# Hands on GraphQL and Relay

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# GraphQL

# REST API

# REST API

- http://api.example.com**/news/**

- http://api.example.com**/news/123/**

- http://api.example.com**/friends/**

- http://api.example.com**/profile/123/**

- http://api.example.com**/images/**

- http://api.example.com**/images/123/**

- http://api.example.com**/settings/**

# REST API

```json
{
    "name": "Tatooine",
    "rotation_period": "23",
    "orbital_period": "304",
    "diameter": "10465",
    "climate": "arid",
    "gravity": "1 standard",
    "terrain": "desert",
    "surface_water": "1",
    "population": "200000",
    "residents": [
        "http://swapi.co/api/people/1/",
        "http://swapi.co/api/people/2/",
        "http://swapi.co/api/people/4/",
        "http://swapi.co/api/people/6/",
        "http://swapi.co/api/people/7/",
        "http://swapi.co/api/people/8/",
        "http://swapi.co/api/people/9/",
        "http://swapi.co/api/people/11/",
        "http://swapi.co/api/people/43/",
        "http://swapi.co/api/people/62/"
    ],
    "films": [
        "http://swapi.co/api/films/5/",
        "http://swapi.co/api/films/4/",
        "http://swapi.co/api/films/6/",
        "http://swapi.co/api/films/3/",
        "http://swapi.co/api/films/1/"
    ],
    "created": "2014-12-09T13:50:49.641000Z",
    "edited": "2014-12-21T20:48:04.175778Z",
    "url": "http://swapi.co/api/planets/1/"
}
```
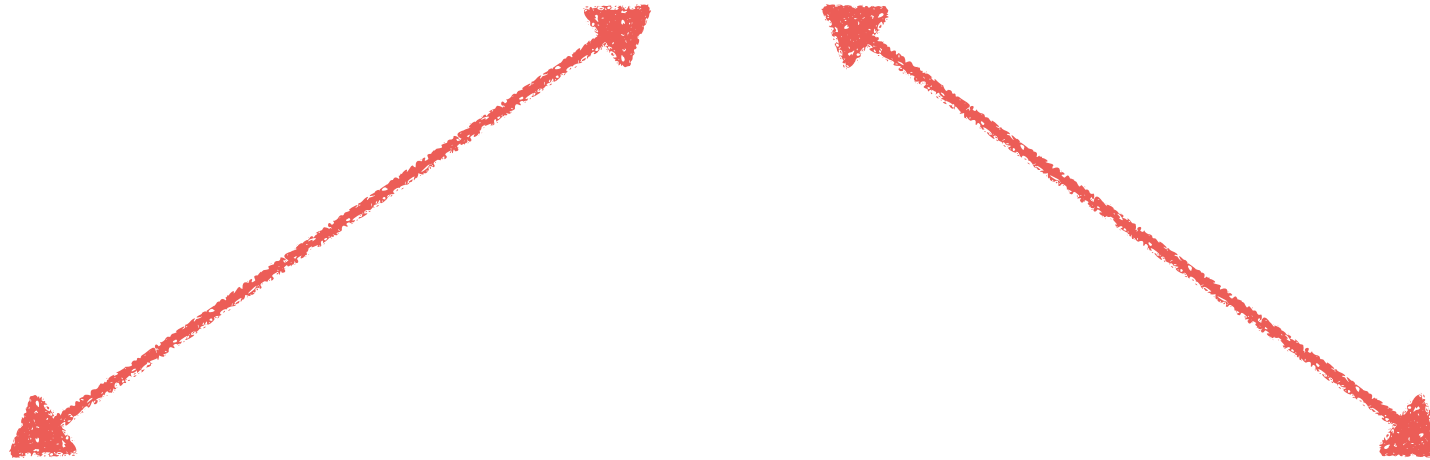
# REST API

- ✔ HTTP

- ✔ JSON

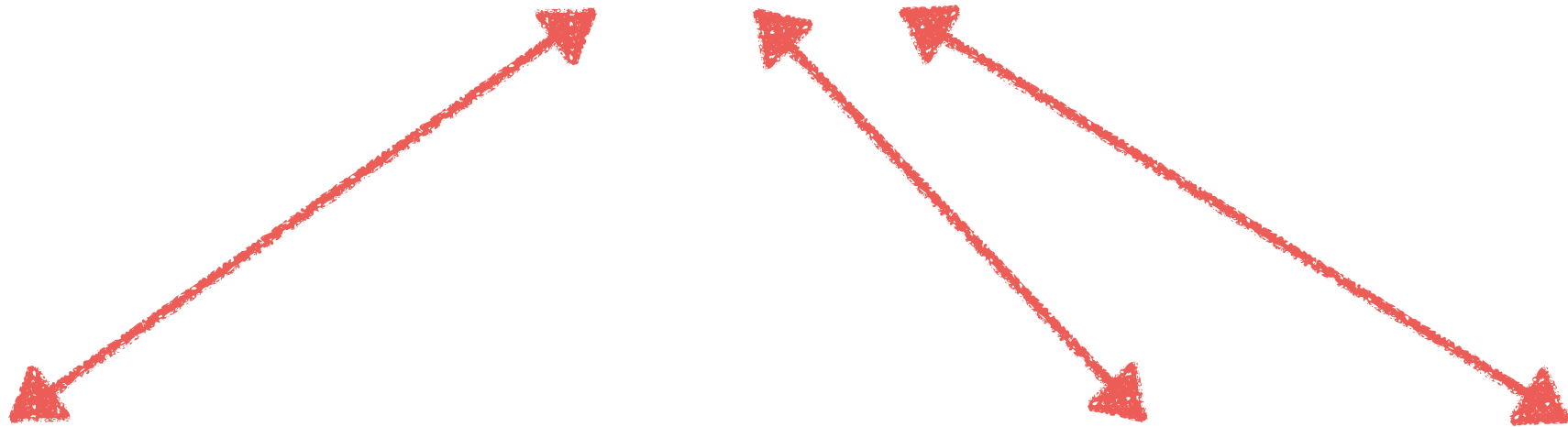- ✔ simple and works everywhere!

# All is nice!

# REST API



web

mobile

# REST API

- web

  - http://api.example.com**/web/news/**

- mobile

  - http://api.example.com**/mobile/news/**

# REST API



web

mobile

# REST API

- web

  - http://api.example.com**/web/news/**

- mobile

  - http://api.example.com**/mobile/v1/news/**

  - http://api.example.com**/mobile/v2/news/**

# What about…

- A/B testing?

- tablets?

- mobile web?

- public API?

# Backend developer



This whole place is a mess!

# REST API

- ✔ HTTP

- ✔ JSON

- ✔ simple and works everywhere!

- ✘ not flexible

# JSON

```json
{
  "data": {
    "allPeople": [
      {
        "id": 1,
        "name": "Luke Skywalker",
        "homeworld": {
          "name": "Tatooine"
        }
      },
      {
        "id": 2,
        "name": "C-3PO",
        "homeworld": {
          "name": "Tatooine"
        }
      }
    ]
  }
}
```

## query

```
query {
  allPeople {

    id
    name
    homeworld {
      name
    }
  }
}
```

## JSON

```json
{
  "data": {
    "allPeople": [
      {
        "id": 1,
        "name": "Luke Skywalker",
        "homeworld": {
          "name": "Tatooine"
        }
      },
      {
        "id": 2,
        "name": "C-3PO",
        "homeworld": {
          "name": "Tatooine"
        }
      }
    ]
  }
}
```

# GraphQL

**query**

```
query {
  allPeople {

    id
    name
    homeworld {
      name
    }
  }
}
```

**JSON**

```
{
  "data": {
    "allPeople": [
      {
        "id": 1,
        "name": "Luke Skywalker",
        "homeworld": {
          "name": "Tatooine"
        }
      },
      {
        "id": 2,
        "name": "C-3PO",
        "homeworld": {
          "name": "Tatooine"
        }
      }
    ]
  }
}
```
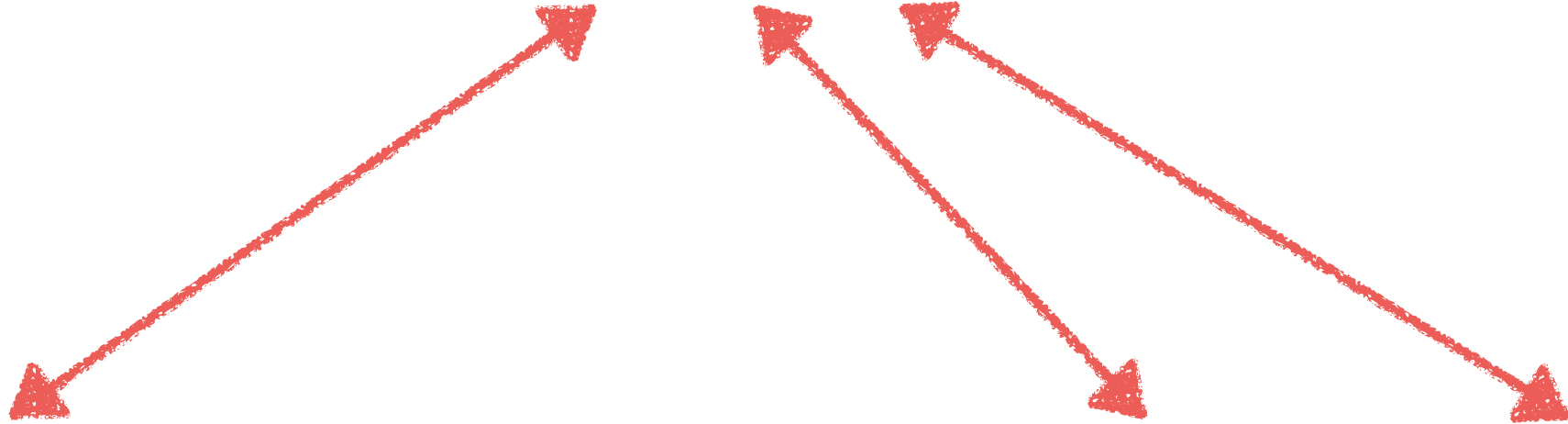
# GraphQL

= query language and runtime

# GraphQL

- ✔ HTTP

- ✔ JSON

- ✔ simple and works everywhere!

- ✔ flexible

# GraphQL



web                                                    mobile