

HTTP / Backend

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Who am I?

- Faculty of Information Technologies
- Alumni of BEST
- MSS employee
- +2y Development experience

Agenda

- About HTTP
- History of HTTP
- How the Web works
 - Web protocol
- CODE
 - BasicJS
 - BasicNode
 - BasicNodeExpressJS
 - BasicNodeMongoose
 - Basic Vue app

HTTP

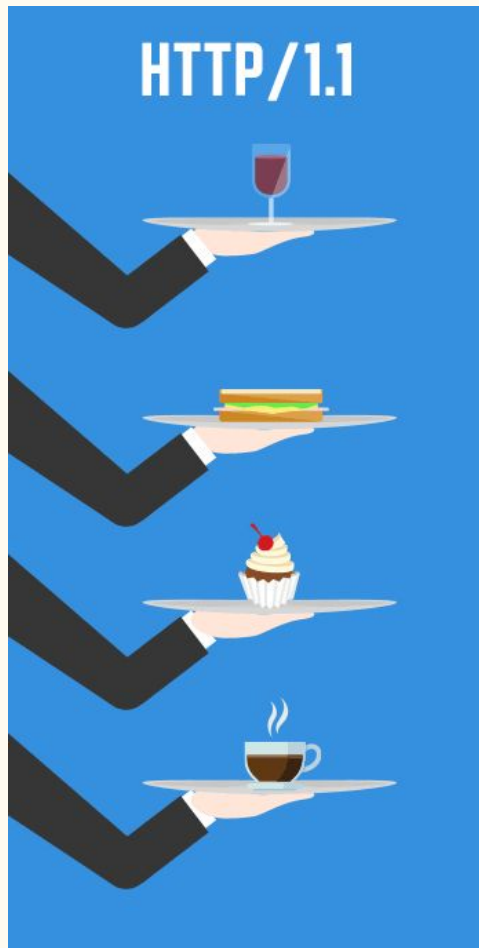
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HTTP

- **H**ypertext **T**ransfer **P**rotocol
- Application layer (7 OSI Model)
- TCP/IP 80/443
- Messenger of the web
- Client/Server

History

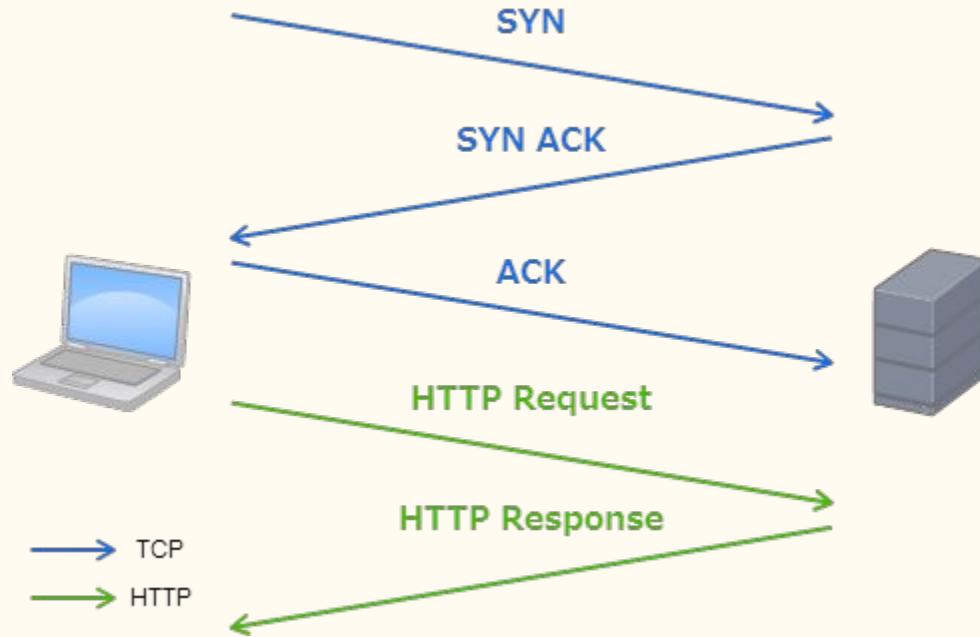
- HTTP v0.9 1991
- Mainly idea for transferring paper research
- HTTP/2 May 15



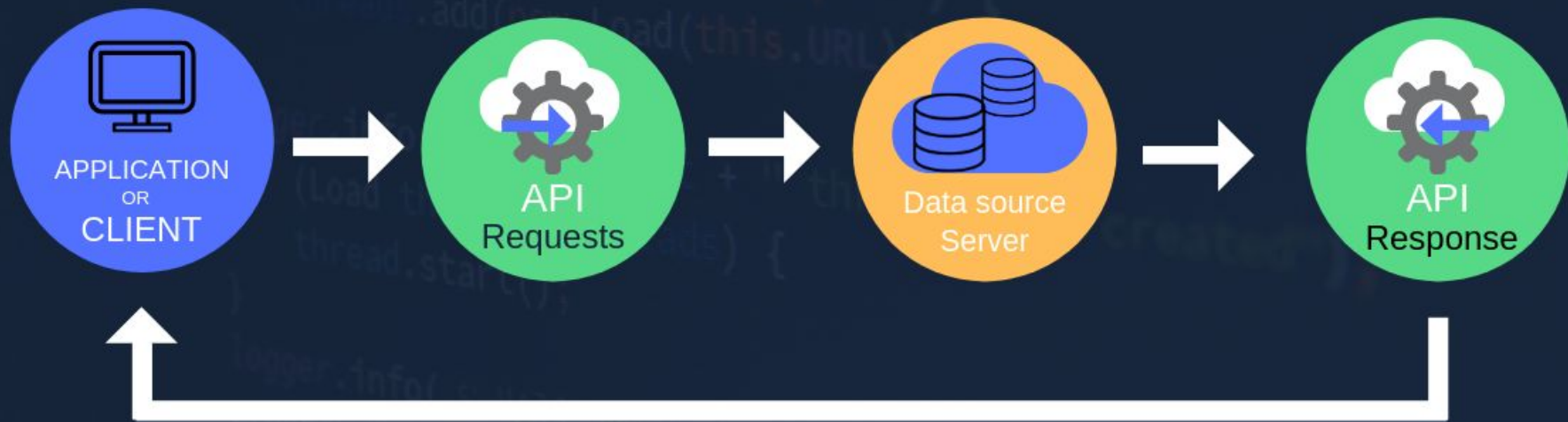
How the Web works

- Connectivity
- **Application Programming Interface**
 - In computer programming and API is set of routines
 - Waiter
 - Methods/Verbs [POST,GET,PATCH,PUT,DELETE, ... rest]
- Kiwi vs WizzAir
- Flow -?

3 way handshake



How API Works?



Request && Response

START LINE

HEADERS

BODY



CONTAIN PLAIN TEXT INFORMATION

Request

METHOD
VERB

URI

VERSION

GET

/bandits

HTTP1.0

HEADERS

BODY

Origin: http://localhost:3500
Referrer: http://localhost:3500
User-Agent: Mozilla/5.0 (X11; Linux
x86_64) AppleWebKit/537.36
(KHTML, like Gecko) snap
Chromium/74.0.3729.131
Chrome/74.0.3729.131 Safari/537.36

Response

RESPONSE CODE

VERSION

200: OK

HTTP1.0

HEADERS

Host: http://localhost:3500
Accept: text/html

BODY

bandits.html

RESTful API schema

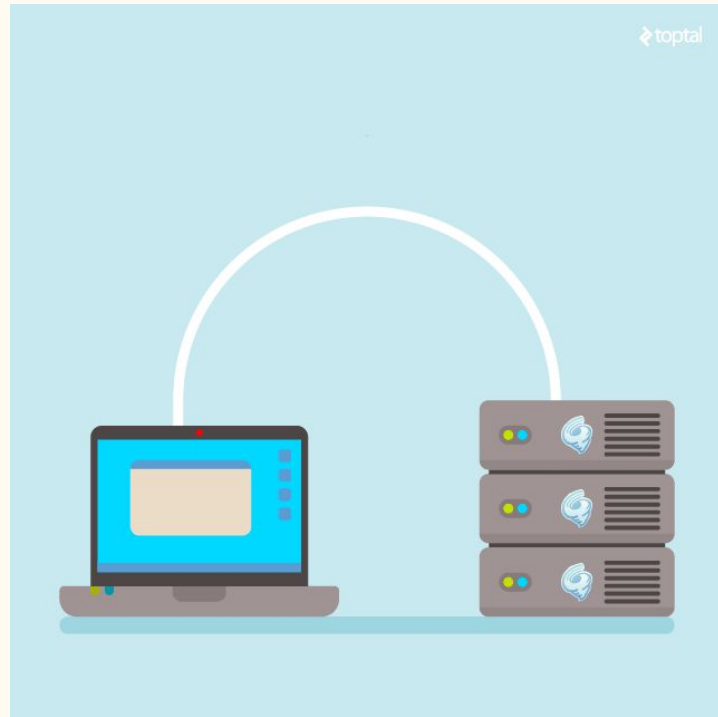
- | • | METHOD | URI | Description |
|---|-----------|--------------|---------------------------|
| • | GET | /bandits | Get list of bandits |
| • | GET | /bandits/:id | Get bandit by its ID |
| • | POST | /bandits | Create new bandit |
| • | PUT/PATCH | /bandits | Update an existing bandit |
| • | DELETE | /bandits | Delete all bandits |

3 important things

1. **Connectionless** request, server re-establish connection again and deliver the response.
2. HTTP can deliver any sort of data as long as the two computers are able to read it
3. HTTP is a stateless: The client and server know about each other just during the current request.
When connection is closed, if computers want to connect again, they need to provide information to each other anew, and connection is handled as the very first one

Web Sockets

- Application layer
- Works on 80 & 443 port
- Connection opened



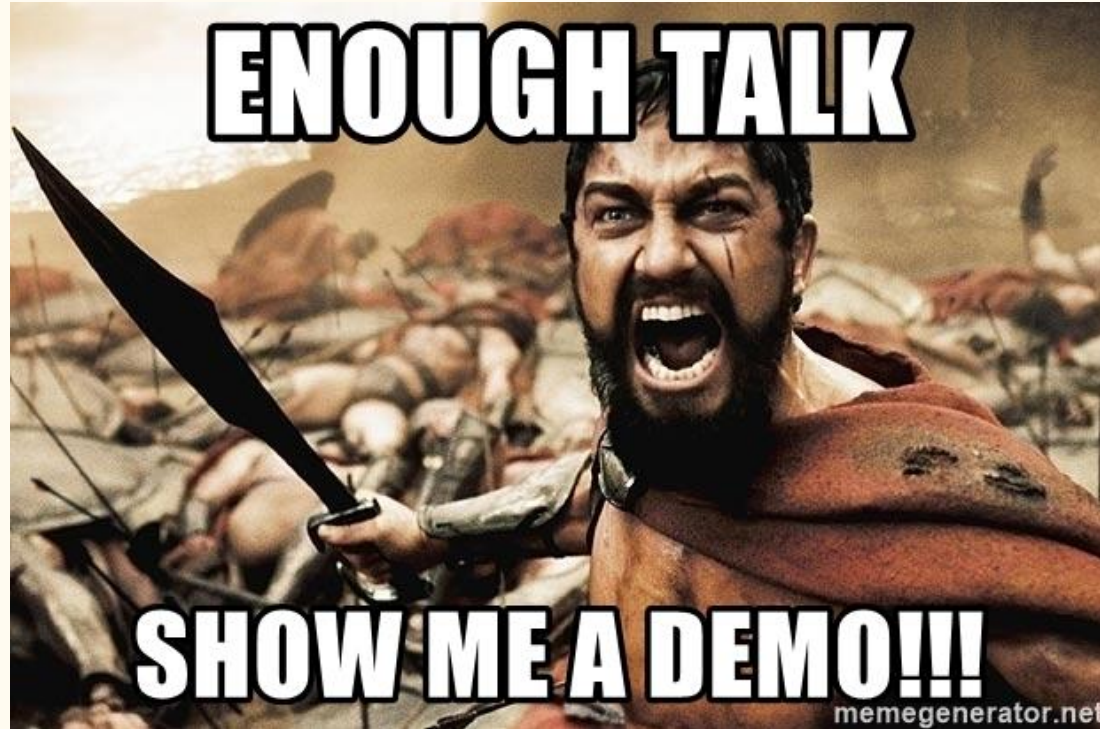


Backend

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CODE



Tools

- Visual Studio Code
- MongoDB <https://www.mongodb.com/cloud/atlas>
- Node / NPM

Thank you



<https://github.com/MedoDome/WebDevRedemption>



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