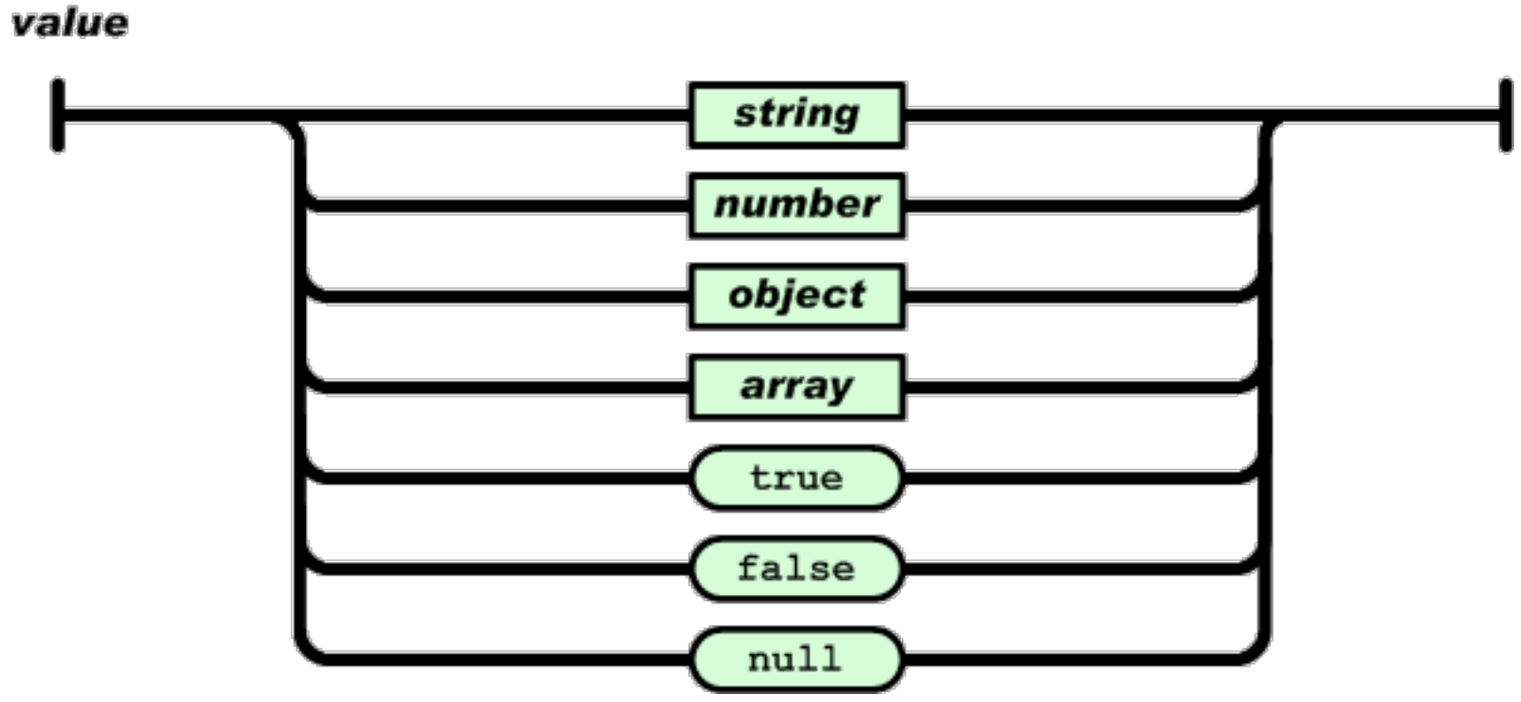
http://json.org/

- Details
  - Two basic structures
    - object:
      - name/value pairs
      - think Map
    - array
      - list of values
      - think List

JSON

http://json.org/

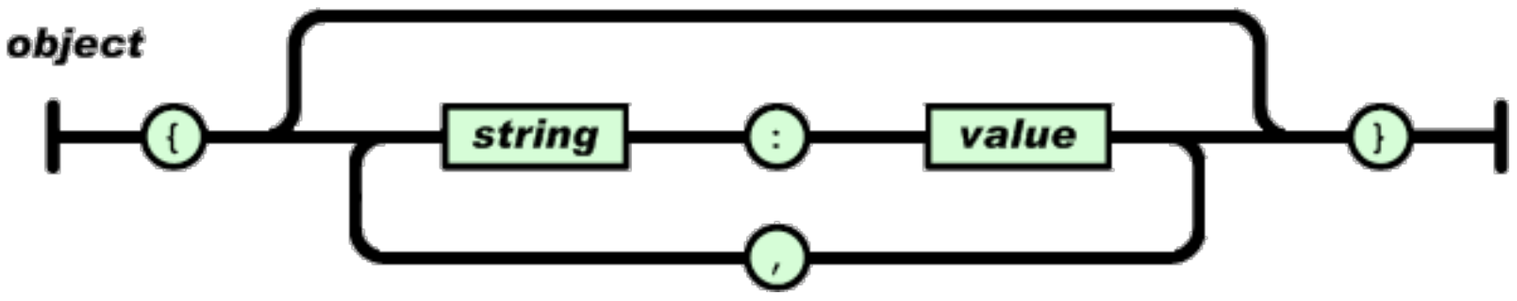
- Details
  - The basic type is a value which can be
    - a string
    - a number
    - an object
    - an array
    - “true”
    - “false”
    - “null”



JSON

http://json.org/

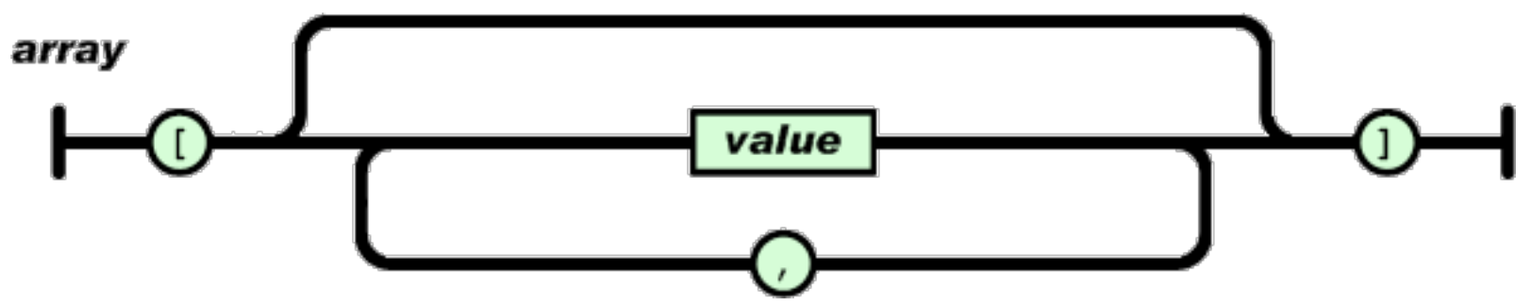
- Details
  - Object
    - Delimited by curly braces
    - name/values are separated by colons
    - elements are separated by commas
      - names are always strings
      - values are always values



JSON

http://json.org/

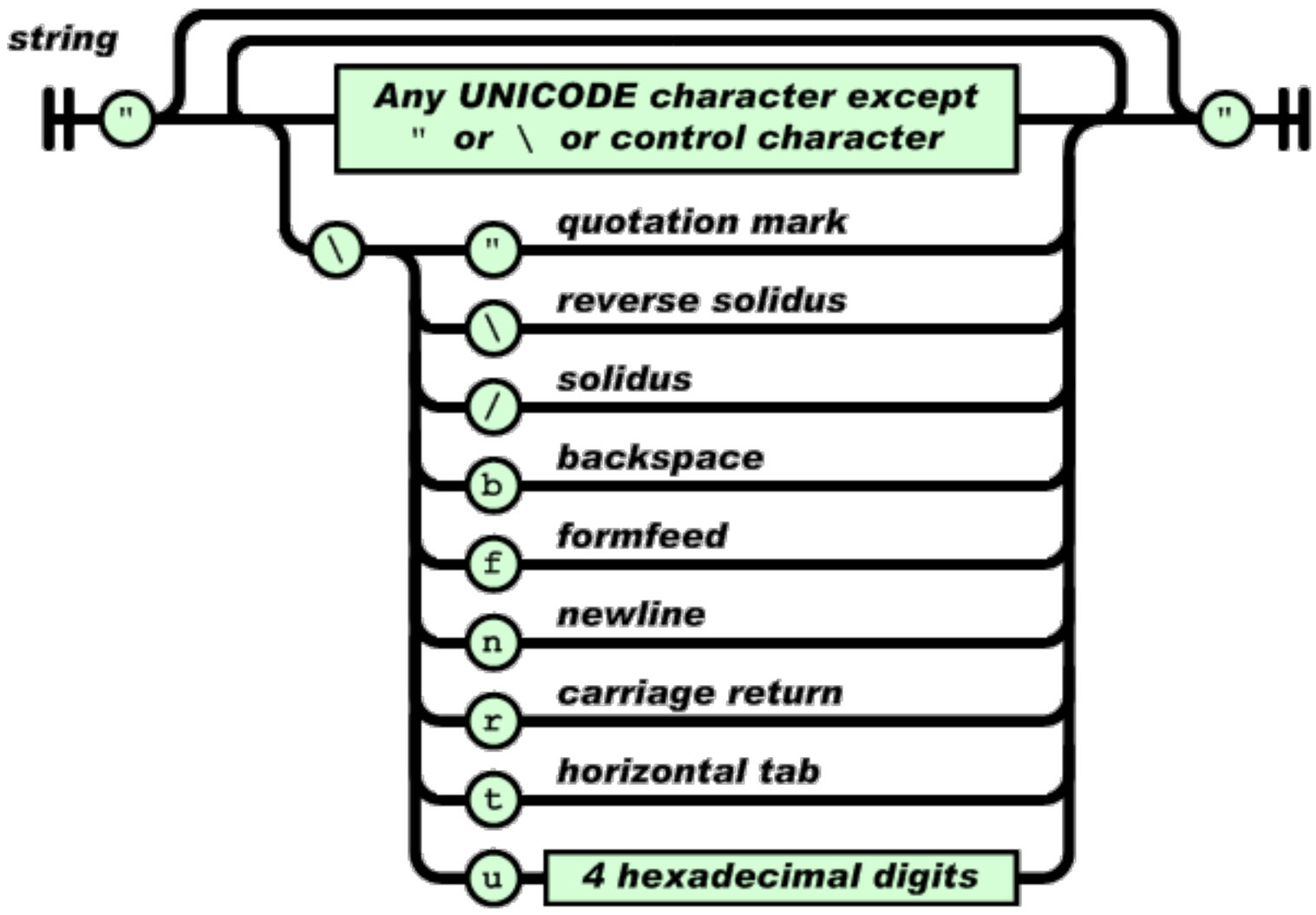
- Details
  - Array
    - Delimited by square braces
    - elements are separated by commas
      - elements are always values



JSON

http://json.org/

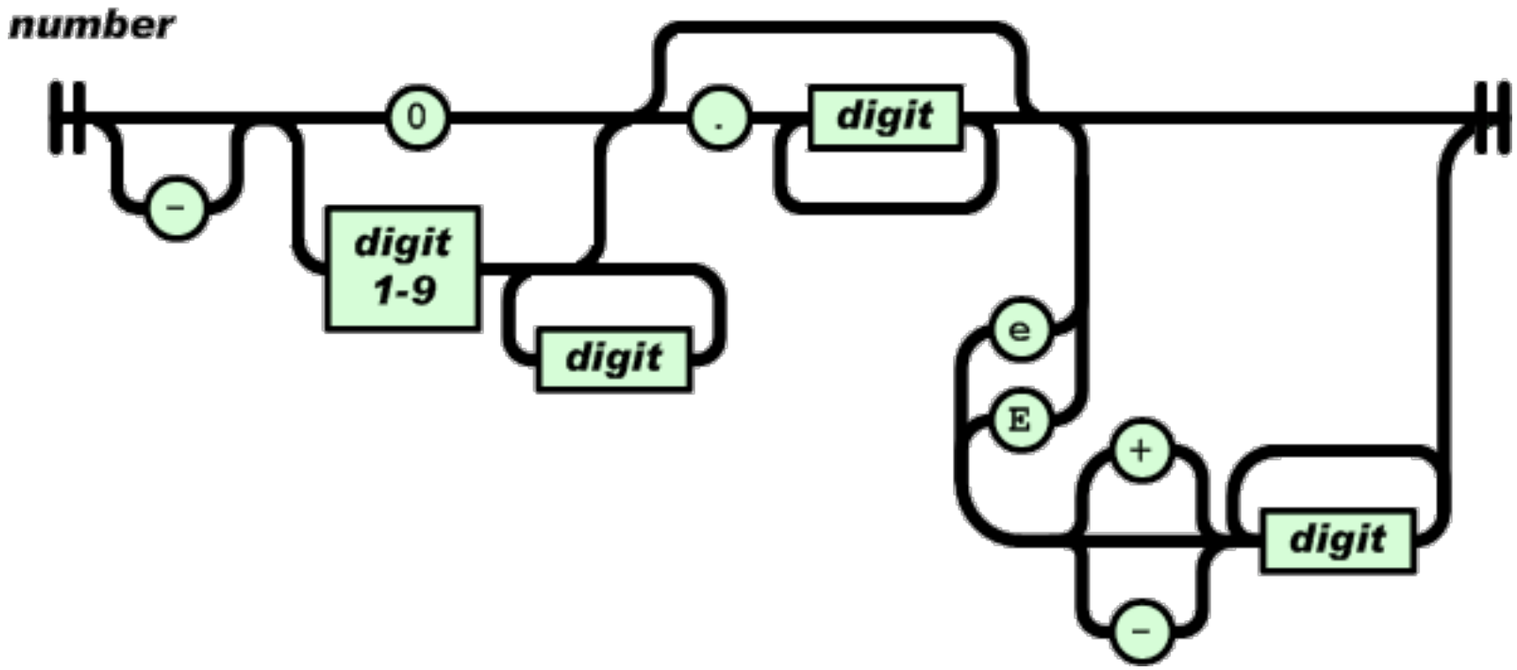
- Details
  - String
    - is UNICODE
    - is always in double quotes
    - uses \ escape sequences



JSON

http://json.org/

- Details
  - Number



JSON

http://json.org/

- Details
  - White space outside of quotes is ignored

JSON


```
{
   "place":[
      {
         "suggestion":"at home",
         "meta":{
            "id":"null",
            "index":0
         },
         "size":"20.0"
      }
   ],
   "activity":[
      {
         "suggestion":"working",
         "meta":{
            "id":"null",
            "index":2
         },
         "size":"10.558333333333334"
      },
      {
         "suggestion":"sleeping",
         "meta":{
            "id":"null",
            "index":3
         },
         "size":"10.0"
      }
   ],
   "other":[
      {
         "suggestion":"(do not disturb)",
         "meta":{
            "id":"null",
            "index":1
         },
         "size":"10.0"
      }
   ],
   "error":[
      "false"
   ]
}
```

JSON

http://json.org/

- Supported languages
  - ASP, ActionScript, C, C++,C#,ColdFusion, D, Delphi, E, Eiffel, Erlang, Fan, Flex, Haskell, haXe, Java, JavaScript, Lasso,Lisp,LotusScript, Lua, Objective C, Objective CAML, OpenLaszlo, Perl, PHP, Pike, PL/SQL,PowerShell, Prolog, Python, R, Realbasic, Rebol, Ruby, Squeak, Tcl, Visual Basic, Visual FoxPro

JSON

- On beyond JSON
  - JSON validation tools are easy to find
  - No defined schema language
  - No built-in namespaces (no meta-data!)
  - No built-in transformation languages

XML vs JSON

- XML is like a Ferrari
  - A Ferrari will get you to Las Vegas faster
- JSON is like a good bicycle
  - A bicycle can go off-road

- XML is beautiful and powerful
- XML is well-engineered and well-researched
- JSON is much lighter weight
- JSON is easier to just get going fast

JSON vs XML

http://www.secretgeek.net/json_3mins.asp

- JSON is like XML
  - They are both human-readable text
  - They are both hierarchical/ tree-structured
  - Both can be parsed and used in many languages
  - Both can be passed in AJAX requests
    - (despite the X in AJAX)

JSON vs XML

http://www.secretgeek.net/json_3mins.asp

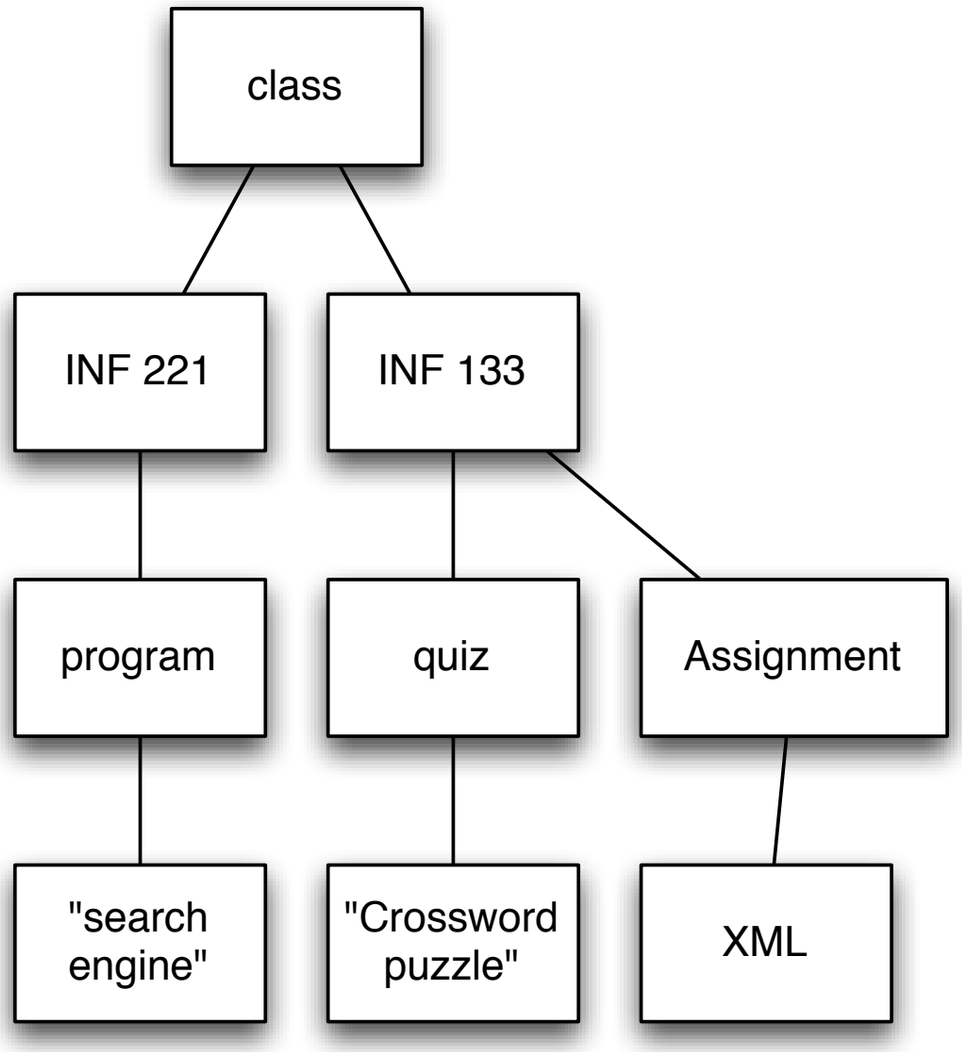
- JSON is different than XML
  - JSON does not have tags
  - JSON is less verbose
    - quicker to write
    - quicker to read
    - quicker to transport
- JSON can be parsed trivially using the eval() procedure in Javascript
- JSON has arrays, XML does not
- XML is extensible JSON usually isn't

JSON vs XML

http://www.secretgeek.net/json_3mins.asp

- Using either looks like:
  - get the JSON/XML string
  - convert it to a data structure
    - JSON -> eval()
    - XML -> some parse function (lib dependent)
  - Use the data
- Do not process either type of data by “hand”.
  - input: Use a library to parse the data
  - output:
    - Create the data in native data structures
    - Use a program or method to output the data structure in JSON/XML

Example

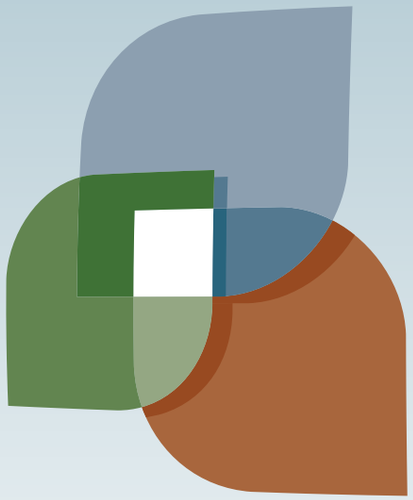


- Represent this as
  - XML
  - JSON
- There is not an absolutely correct answer to how to interpret this tree in the respective languages.
- There are multiple ways to interpret what this tree means.

Example

```
<?xml version="1.0"?>
<class>
  <INF_221>
    <program>
        search engine
    </program>
  </INF_221>
  <INF_133>
    <quiz>
        crossword puzzle
    </quiz>
    <Assignment>
      <XML/>
    </Assignment>
  </INF_133>
</class>
```

```
{
    "class": {
        "INF 221": {
            "program": "search engine"
        },
        "INF 133": {
            "quiz": "Crossword puzzle",
            "Assignment": "XML"
        }
    }
}
```



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