Timeline	822ms	1.23s	1.64s	2.05s	7.47s

DOMContentLoaded   Document Complete

1.10s
770ms

Pending

365ms
47ms

46ms
43ms

DOMContentLoaded event is fired,

the page's DOM is parsed and ready.

```
<head>
  <script type="text/javascript"
    src="external_js.js"></script>
</head>
```

```html
<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js" ></script>
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@4.5.3/dist/js/bootstrap.bundl
e.min.js"></script>
<script>
  $(document).ready(function () {
    $('[data-toggle="tt"]').tooltip();
  });
</script>

<a href="Projects/0/" data-toggle="tt" title="WEB-technologies
introduction">0. W-T Intro</a>
```
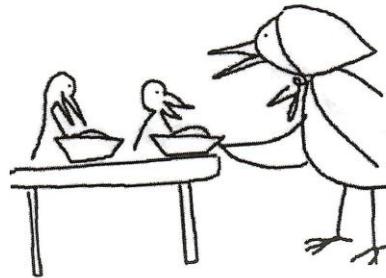
Bootstrap
Подсказки

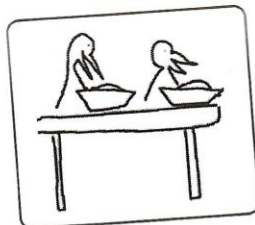WEB-technologies
introduction

0. W-T Intro   1.

```
document.querySelector('#red').onclick =
        function() {
document.querySelector('#hello').style.color = 'red';
        };
<h1 id="hello">Hello!</h1>
```

Сорока-Белобока кашу варила,
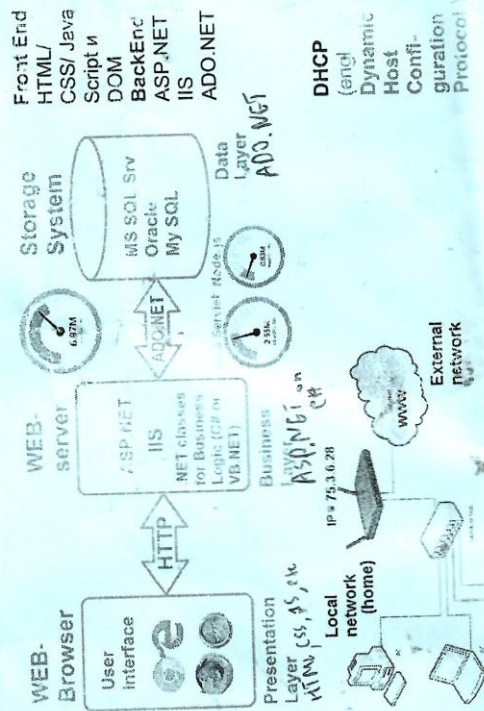Деток кормила: - Этому дала, - Этому дала,

[🐦, 🐦].forEach(🥄);

querySelector() ⟹ 🐦
querySelectorAll() ⟹ [🐦, 🐦]

1984 – Apple Macintosh
"saved people's
private information"

Request

Method   URL   Protocol
version → HTTP/1.1

GET / index.htm HTTP/1.1
Host: www.site.com
User-Agent: Opera
Accept: text/html, */*
Accept-Language: en-us
Accept: ISO-8859-1, utf-8
Connection: keep-alive

Header

Response

Version   Status   Message
status

HTTP/1.1 200 OK
Date: Sun, 21 Jul 2023
23:17 GTM
Server: IIS /6.0
Content-Type: text/html;
charset=UTF-8
Content-Length: 7686

blank line
<html>
....
</html>

Header / Body

C — HTTP POST /api/devices + payload
    201 + Location

R — HTTP GET /api/devices
    200 + payload

U — HTTP PUT /api/devices/1 + payload
    200

D — HTTP DELETE /api/devices/1
    200

CLIENT

SERVER

- GET — getting a resource
- POST — resource creation
- PUT — resource update
- DELETE — deleting a resource

Methods		Request			Response	
		URL	Request body	Status	Status	Response body
1	GET	Yes	No	Yes	Yes	Yes
2	PUT	Yes	Yes	Yes	Yes	No
3	POST	Yes	Yes	Yes	Yes	Yes
4	DELETE	Yes	No	Yes	Yes	No

WEB-
Browser

User
interface

Presentation
Layer css, js, etc
HTML css, js, etc

Local
network
(home)

HTTP

WEB-
server

ASP.NET
IIS
.NET classes
for Business
Logic (C# in
VB.NET)

Business
Layer ASP.NET on
C#

IP = 75.3.6.28

AJAX
6.97M

Storage
System

MS SQL Srv
Oracle
My SQL

Data
Layer
ADO.NET

Servlet Mode IS
2.55k

Front End
HTML/
CSS/ Java
Script и
DOM
BackEnd
ASP.NET
IIS
ADO.NET

DHCP
(engl.
Dynamic
Host
Confi-
guration
Protocol)

DNS – clearer
Domain Name
server

4 billion addresses
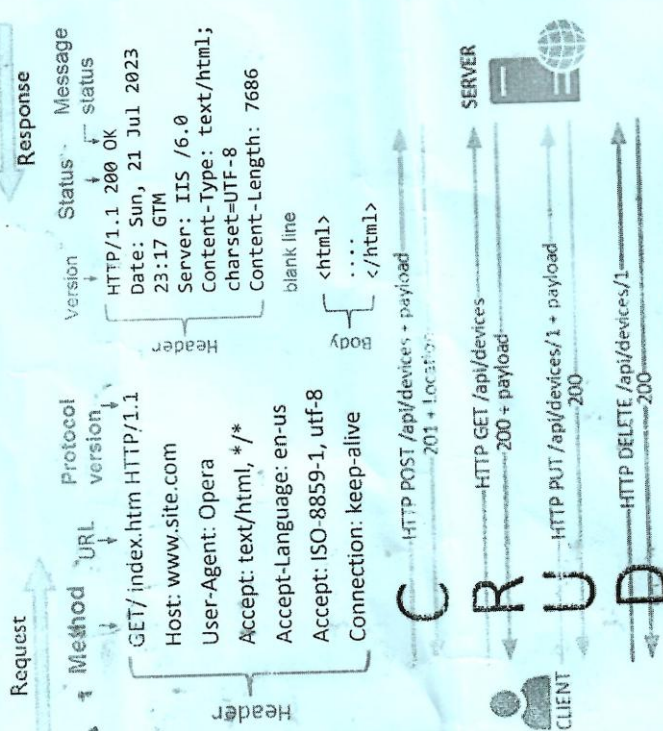4 294 967 296

address.   2, n-bits

External
network
www

tracert – tracerout (in Apple)   www.geotraceroute.com

172 . 16 . 254 . 1

10101100.00010000.11111110.00000001

8 bits   32 bits (4 bytes)

217.21.43.40 – sbmt.by, sbmt.bsu.by   sb.bsu.by

ping sb.bsu.by   tracert sb.bsu.by   https://geotraceroute.com/

+375 (29) 254 07 92 - ANDREY O. YAROSHEVICH

ip config

Root Server

TLD DNS Server

Authoritative DNS Server

www.google.com
Go to ".com" TLD DNS Server

www.google.com
Go to "google.com" Authoritative DNS Server

www.google.com
142.251.46.236

Recursive DNS Server

www.google.com

142.251.46.236

http://

"google.com"'s IP address is "142.251.46.238" I will remember it for future use

Its IP address is "142.251.46.238"

So smart! Thank you!

Search
google.com

8

If local DNS doesn't know:

Hey guys, help me search "google.com"

Arrange immediately

Recursive DNS server 3

Please check "google.com" for me.

Authoritative DNS Server 6

Its IP address is "142.251.46.238"

Do you know "google.com"?

Sorry, I don't know

Local DNS Cache 2

Please check "google.com" for me.

"google.com" is stored in the Authoritative DNS server, you can ask him

TLD DNS Server 5

Search
google.com

You type" example.com"in to a web browser 1

Please search "google.com"

All the domain under ".com" are stored in the TLD name server You can ask him

Root Server 4

If local Lady doesn't know:

Hey guys, help Princess

Arrange immediately

Please check the Princess for me.

Its ip address is coffin cavern mountain

Wind 6

Mum Do you know where the Princess is?

Sorry, I don't know Local Lady

Please check ... for me.

The Wind you can ask him

Moon 5

Please search Princess

You can ask the Moon

Sun 4

```html
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0"> 
  <meta name="robots" content="noindex">
```

— на любом device операти*ы* (handwritten)

Web Spider (handwritten label)

Flexbox (handwritten)

```css
<style>
  #container {
    display: flex;
    flex-wrap: wrap;
    align: center;
  }
  #container > div {
    background-color: gray;
    font-size: 20px;
    margin: 20px;
    padding: 20px;
    width: 200px;
    text-align: center;
  }
</style>
```
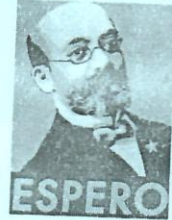
```html
<body>
..............................
  <div id="container">
    <div>Project 0</a></div>
    <div>Project 1</div>
    <div>Project 2</div>
    <div>Project 3</div>
  </div>

</body>
<html>
```

Ludovik Zamenhof

ESPERO

https://dot.net.by/esperanto/

```html
<!-- Google Font -->

  <link href="https://fonts.googleapis.com/css2?family=Poppins:wght@300;500;700&display=swap" rel="stylesheet">

  <style>

  body {

    font-family: 'Poppins', sans-serif;

  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-alpha3/dist/css/bootstrap.min.css" rel="stylesheet">
```

boot strap (handwritten)

```html
  <div class="buttons">
    <a href="project1.html" class="btn btn-primary btn-project">Project 1</a>
```

```css
  @media (min-width: 768px) {
    .profile-image {
      width: 200px;
      height: 200px;
    }
    .name {
      font-size: 2.5rem;
    }
  }
```

to enlarge photos on large screens from 150 to 200px (handwritten)

The same goes for fonts (handwritten)

Java   JavaScript (E6+)

```java
class ACat {
  string name;
  public ACat(n){
    this.name=n;
  }
}
ACat mycat= new ACat("Barsik");
```

```javascript
class ACat {
  constructor(n) {
    this.name = n;  //property
  }
}
mycat = new ACat("Barsik");
```

```
Say() {
  return "meou";
}
s =
"My cat says <b>"
+
myCat.Say()+
"</b> !"
```

```javascript
<script>
class APet {
    Say() {
        alert("No");
    }
}
class ACat extends APet {
    Say() {
        return "Miou";
    }
}
var myPet =
  new ACat("Barsik");

S = "My pet says  <b>"
    + myPet.Say()+
    "</b> !"
</script>
```

class Women — To describe a Woman: name, age, job — can do: eat, drink, sleep, walk, ...
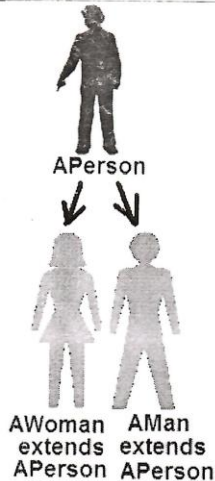
Real world objects

object — Jane 19 Student

object — Emma 45 Doctor

object — Ann 30 Engineer

Queen / Drone / Worker — Polymorphism in Biology

APerson

AWoman extends APerson   AMan extends APerson

ira= new AWoman()   ivan= new AMan()

function **WashDishes()**

Men's version wipe dry

Female version wet with water

```javascript
class AMan {
  WashDishes() {
    return 'wipe dry';
  }
}
```

```javascript
class AWomen {
  WashDishes() {
    return 'wet';
  }
}
```

```javascript
var family = [new AWomen(), new AMan()];
for(i=0;i<2;i++){ alert(" "+ family[i].WashDishes());} //dry wet
```

women = new AWomen(); man = new AMan(); var family = [women,man];

ES6:

asp.net.by/es6/01.htm, asp.net.by/es6/02.htm **let const**

asp.net.by/es6/03.htm **Arrow functions:**

```
x = (x, y) => y + "," + x;        x("sbmt.by", "SBMT");
```

asp.net.by/es6/04.htm

```
function myExam(y = 4) //-default option
```

asp.net.by/es6/05.htm **Array.find(myFunction)**

```
fibo = [1, 1, 2, 3, 5, 8]
index   0  1  2  3  4
var first = fibo.find(myFunction);
function myFunction(value, index, array) {
  return value > 4;
}
```

asp.net.by/es6/06.htm **Array.findIndex()**

```
var fibo = [1, 1, 2, 3, 5, 8];
        fibo[4]        //The first digit > 4 - has index 4
var first = fibo.findIndex(myFunction);
function myFunction(value, index, array) {
  return value > 3;
}
```

asp.net.by/es6/07.htm **Классы**

```
class ACat { constructor(n) {
  this.name = n;   //property
  }
}

mycat = new ACat("Барсик");
```

```
class ACat {
  .................
  Name(){
    return 'Меня зовут ' + this.name;
  }
}

mycat = new ACat("Барсик");
document.write(mycat.Name());
```
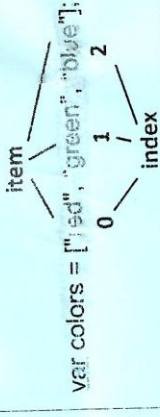
Меня зовут Барсик

asp.net.by/es6/08.htm

asp.net.by/es6/09.htm **Array.forEach()**

```
var colors = ["red",
"green", "blue"];
```

```
                item
var colors = ["red", "green", "blue"];
               0    1      2
                    index
```

```
colors.forEach(myFunction);
function myFunction(item, index) {
  item ... index
}
```

Callback illustrated

```
Function One (){
  // Do something
}

Function Two (call_One){
  // Do something else
  call_One()
}

Two(One);
```
code is being executed

https://asp.net.by/callback/

Promise

```
new
Promise(executor)
```

state: "pending" result: undefined

state: "fulfilled" result: value

state: "rejected" result: error

https://asp.net.by/es6/13-promise.htm

```
{"managers":[
{ "firstName":"Bill", "lastName":"Gates" },
{ "firstName":"Mike", "lastName":"Dell" },
{ "firstName":"Elon", "lastName":"Musk" }
]}
```

`<=JSON`   vs   `XML=>`

```
< managers >
<manager>
<firstName>Bill</firstName>
<lastName>Gates</lastName>
</manager>
<manager>
<firstName>Mike</firstName>
<lastName>Dell</lastName>
</manager>
<manager>
<firstName>Elon</firstName>
<lastName>Musk</lastName>
</manager>
</managers>
```
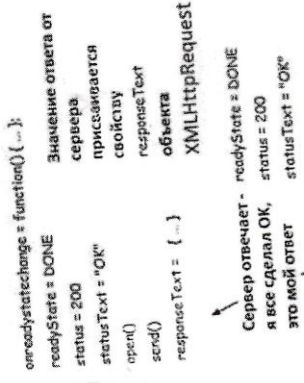
1) **JSON**.parse(minskJSON);

2) **localStorage**.setItem() getItem()

7) Работа с массивами myArr[2];

9) `obj.birth = new Date(obj.birth);`

10) "age":"function() {return 48;}" – ф-ция как строка

11) JSON.stringify() 14)   Object => в JavaScript-строку

x = myObj["name"] + " " + myObj["Networth"];

// x = myObj. name + " " + myObj.Networth;

16) 17) 18) myObj.Occupation.pos3   myObj.Occupation["pos3"]

Yes	8.0	3.5	4.0	10.0

XMLHttpRequest

onreadystatechange = function() {...};
readyState = DONE
status = 200
statusText = "OK"
open()
send()
responseText = {...}

Значение ответа от сервера присваивается свойству responseText объекта XMLHttpRequest

Сервер отвечает -
я все сделал OK,
это мой ответ

readyState = DONE
status = 200
statusText = "OK"

```
{
"firstName":"Elon",
"lastName":"Musk"
}
```