



# Ekosystem React

JavaScript Developer 2020/2021 (*jeśli przetrwamy*)



ZACZNIJMY OD PODSTAW:

# **Magiczny świat Front End**



Trudne początki

# 1990

**The WWW Virtual Library**

- [Agriculture](#)  
Agriculture, Beer & Brewing, Gardening...
- [Computer Science](#)  
Computing, Graphics, Languages, Web...
- [Communications and Media](#)  
Communications, Telecommunications, Journalism...
- [Education](#)  
Education, Cognitive Science, Libraries, Linguistics...
- [Engineering](#)  
Civil, Chemical, Electrical, Mechanical, Software...
- [Humanities](#)  
Anthropology, Art, Dance, History, Museums, Philosophy...
- [Information Management](#)  
Information Sciences, Knowledge Management...
- [International Affairs](#)  
International Security, Sustainable Development, UN...
- [Law](#)  
Law, Environmental Law...
- [Business and Economics](#)  
Economics, Finance, Transportation...
- [Recreation](#)  
Recreation, Games, Gardening, Sport...
- [Regional Studies](#)  
Asian, Latin American, West European...
- [Science](#)  
Biosciences, Medicine & Health, Physics, Chemistry...
- [Society](#)  
Political Science, Religion, Social Sciences...

Mirrors: [Stanford](#) (USA), [Penn State](#) (USA), [East Anglia](#) (UK) [Geneva](#) (CH), [Geneva-2](#) (CH), [Argentina](#).

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Last update Nov 23 1998

# 2010

**zune** products music video podcasts my social search

**zune hd**

ZUNE HD 16  
ZUNE HD 32  
ZUNE HD 64  
LEARNING CENTER

bigger on the inside  
The new Zune HD 64 has enough room for a music and movie collection. And with Smart DJ right tracks, you can sit back and let the good s Buy now at Zune Originals

Take your entertainment experience to new levels Watch video

**touchscreen**  
Enhanced entertainment is vivid with an easy-to-use 3.3 inch touchscreen for all navigation. Navigate Zune HD touchscreen

**HD Radio**  
Get instant access to a variety of FM stations at no additional cost with crystal clear, CD-quality sound. Discover the benefits of HD Radio

**HD video out**  
Watch HD movies and TV shows, or shop for music from Zune Marketplace, all on your big screen HDTV. (Zune HD AV dock required, sold separately.)\* Learn more

**wi-fi**  
Buy and stream music in wi-fi hotspots, sync wirelessly to your PC, and surf the Internet on wireless networks.\* Shop Zune Marketplace on wi-fi

**be appy**  
We continue adding more free apps for Zune HD so you can connect to friends on Facebook and Twitter, play cards, bowl, race cars, and much more. See what's new

**get personal with zune originals**  
Put your own spin on your Zune HD. Choose from five colors, artist designs and logos, and make it yours with text engraving. Personalize Zune HD

\*Offer limited to U.S. only.  
\*\*Zune HD AV Dock and an HDTV (all sold separately) are required to view video at HD resolution. Supported 720p HD video files play on the player, downscaled to fit the screen at 480 x 272 – not HD resolution. Zune Pass subscription required; streaming via wi-fi available in U.S. only. HD Radio™ is a proprietary trademark of iBiquity Digital Corp. Learn more about HD Radio [here](#).

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Zune Media Player and Flat Design in 2009

# 2000

**Netscape: Welcome to Batman Forever**

File Edit View Go Bookmarks Options Directory Help

Back Forward Home Reload Images Open Print Find Stop

WELCOME TO GOTHAM

GALLERY MAIL LIBRARY CINEMA RADIO

WHAT'S NEW FRODLES PATHFINDER HELP

<http://www.batmanforever.com/welcome/gotham.map?442.143>

MacBook Air

Nowość Uskrzydłony mocą. Już od 5199 zł Kup Dowiedz się więcej >

**MacBook Air**

Nowość 13-calowy

# Oto przyszłość Maca.

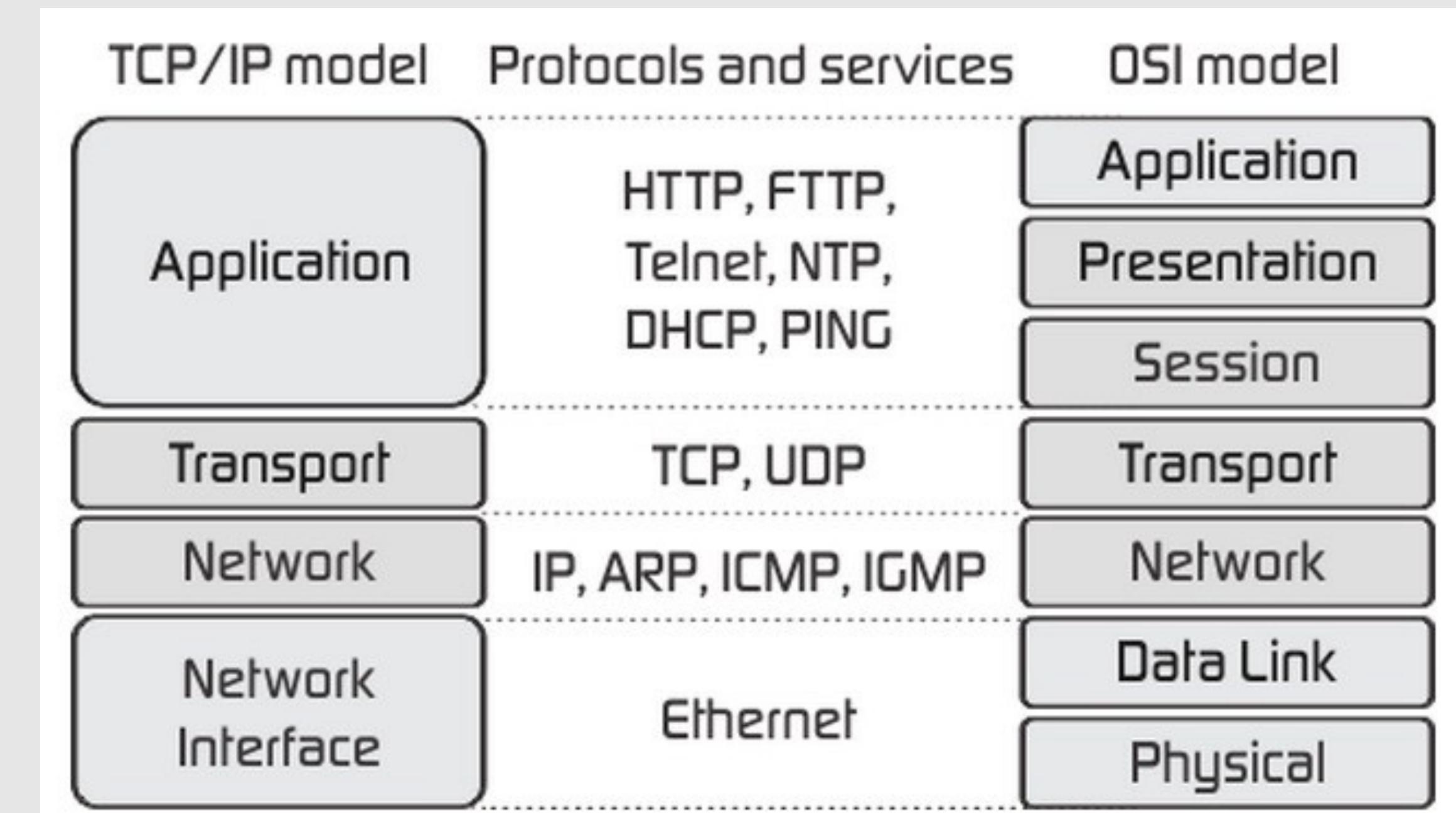
# Protokół HTTP

# HyperText Transfer Protocol

PROTOKÓŁ KOMUNIKACYJNY W WARSTWIE APLIKACJI MODELU OSI

Wymienia dane w zestawionym połączeniu

Wymiana odbywa się przy wykorzystaniu akcji **request** i **response**



# HTTP Request

- METHOD:
    - GET
    - POST
    - PUT
    - PATCH
    - DELETE
  - PATH
  - VERSION
  - HEADERS
  - BODY
- ## Example **GET** request
- Request URL:** chrome-extension://mmgplondnjekobonklacmemikcnhklla/logo.png
- Request Method:** GET
- Status Code:** 200 OK
- Referrer Policy:** strict-origin-when-cross-origin
- Response Headers (4)
- ▼ Request Headers
- ⚠ Provisional headers are shown
- Referer
- User-Agent:** Mozilla/5.0 (Macintosh; Intel Mac OS X 10\_15\_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/86.0.4240.183 Safari/537.36

# HTTP Response

- STATUS CODE
- STATUS MESSAGE
- VERSION
- HEADERS
- BODY

Example **GET** response

```
Request URL: chrome-extension://mmgplondnjekobonklacmemikcnhklla/logo.png
Request Method: GET
Status Code: 200 OK
Referrer Policy: strict-origin-when-cross-origin

▼ Response Headers
cache-control: no-cache
Content-Security-Policy: script-src 'self' 'unsafe-eval'; object-src 'self';
Content-Type: image/png
ETag: "/miQmUQaAyPA1uXlgIEZqkqfhgs="
```

# HTML

## HyperText Markup Language

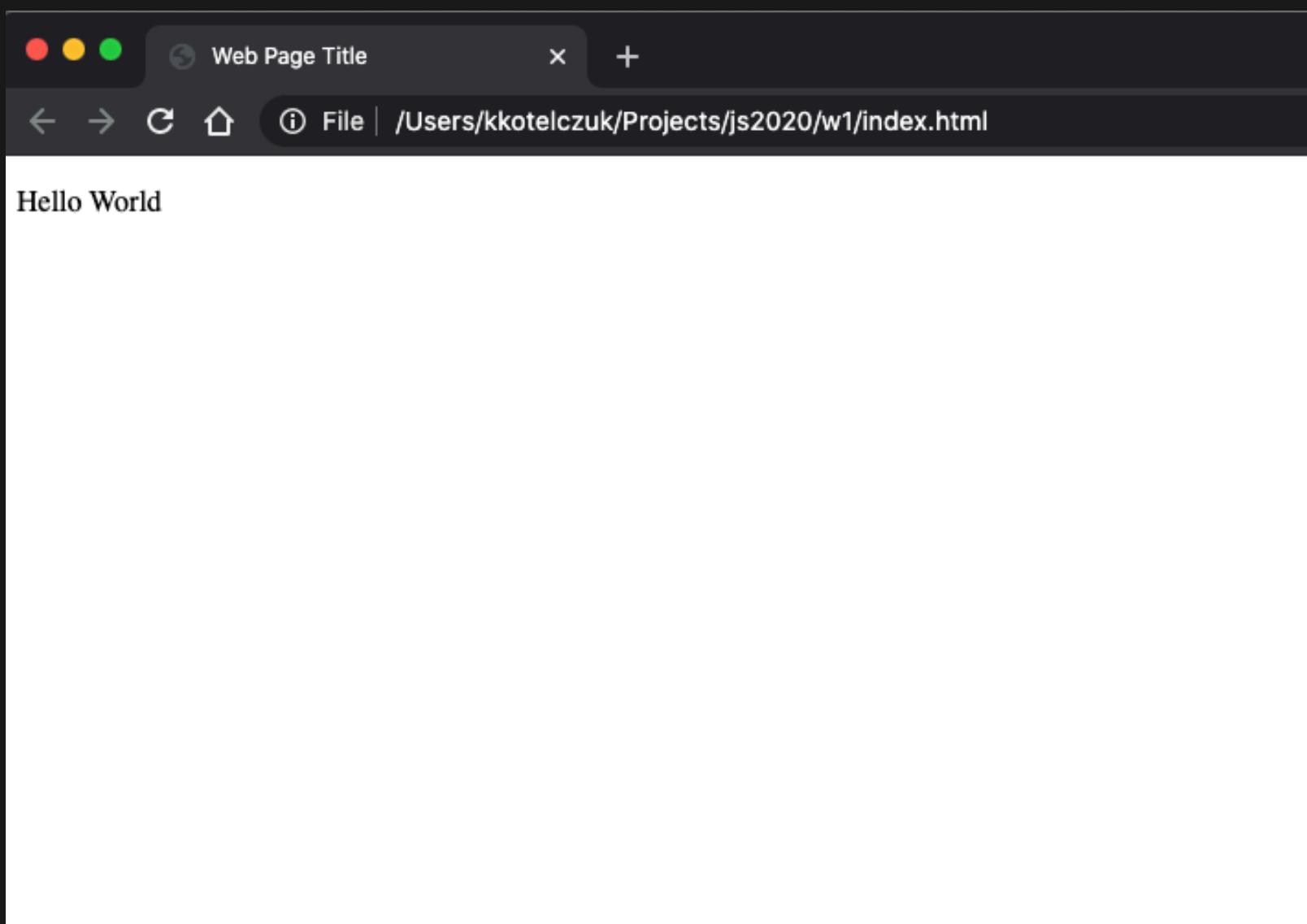
# Podstawowa struktura HTML

```
<!DOCTYPE html>

<html>
  <head>
    <title>Web Page Title</title>
  </head>
  <body>
    To też zadziała
    <p>Hello World</p>
  </body>
</html>
```

```
<Deklaracja typu pliku>

<Ramka dokumentu >
  <Znacznik sekcji nagłówka strony>
    <Znacznik nazwy strony >Web Page Title</Znacznik zakończenia nazwy strony>
  </Znacznik zakończenia sekcji nagłówka strony>
  <Znacznik "ciała" dokumentu>
    <Znacznik paragrafu>Hello World</Znacznik zakończenia paragrafu>
  </Znacznik zakończenia "ciała" dokumentu>
</Ramka dokumentu >
```



Filter  Hide data URLs **All** XHR JS CSS Img Media Font Doc WS Manifest Other  Has blocked cookies  Blocked Requests

10 ms	20 ms	30 ms	40 ms	50 ms	60 ms	70 ms	80 ms	90 ms	100 ms	110
-------	-------	-------	-------	-------	-------	-------	-------	-------	--------	-----

Name x Headers Preview Response Initiator Timing

index.html

Request URL: file:///Users/kkotelszuk/Projects/js2020/w1/index.html  
Referrer Policy: strict-origin-when-cross-origin

Request Headers

⚠ Provisional headers are shown  
Upgrade-Insecure-Requests: 1

Filter  Hide data URLs **All** XHR JS CSS Img Media Font Doc WS Manifest Other  Has blocked cookies  Blocked Requests

10 ms	20 ms	30 ms	40 ms	50 ms	60 ms	70 ms	80 ms	90 ms	100 ms	110
-------	-------	-------	-------	-------	-------	-------	-------	-------	--------	-----

Name x Headers Preview Response Initiator Timing

index.html

Hello World

Filter  Hide data URLs **All** XHR JS CSS Img Media Font Doc WS Manifest Other  Has blocked cookies  Blocked Requests

10 ms	20 ms	30 ms	40 ms	50 ms	60 ms	70 ms	80 ms	90 ms	100 ms	110
-------	-------	-------	-------	-------	-------	-------	-------	-------	--------	-----

Name x Headers Preview Response Initiator Timing

index.html

```
1 <!DOCTYPE html>
2
3 <html>
4   <head>
5     <title>Web Page Title</title>
6   </head>
7   <body>
8     <p>Hello World</p>
9   </body>
10 </html>
11
```

# CSS

## CASCADING STYLE SHEETS

```
p {  
    color: blue;  
}  
  
body {  
    font-size: xx-large;  
}
```

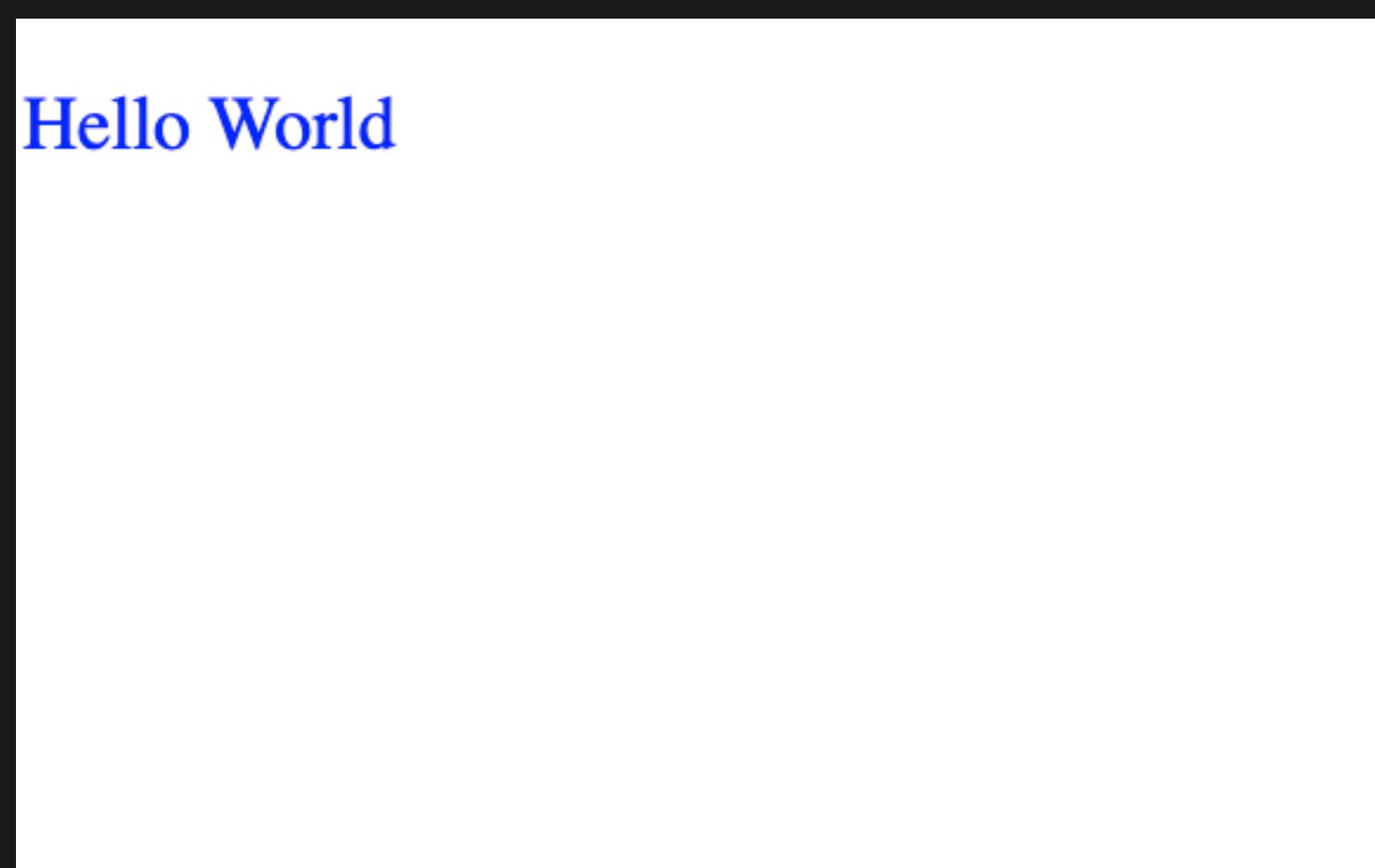


```
<!DOCTYPE html>

<html>
  <head>
    <title>Web Page Title</title>
  </head>
  <body>
    <p>Hello World</p>
  </body>
</html>
```

```
p {
  color: blue;
}

body {
  font-size: xx-large;
}
```

A screenshot of the Chrome DevTools Network tab. The table shows two resources: "index.html" and "styles.css". The "index.html" entry has a preview showing the HTML code, and the "styles.css" entry has a preview showing the CSS code. The CSS code includes the rule "p { color: blue; }" and the rule "body { font-size: xx-large; }".

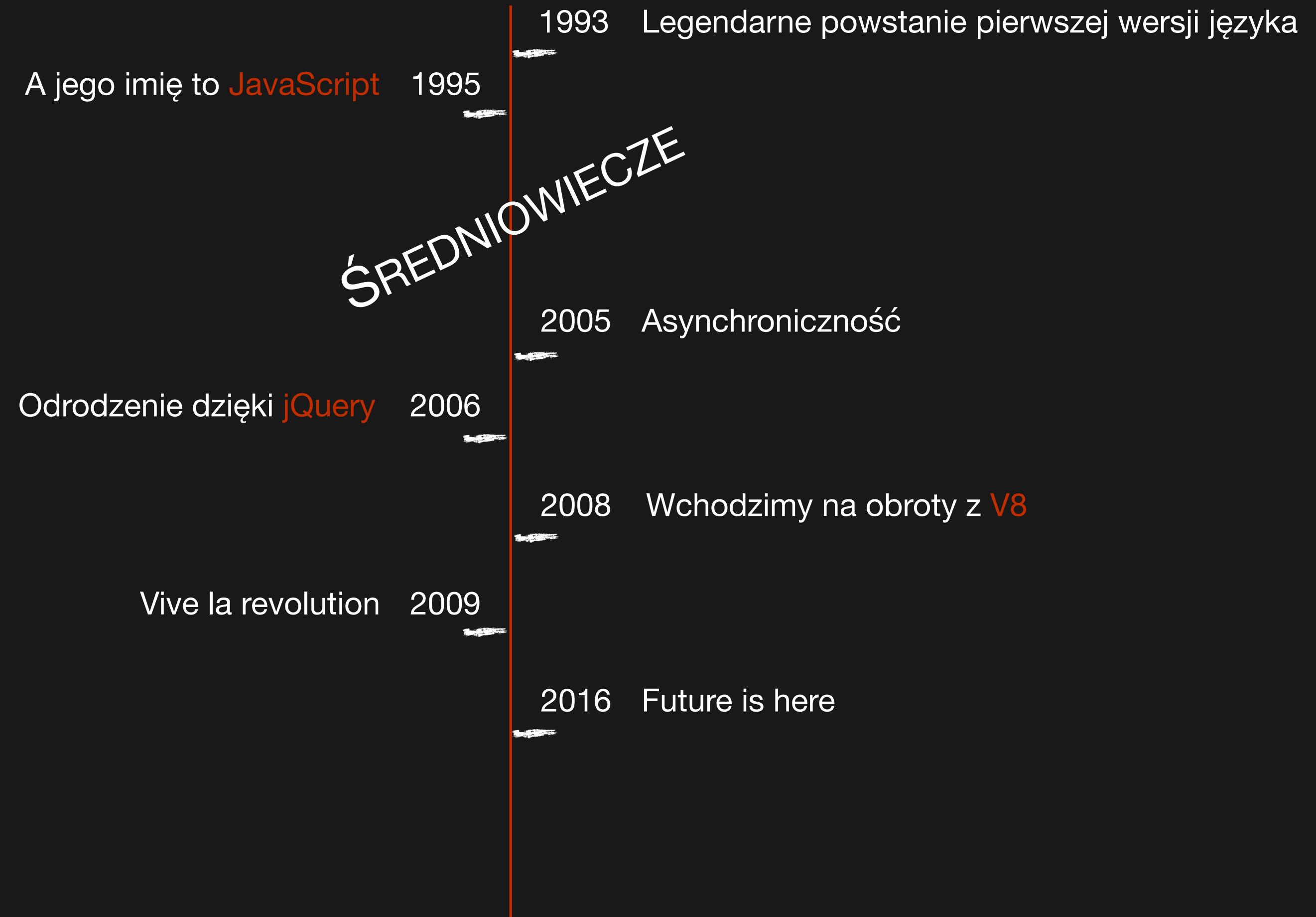
Name	Headers	Preview	Response	Initiator	Timing
index.html					
styles.css					

```
1 p {
2   color: blue;
3 }
4
5 body {
6   font-size: xx-large;
7 }
```

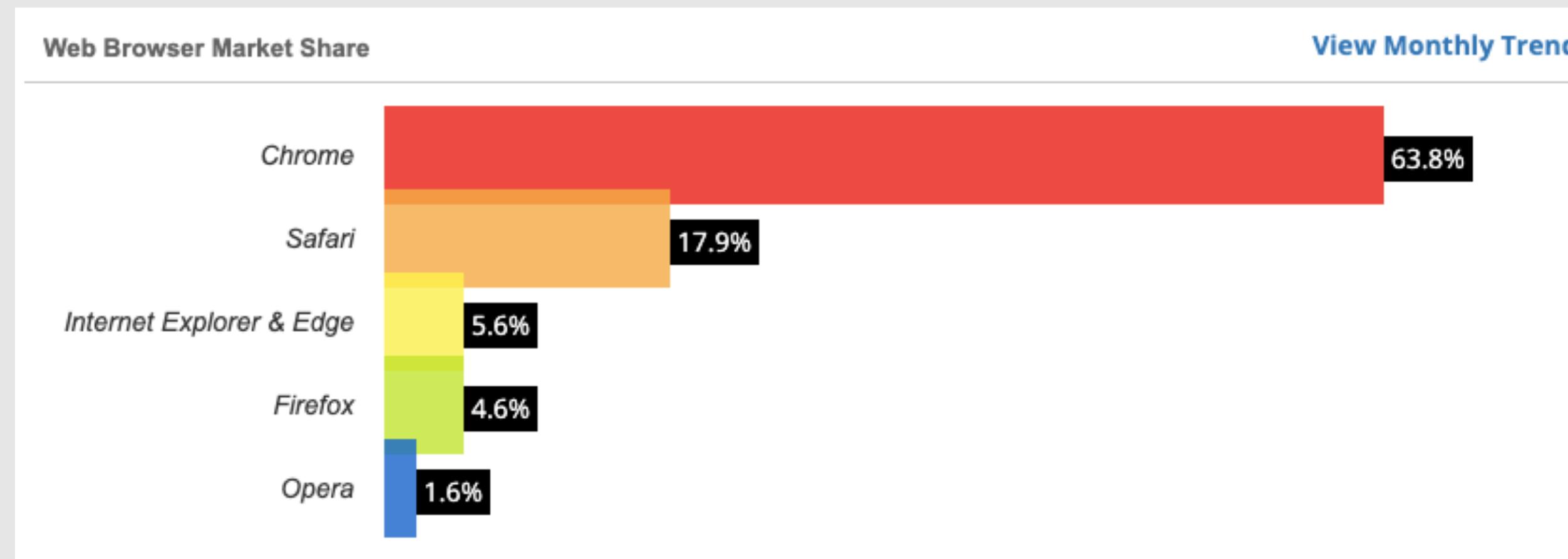
# JavaScript

*Tu już prawdopodobnie wszystko wiecie*

# Krótka lekcja historii



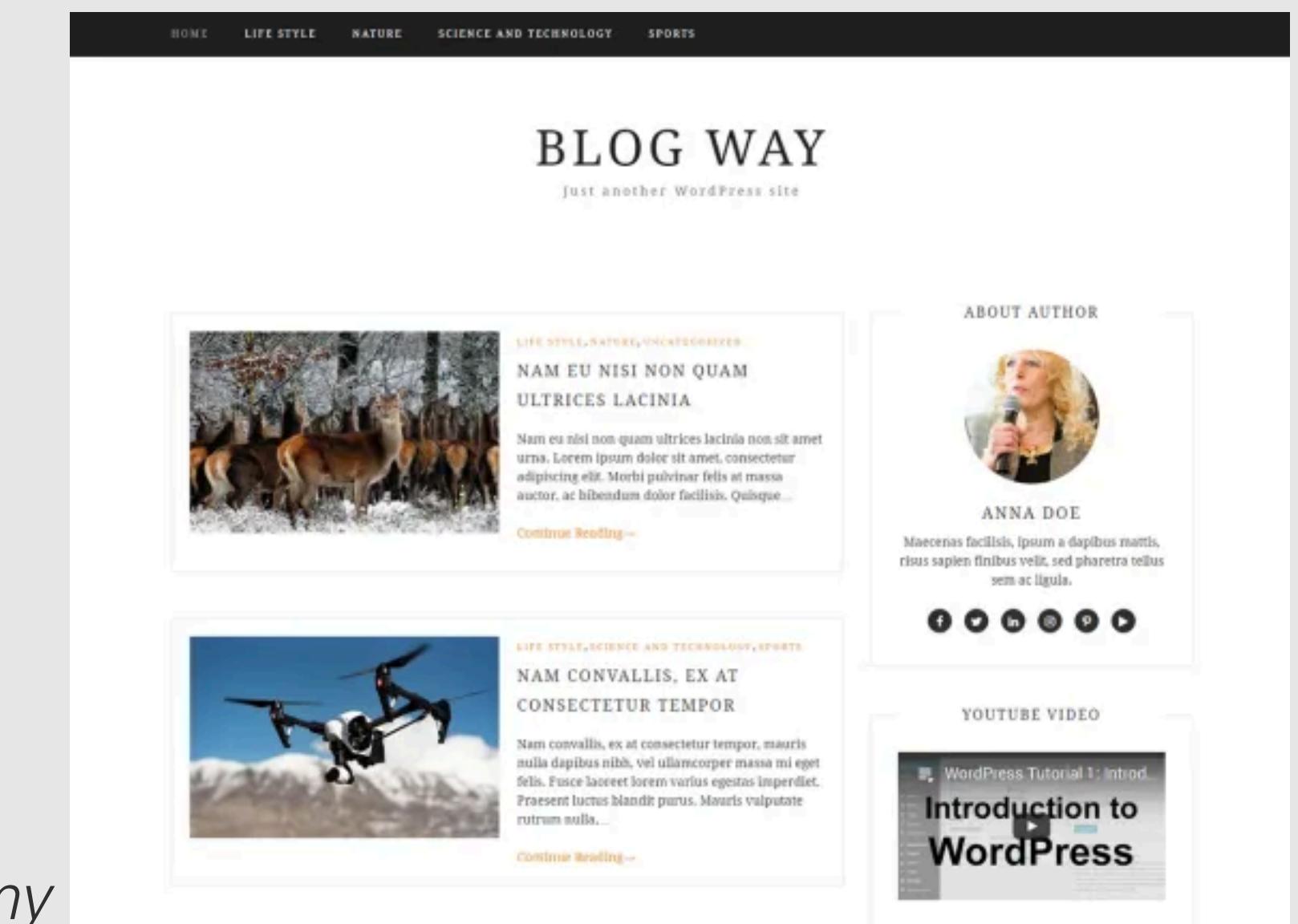
# BROWSERS WARS





# Multi Page Application

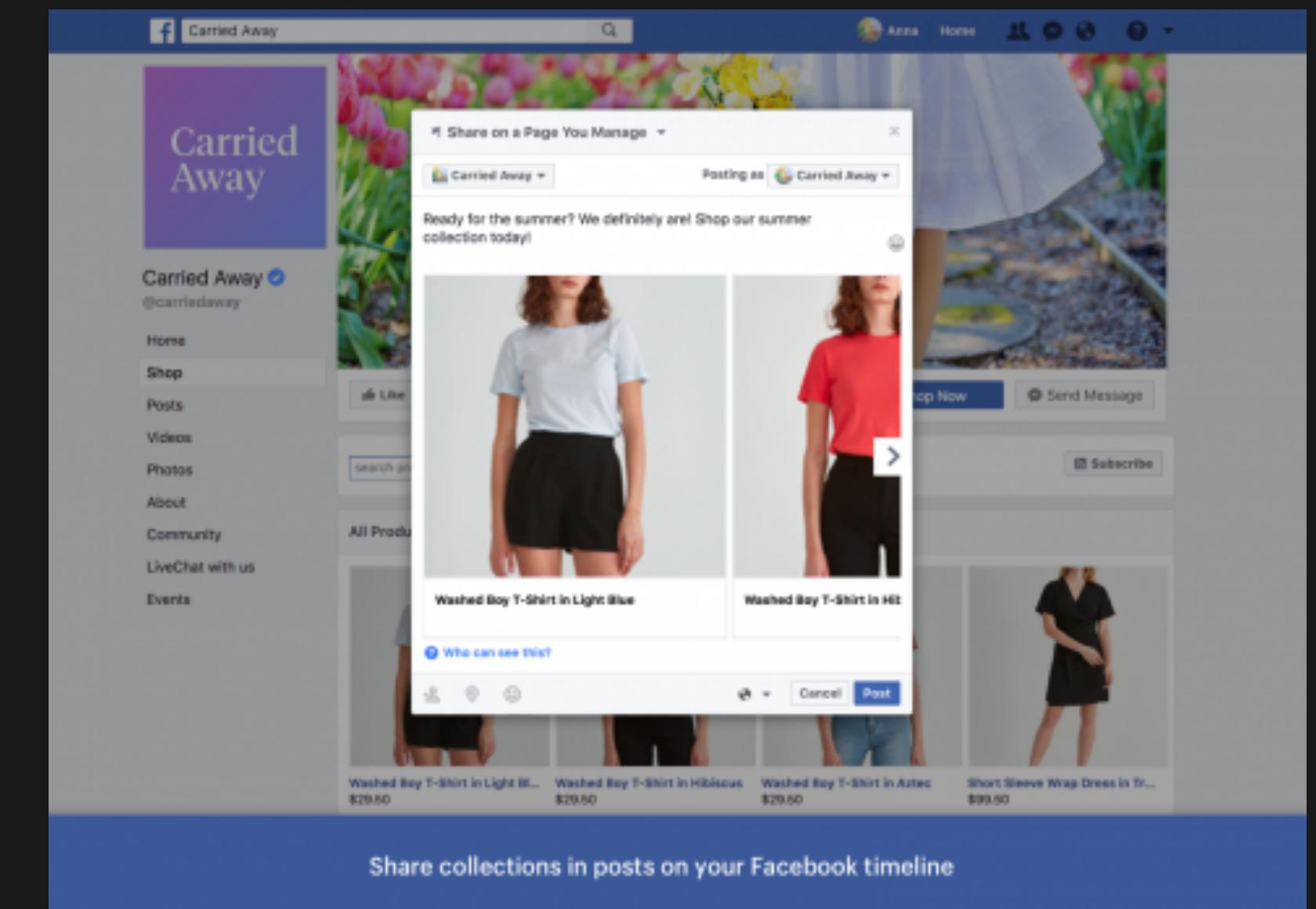
- Klasyczne strony
- Każde przejście na podstronę wymaga przeładowania zasobów
- Łatwe do pozycjonowania
- Klarowna struktura aplikacji



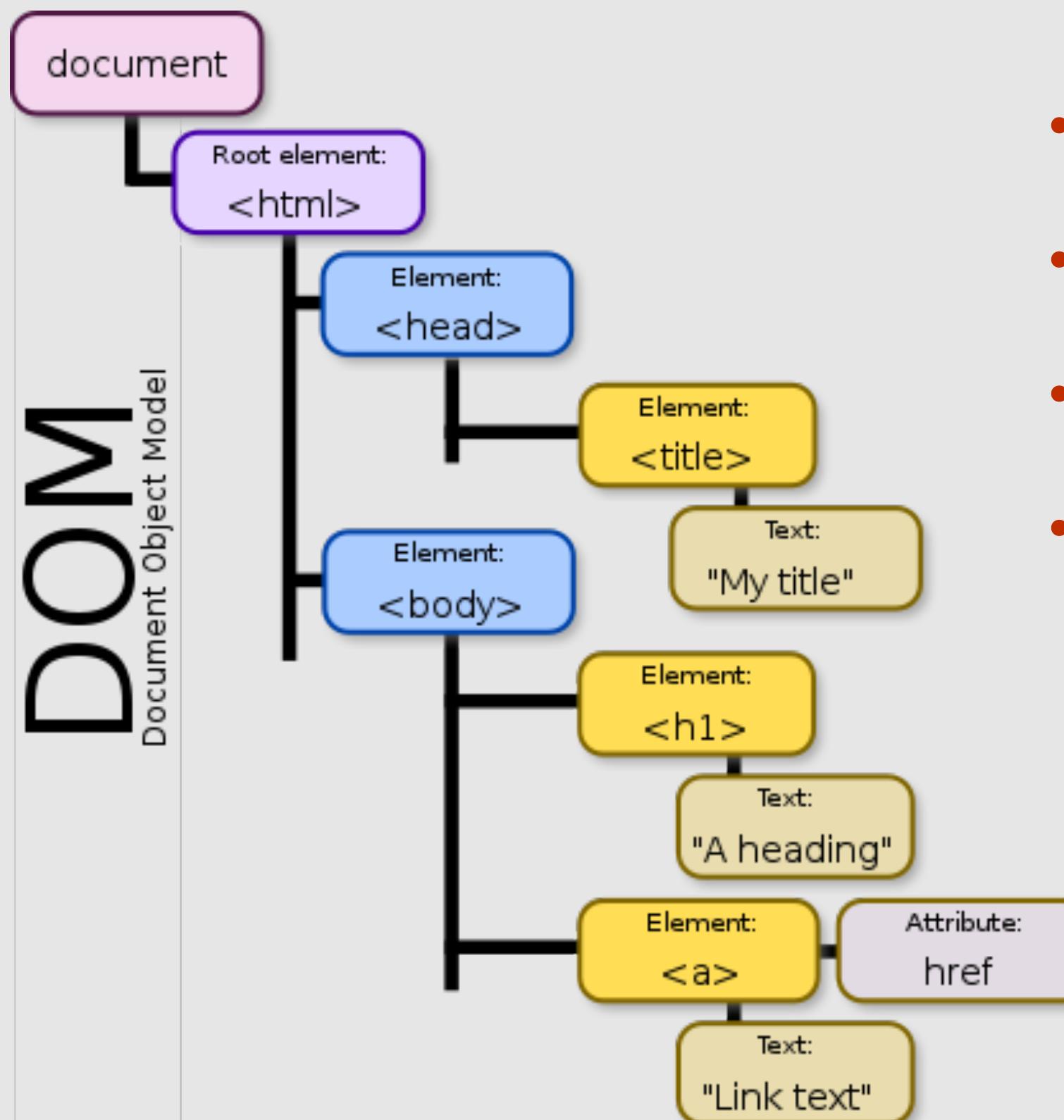
Dziś, wykorzystujemy głównie tam gdzie potrzebujemy dobrego SEO oraz nie mamy potrzeby często zmieniać zawartości strony

# Single Page Application

- Strona składa się z 1 pliku js + 1 pliku HTML (zazwyczaj)
- Przechodzenie po stronie nie wymaga ciągłego ładowania wszystkich danych
- Znaczna część ciężaru aplikacji jest po stronie komputera użytkownika
- Pierwsze ładowanie trwa dłużej niż w MPA
- Proces twórczy jest bardziej skomplikowany



# DOCUMENT OBJECT MODEL



- INTERFEJS
- Reprezentacja dokumentu HTML w formie drzewa logicznego
- Tworzony jest przez przeglądarkę
- Umożliwia JavaScript na modyfikowanie HTML'a
- Oraz dynamiczne reagowanie na wydarzenia

# React

# Rys historyczny



## React v0.3.3

June 21, 2013 dodane przez [Paul O'Shannessy](#)

We have a ton of great stuff coming in v0.4, but in the meantime we're releasing v0.3.3. This release addresses some small issues people were having and simplifies our tools to make them easier to use.



## React v15.0

April 07, 2016 dodane przez [Dan Abramov](#)

We would like to thank the React community for reporting issues and regressions in the release candidates on our [issue tracker](#). Over the last few weeks we fixed those issues, and now, after two release candidates, we are excited to finally release the stable version of React 15.

Biblioteka // framework

# Kluczowe koncepcje

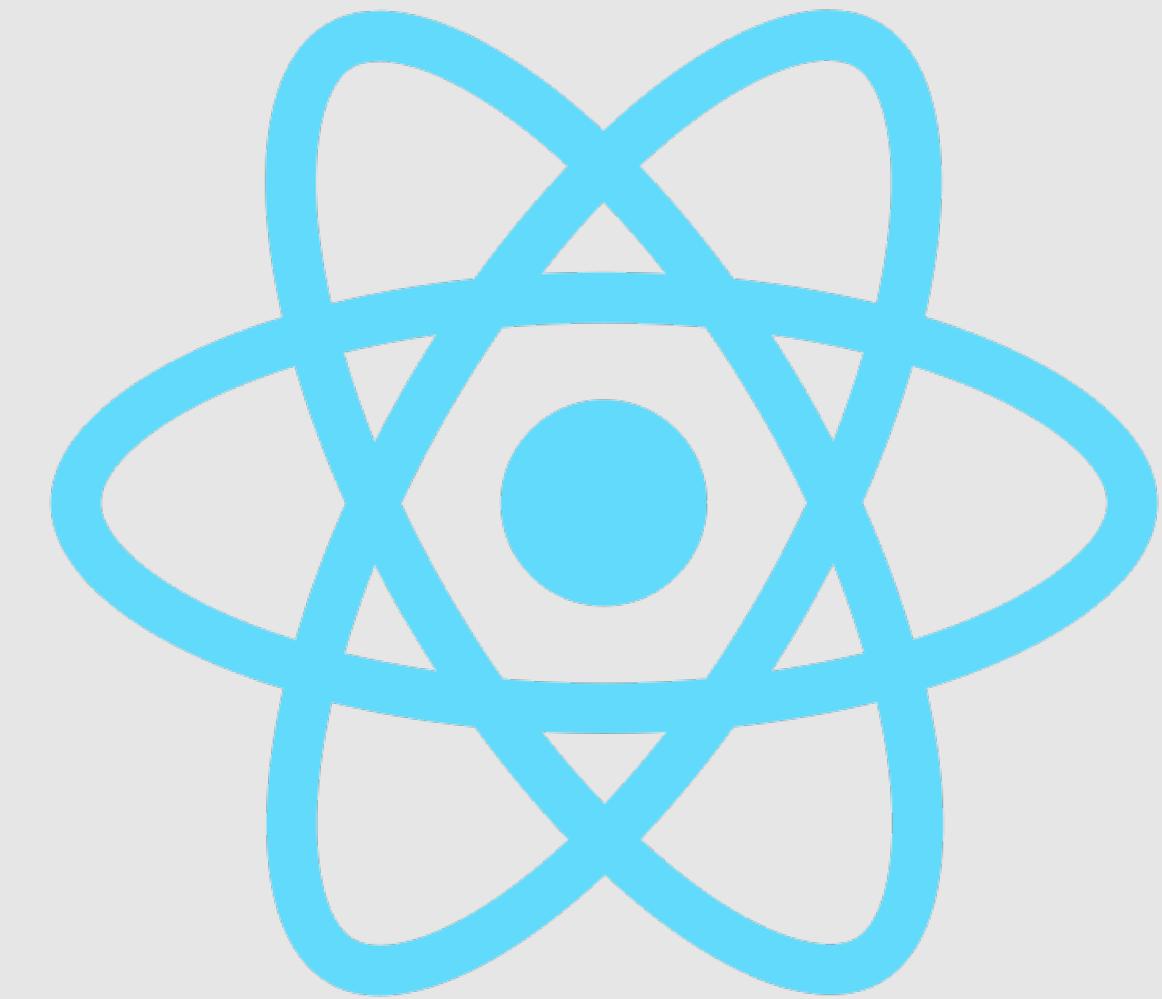
JSX

Wolność wyboru

One way **data** binding

Komponenty

Virtual **DOM**



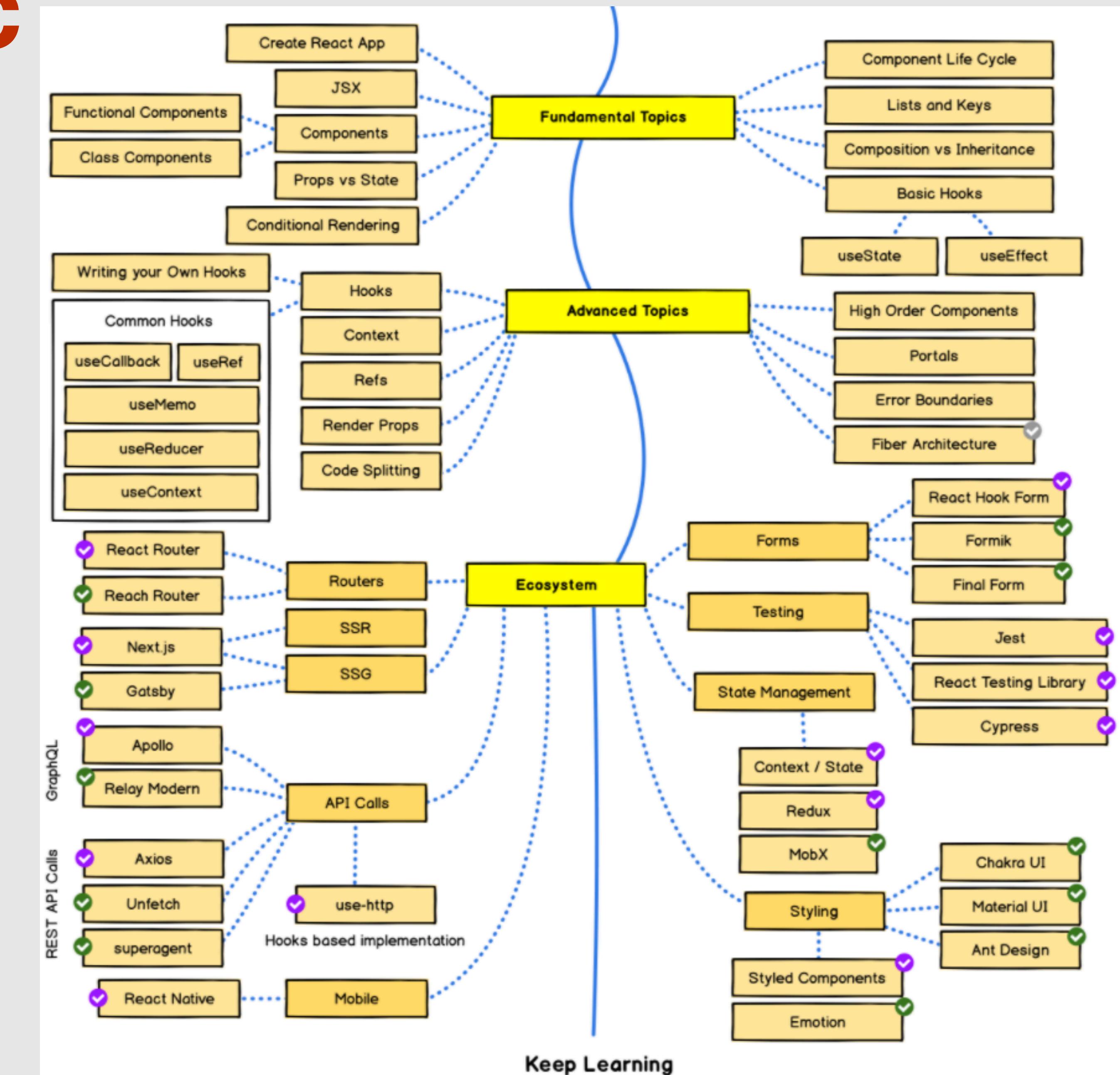
# JSX

```
renderMyComponent = () => {
  const someData = [1,2,3,4,5,6]
  return (
    <div>
      {someData.map(item => <span>{item}</span>)}
    </div>
  )
}

<div>
  <span>1</span>
  <span>2</span>
  <span>3</span>
  <span>4</span>
  <span>5</span>
  <span>6</span>
</div>
```

# Od czego zacząć

“Strive for progress, not perfection.”  
— Unknown.



# BABEL

Input:

```
// ES2020 nullish coalescing
function greet(input) {
    return input ?? "Hello world";
}
```

Output:

```
function greet(input) {
    return input != null ? input : "Hello world";
}
```

# Środowisko programistyczne

01.

## Przeglądarka

- Chrome, Safari, Edge
- Firefox, Opera, Internet Explorer
- ? Brave, Vivaldi

02.

## System kontroli wersji Git

- Zainstalowany w systemie
- ? Aplikacja desktopowa
- ? Git dodany do konsoli

03.

## Edytor tekstu

- Kartka papieru + ołówek
- Word, Wordpad, OpenOffice
- ? Notatnik
- ? VS CODE, Atom, WebStorm, VIM etc

04.

## Niezbędne oprogramowanie

- Node.js
- ? Xcode command line tools
- ? Windows build tools

05.

## Pomocnicze oprogramowanie

- ? Slack - desktop app
- ? M\$ Teams - desktop app
- ? Bash for command line

06.

## Warto znać

- ? Skróty klawiaturowe
- ? Strona MDN
- ? Strona z dokumentacją React

# Git Flow

Repozytorium

SSH

Fork

Pull Request

Remote

Merge

Local

Pull

Push

Fetch