Intro to Web Development Using Python/Flask

By: Kaushal Parikh
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Who am I?

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Web Developer @ The Internet

Overview

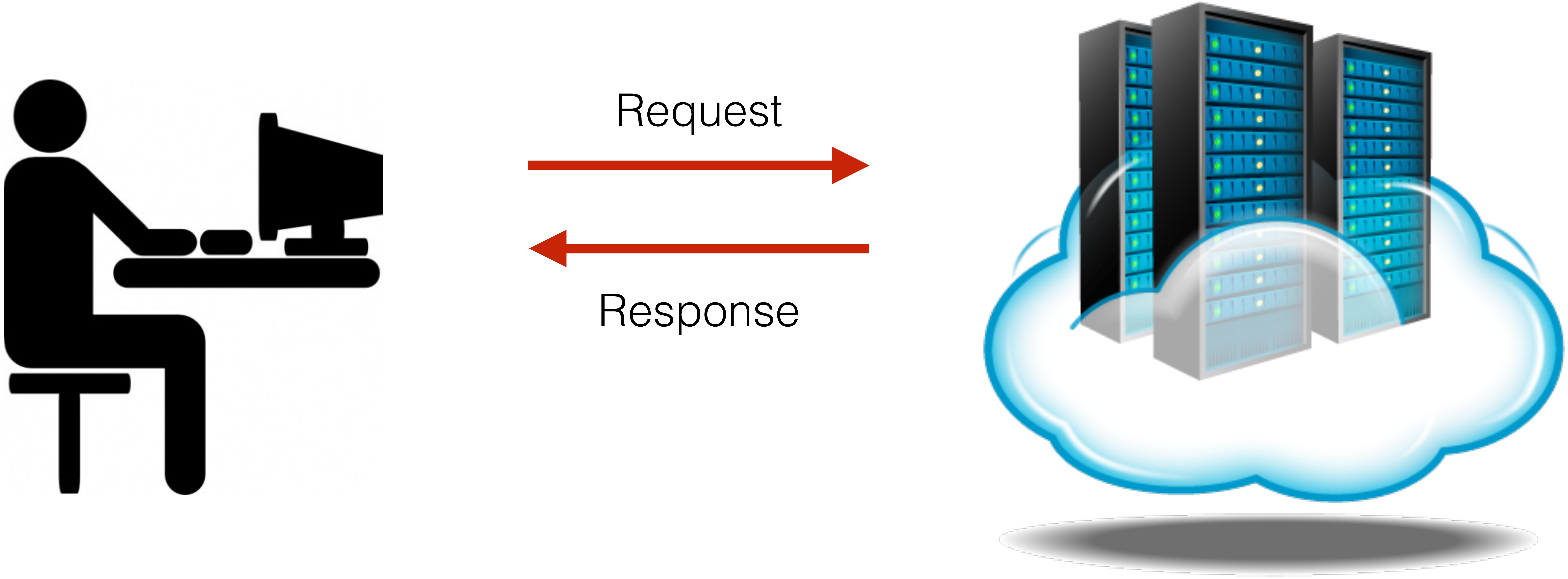
What is a web application?

Buzzwords/Terms: HTTP, REST, CRUD, Middleware, etc.

Data flow through web applications

How requests/responses work

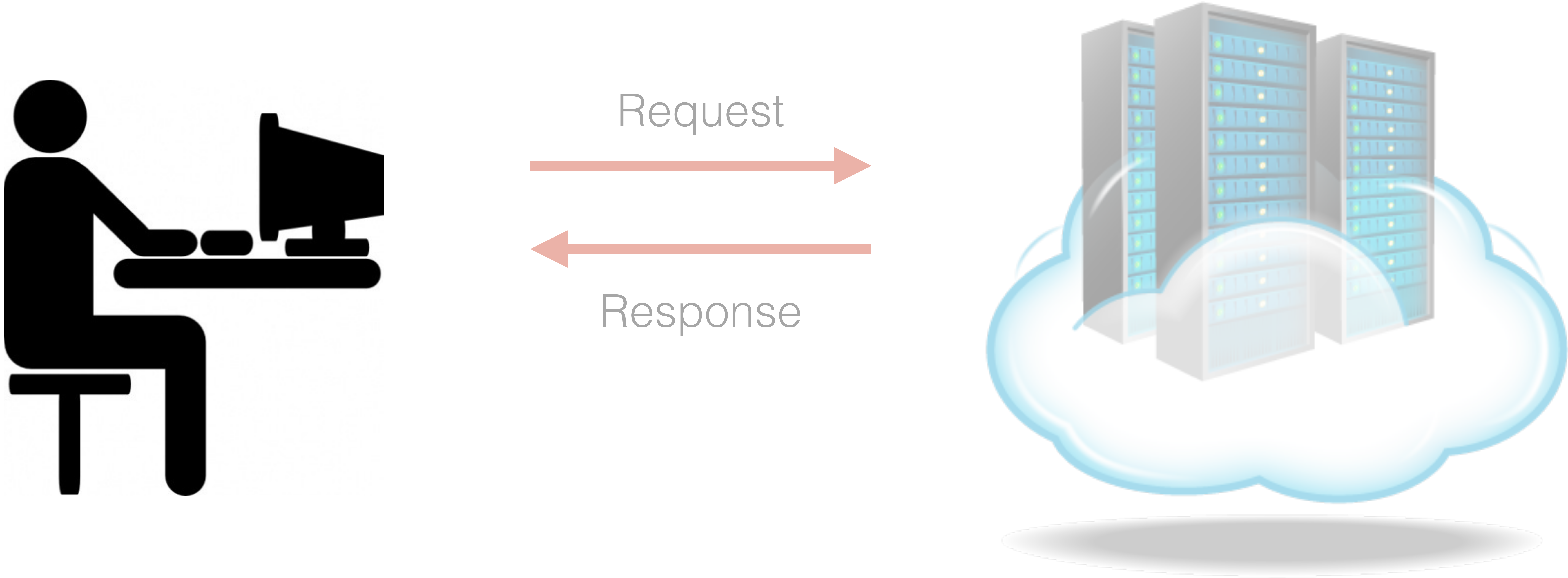
What is a web application?



Request

Response

The User



Request

Response

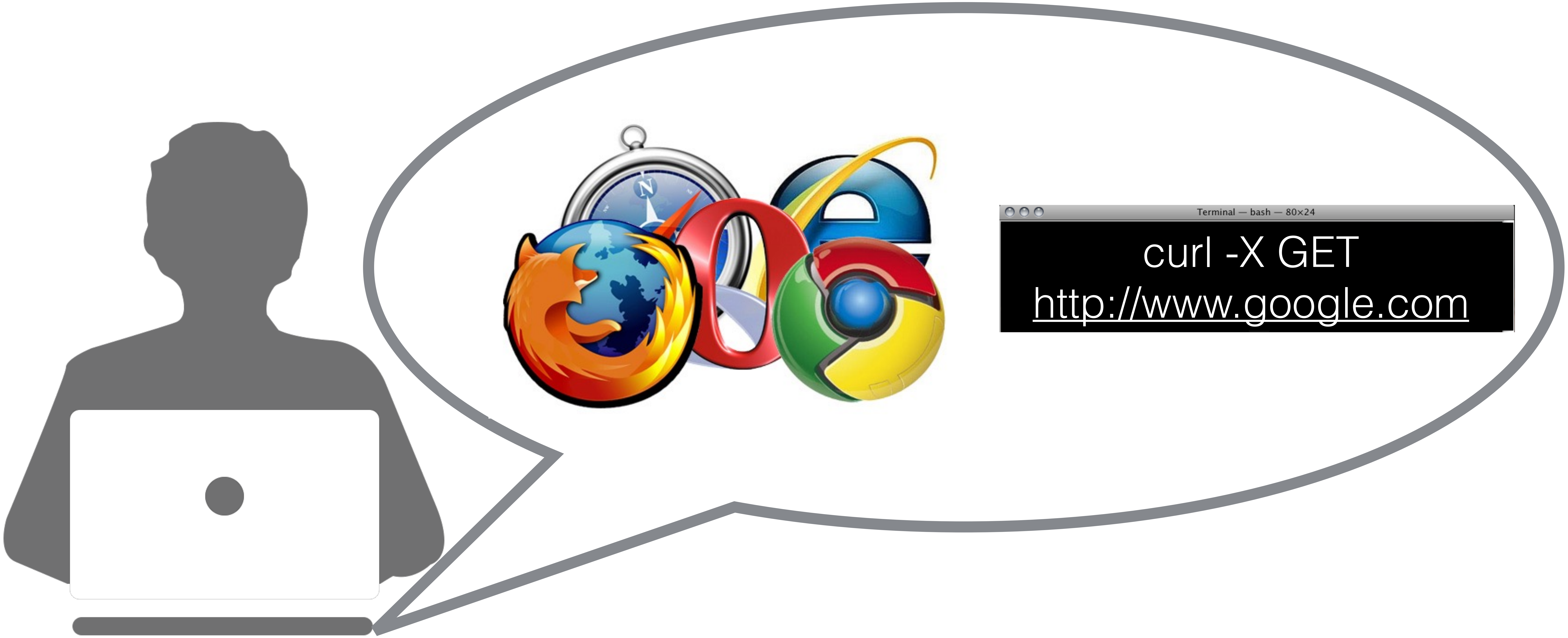
Your User

Makes requests

- Typing in a url, form submissions, button clicks

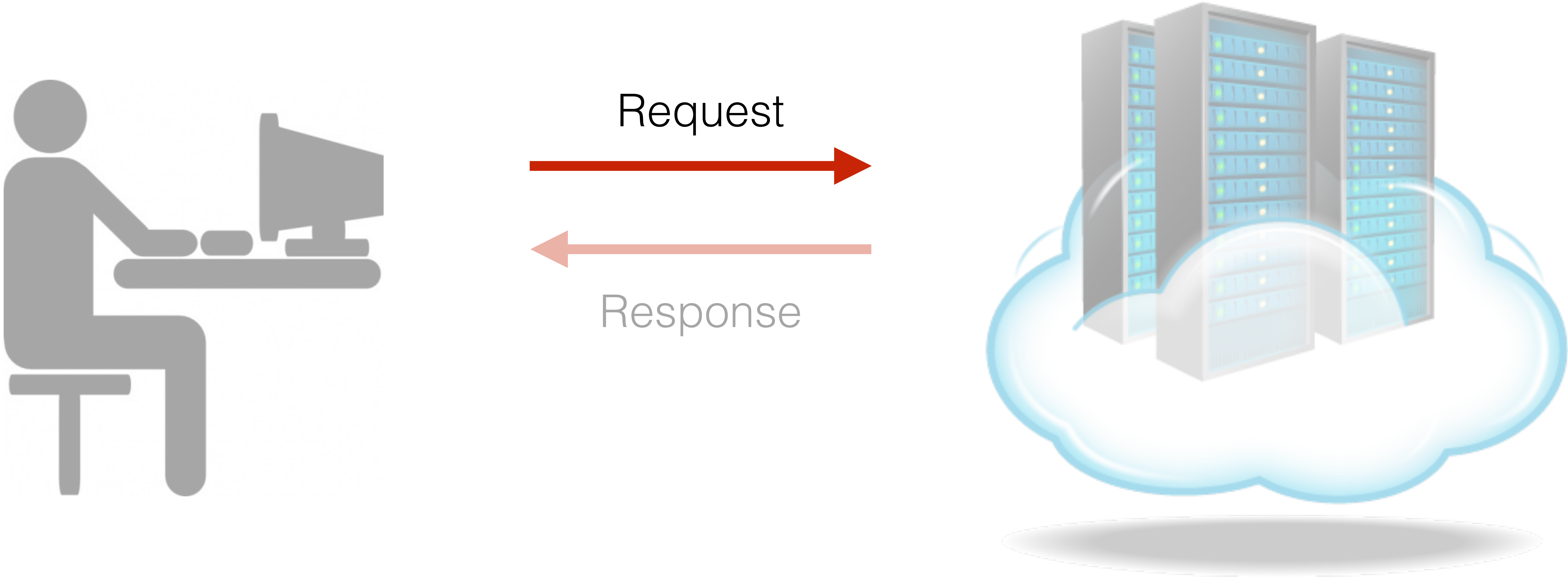
Receives responses

Displays content



```
curl -X GET
http://www.google.com
```

The Request



Request

Response

The Request

Made over HTTP

Uses the HTTP methods

Typically uses the Rest Paradigm

HTTP

Hyper Text Transport Protocol

Verbs:

Commonly Used

GET
POST
PUT
DELETE

Less Commonly Used

TRACE
CONNECT
OPTIONS
PATCH
etc.

REST

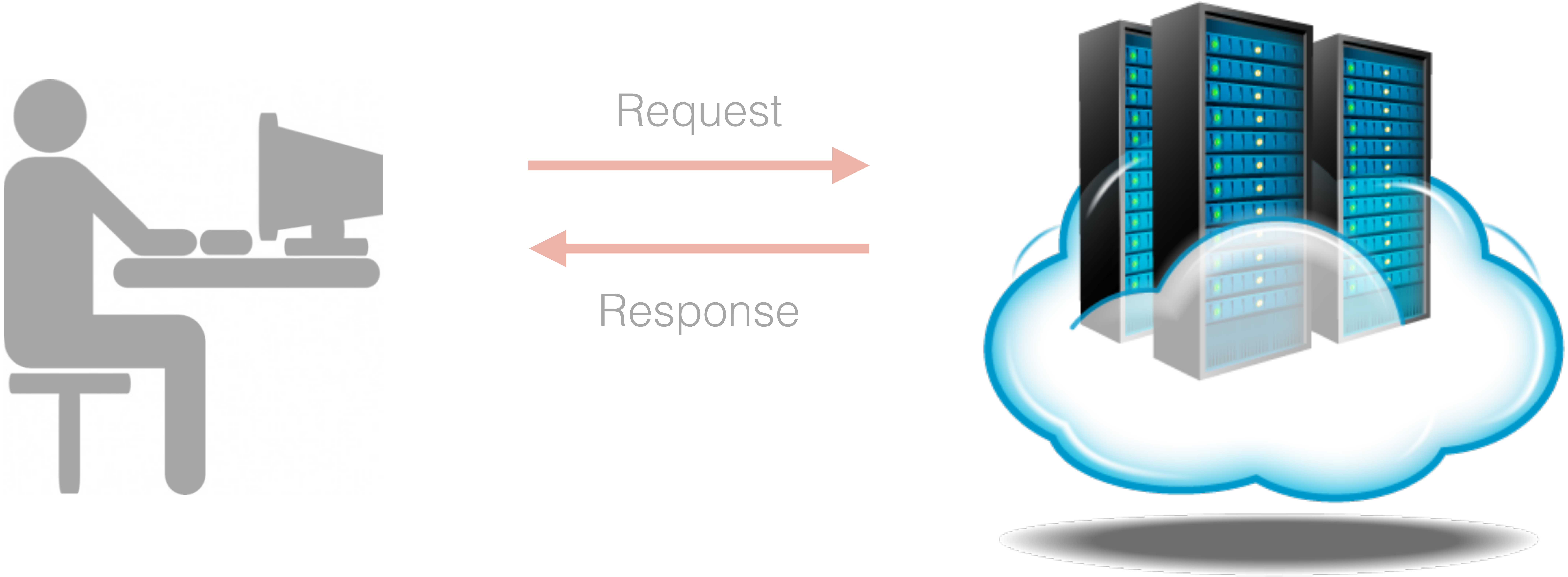
Representational State Transfer

Paradigm for how to use the HTTP verbs pragmatically

Ex

- GET - get a resource
- DELETE - delete resource
- POST - create new entry/resource

The Application



Request

Response

What is a server?

Server(hardware) vs Server(software)

Place where the application is running

Accepts requests

Sends response

HTTP Middleware

Server (hardware)

Physical machine

Can have several programs/processes running on it

Server (software)

Program that will accept requests and send responses

‘Back end’

Responsibilities:

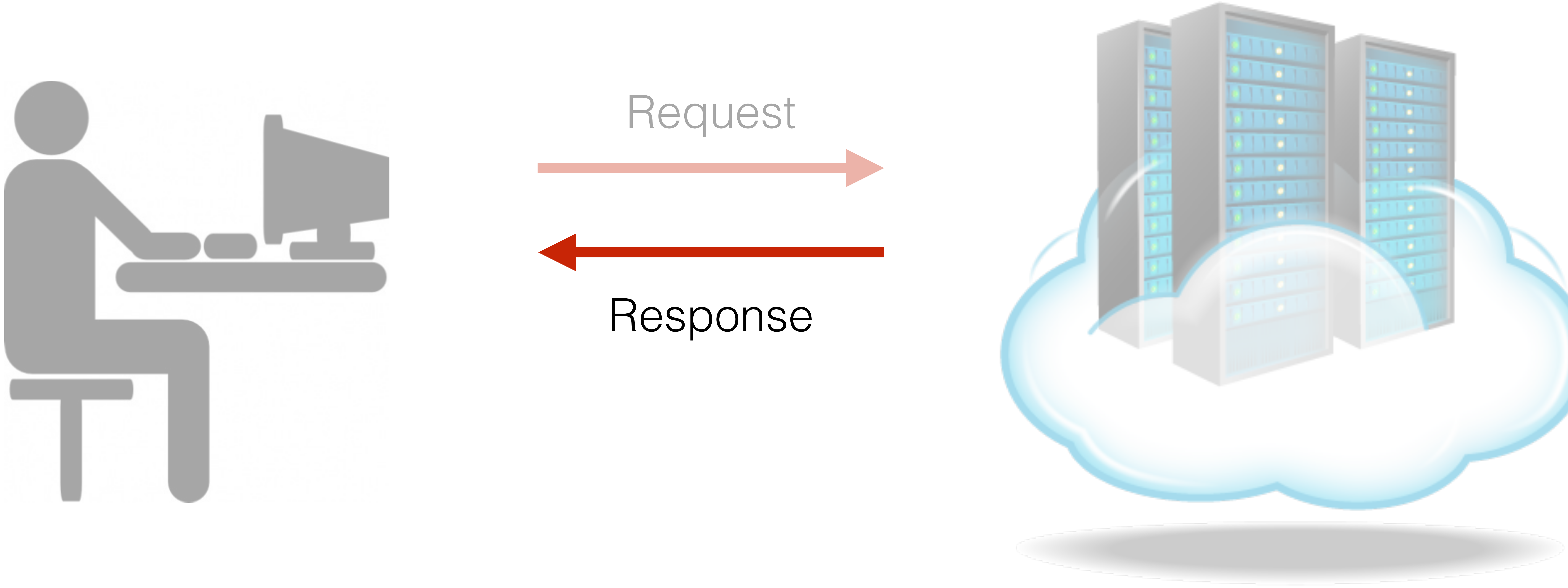
- Talking to databases
- Keeping state

HTTP Middleware

Parses and sanitizes requests

Makes sending responses easy

The Response



Request

Response

Response

Generated by server (software)

Types of responses:

- HTML page
- Strings
- JSON

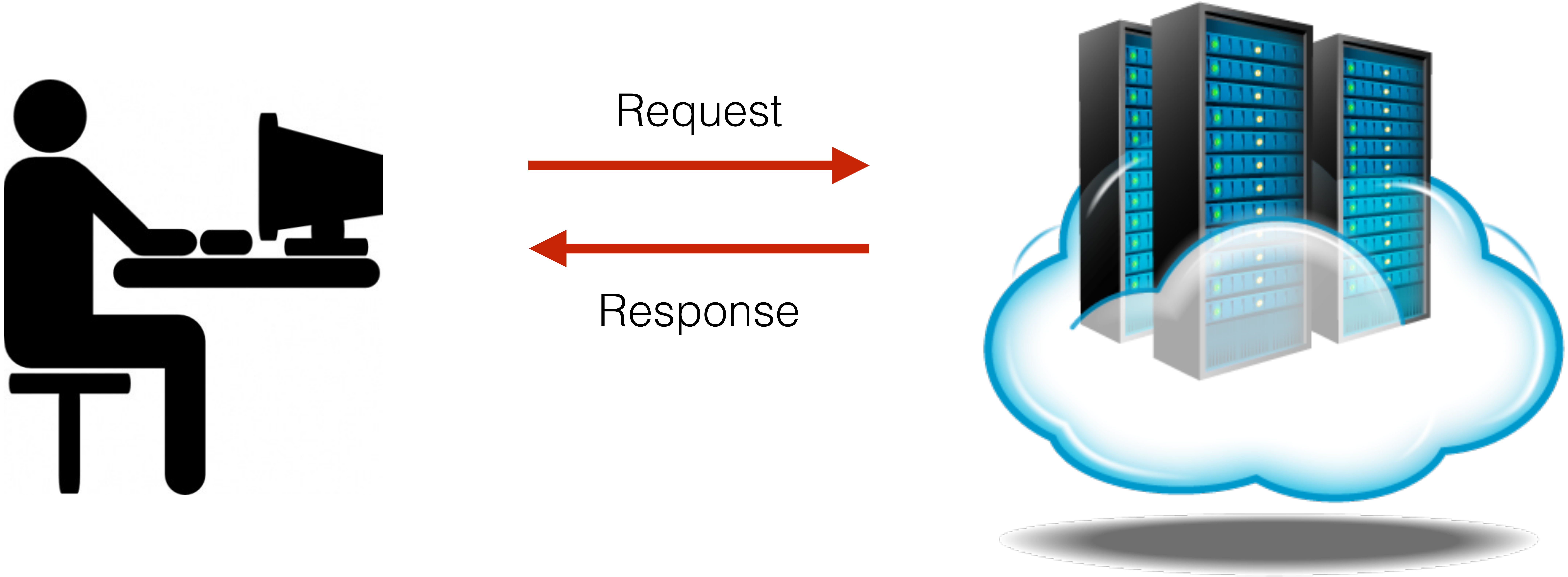
Status codes

Also included in the response

Gives the users more information about the response

- 1xx - Informational Codes
- 2xx - Success! Received! Understood!
- 3xx - Redirect
- 4xx - Client Error Detected
- 5xx - Server Error Detected

Your web application!



Request

Response

Lets write some code!

Example app in Python/Flask

https://github.com/kaushal/localhackday

Conclusion

Web development isn’t that complicated

Data flow

Request/response

Use tools/frameworks

Ask for help!

Helpful links

Flask - http://flask.pocoo.org/

HTTP - http://en.wikipedia.org/wiki/Hypertext_Transfer_Protocol

HTTP status codes - http://www.w3.org/Protocols/rfc2616/rfc2616-sec10.html

REST - http://en.wikipedia.org/wiki/Representational_state_transfer

Contact Info

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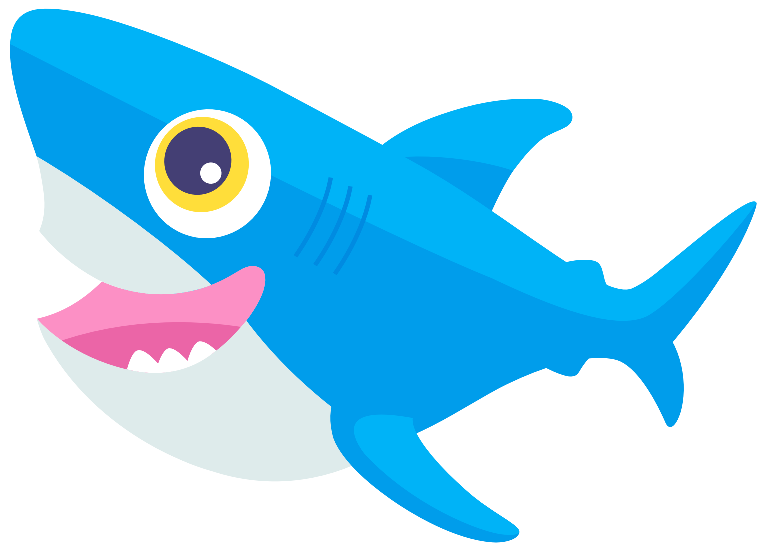

The End.