JSON

Ultimate JavaScript Objects

WHAT IS JSON? (*JAY–SONN*)

- **J**avaScript **O**bject **N**otation
- Means of encoding data in object or array format
- Looks identical to Object Literal Notation
- Can store certain properties…
  - String
  - Float
  - Null / Undefined
  - Boolean
  - Object / Array
- But not…
  - Functions
  - References

```
{"a":1,"b":"Jon"}
```

WHY JSON?

- Turns any object into a string
- Can be transmitted efficiently across HTTP
- Responses sent from server in JSON do not need to be heavily parsed by JavaScript
- Data models resemble related code (less confusion)
- Format of choice for REST applications

JSON VS XML

JSON

- Brief
- Easy to read
- Non-repetitive
- Drag and drop into any JavaScript application

XML

- Verbose
- Confusing
- Must repeat element names
- Requires hefty XML parsing applications
- Extra layer of confusion if not transformed correctly

SERIALIZING JAVASCRIPT OBJECTS

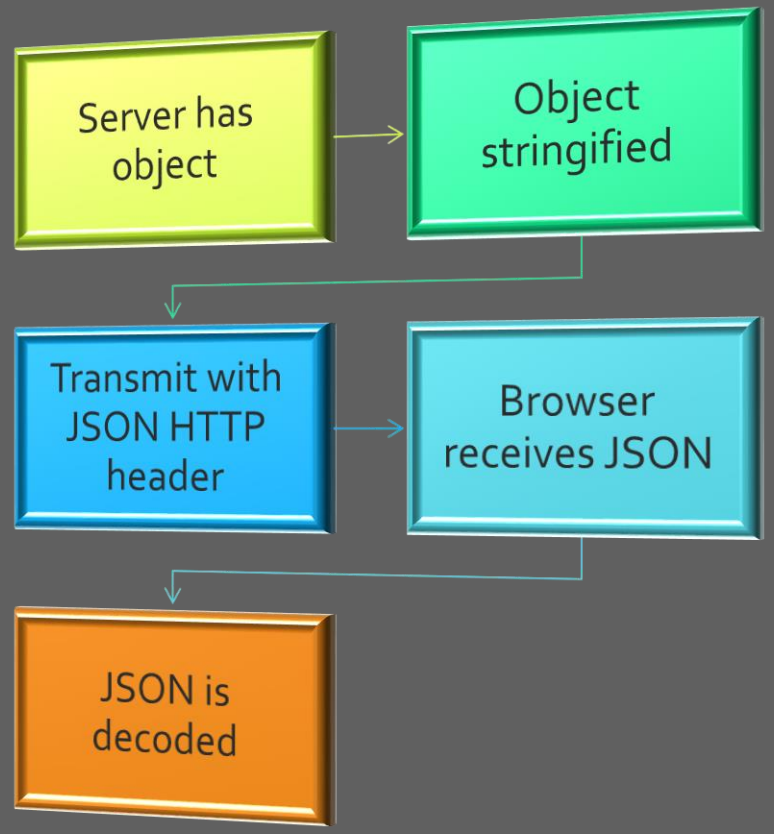
- Turning JavaScript objects into strings (or JSON) is called serializing
- Can be done with built-in JSON module
- Some properties cannot be serialized
- Serialized JavaScript objects can be sent across HTTP connections

PARSING JSON

- Parsing (or de-serializing) JSON turns it into a JavaScript object
- Only valid JSON can be parsed
- Also accomplished with built-in JSON module

TRANSMITTING JAVASCRIPT OBJECTS WITH HTTP

- Perfect for Node.js backend
- Minimal formatting required
- Express can be used to transmit JSON with built-in functions



JSON CONCLUSION

- JSON is lightweight and versatile
- Extremely easy to use in any JavaScript environment
- Good choice for communication between browser and server
- Easily parsed and stringified with JSON module