Lecture 2

—

Web and dApp development
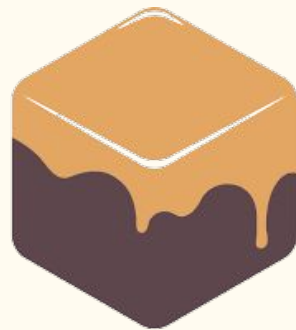
Shaping Developer Experience

IDEs / Web Tools

Integrated Development Environment

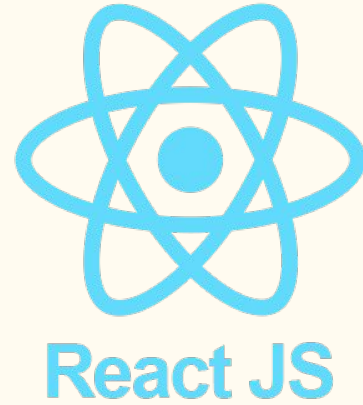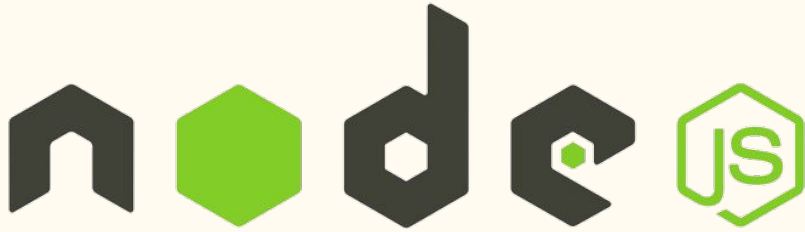

https://remix.ethereum.org/

Web Tools

Become a Web Developer in 1.5 hours

HTML - Define the objects

HTML - Define the objects

HTML - Define the objects

RÉPUBLIQUE FRANÇAISE
Liberté
Égalité
Fraternité

Service-Public.fr
Le site officiel de l'administration française

Se connecter   Accéder au site pour les entreprises →

Rechercher

🏠   Actualités   Comment faire si ?   Fiches pratiques par thème ⌄   Démarches et outils ⌄   Annuaire de l'administration   Une question ?

J'aide les services publics à s'améliorer : je **donne mon avis** avec services publics + →

Accueil > Démarches et outils > Impôts : accéder à votre espace Particulier

Français ⌄

Impôts : accéder à votre espace Particulier (Démarche en ligne)

Ministère chargé des finances

HTML - Define the objects

```
 1   <!DOCTYPE html>
 2   <html>
 3       <head>
 4           <title>Tab Name</title>
 5           <meta charset="utf-8" />
 6           <link rel="stylesheet" href="https://cdn.jsdelivr.net/npm/
             bootstrap@4.3.1/dist/css/bootstrap.min.css" integrity="
             sha384-ggOyR0iXCbMQv3Xipma34MD+dH/1fQ784/j6cY/
             iJTQUOhcWr7x9JvoRxT2MZw1T" crossorigin="anonymous">
 7           <!-- Use the head section for metadata, linking css/js -->
 8       </head>
 9       <body>
10           <h1>This is a heading</h1>
11           <p>This is a smaller paragraph</p>
12       </body>
13   </html>
```

Learn the tags: https://developer.mozilla.org/en-US/docs/Web/HTML/Element

CSS - Give objects appearance and layout
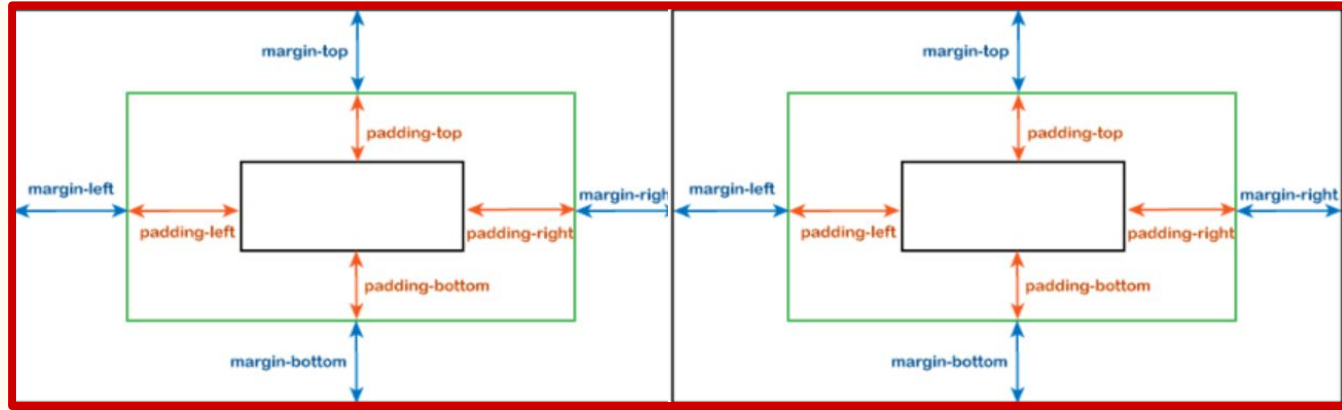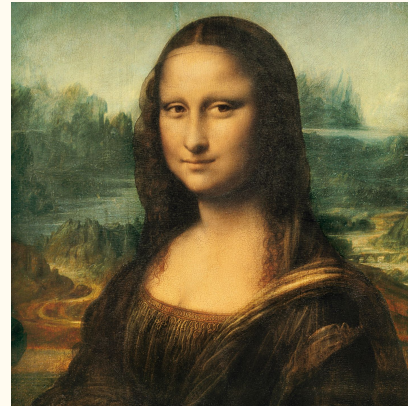
CSS - Selectors

```css
p {
  margin-bottom: 1.5em;
}

.container > div {
  flex: 1 0 auto;
}

#leader::first-letter {
  float: left;
  font: italic bold 2em Operator, sans-serif;
}
```

```html
<p class="container"></p>
```

```html
<p id="leader"></p>
```

Javascript - things come to life

Select HTML Element

document.getElementById("balanceBtn")

↓

function DoSomething();

$("#balanceBtn")

```
// Handle fulfilled (resolved) promises
promise.then((result) => { })

// Handle failed (rejected) promises
promise.catch((error) => { })
```

```
async function getActivity() {
    let response = await axiosRequest.get('https://www.boredapi.com/api/activity')
    console.log(`You could ${response.data.activity}`)
}
```

Javascript - Web Providers

Javascript - web3js vs ethersjs


```javascript
var Web3 = require('web3');

// "Web3.providers.givenProvider" will
var web3 = new Web3(Web3.givenProvider

> web3.eth
> web3.shh
> web3.bzz
> web3.utils
> web3.version
```
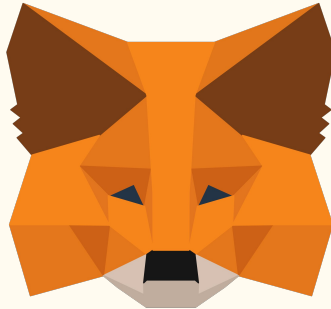
```javascript
// A Web3Provider wraps a standard Web3 provider, which is
// what MetaMask injects as window.ethereum into each page
const provider = new ethers.providers.Web3Provider(window.ethereum)

// MetaMask requires requesting permission to connect users accounts
await provider.send("eth_requestAccounts", []);

// The MetaMask plugin also allows signing transactions to
// send ether and pay to change state within the blockchain.
// For this, you need the account signer...
const signer = provider.getSigner()
```

Javascript - web3js example

```javascript
const senderAddress = "0x4d10ae710Bd8D1C31bd7465c8CBC3add6F279E81"
const receiverAddress = "0x19dE91Af973F404EDF5B4c093983a7c6E3EC8ccE"
const web3 = new Web3("http://localhost:8545")
const getToken = new web3.eth.Contract(ERC20TransferABI, contractAddress)

getToken.methods.balanceOf(senderAddress).call(function (err, res) {
  if (err) {
    console.log("An error occured", err)
    return
  }
  console.log("The balance is: ", res)
}
```

Bonus - Smart Contract to ABI