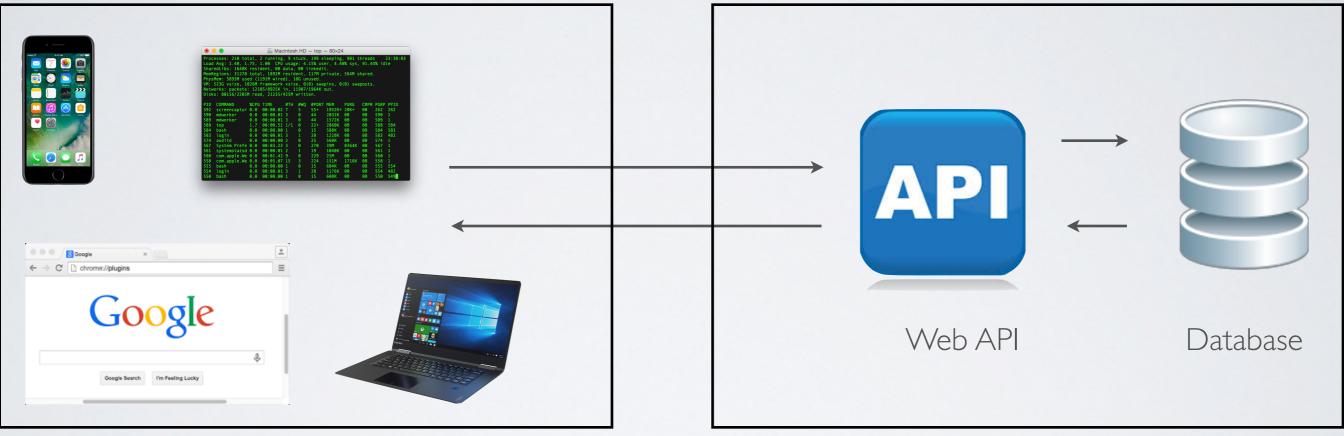
# (REST) Web API

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#### Modern Web Platform

Client Side Server Side



→ The server side is more or less of a **storage system** 

### REST - Representational State Transfer

Design a remote API for a storage system by using HTTP

- Function names: method and URL
- Function arguments: URL and request body
- Returned value: status code and response body

### REST concepts

Mostly storage systems are mean to store

- Collections (or ressources)
- Elements that belongs to one or several collections

# Examples

	HTTP request	HTTP response
Create a new message	POST /messages/ "Hello World"	200 "78"
Get all messages	GET /messages/	200 "['Hello world',]"
Get a specific messages	GET /messages/78/	200 "Hello World"
Delete a specific messages	DELETE /messages/78/	200 "success"

## Relationships

Туре	Example	
one-to-one	/users/sansthie/profile/firstname/	
one-to-many	/users/sansthie/messages/89/	
many-to-many	/users/sansthie/teams/8/ /teams/8/users/sansthie/	

### CRUD - manipulating data

Basic functions of persistent storage

- Create
- Read
- Update
- Delete

# Query methods

CRUD	HTTP	Collection	Element
Create	POST		Create a new element
	PUT	Replace the entire collection	Create (or replace if exists) a specific element
Read	GET	List all elements	Retrieve a specific element
Update	PATCH	Update some attributes of some elements	Update some attributes of a specific element
Delete	DELETE	Delete the entire collection	Delete a specific element

#### Status codes

http://www.restapitutorial.com/lessons/httpmethods.html

#### Use of attributes

Query a subset of a collection : filter, page, range . . .

GET /messages/?from=67&to=99