JSON: Java Script Object Notation

- Is a communication language for a machines like HTTP
- Is a lot cleaner than HTTP.
- JSON and HTTP can have the same functionality
- Takeaway: JSON is a lot easier to read than HTML
- Example 1:
    - {
        - “name” : “Bob”
        - “Age”: 32
        - “Children”: [“Sally”, “Sam”]
        - “House”: {
- Example 2

```
{
    Tables: 8
    Menu:[
        {
            price: 18
            Name: pasta
        }
        {
            name: burger
            Price: 12
        }
    ],
    Location: {
        Street:
        State:
        Zip:
    }
}
```

HTTP Request

- HTML(show things) or JSON(send data)

Python

- Is similar to java but do not have to declare types like in java
- No brackets, heavy on indentation
  Ex.
    - Java: Int x = 5, String name = “Bob”
    - Python: x = 5, name = Bob

Databases

- If you shut down your computer you will lose all your data,

- Databases are these big machines that have the job of just storing content
- SQL
    - Stored in tables
- NoSQL
    - Stored in JSON
    - No tables

MongoDB

- No SQL database using JSON formats
    - No tables
- Flexible
- Lower latency

Response/Request

- Three parts: Browser, Server, Database
- Browser: Sends the requests and loads the data
- Server: Receives requests, then sends the data back to the browser after verification
- Database: Stores the data (ie your password and data)
- Verification takes place in the server
- If verified the data is sent to the Browser

GOAL: We're going to build servers

HOW TO SETUP A SERVER

python3 -m venv newenv

pip install flask

HOW TO GET AN EXISTING SERVER RUNNING

1. First direct into directory of new_server
2. source newenv/bin/activate -- enter virtual system
3. nano firstserver.py -- open <file> in nano editor
4. export FLASK_APP=firstserver.py && flask run -- run the server
5. deactivate -- exit back to computer