

Programmation web - Client riche

# Les modules

```
// app.js
```

```
class Slider {  
  // ...  
}
```

```
const sliderRoots = // ...  
const sliders = sliderRoots.map(root => new Slider(root))
```



*Pourquoi on a besoin de modules ?*



*Découper son code en modules permet...*

- *Réutilisabilité*
- *Composabilité*
- *Isolation*
- *Organisation*

```
// Slider.js
```

```
class Slider {  
  // ...  
}
```

```
// app.js
```

```
const sliderRoots = // ...  
const sliders = sliderRoots.map(root => new Slider(root))
```

```
<html>  
  <head><!-- ... --></head>  
  <body>  
    <!-- ... -->  
    <script src="./Slider.js"></script>  
    <script src="./app.js"></script>  
  </body>  
</html>
```

app.js



Slider.js



# Les modules « Common JS »



```
// Slider.js
```

```
class Slider {  
  // ...  
}
```

```
module.exports = Slider
```

```
// app.js
```


```
const Slider = require("./Slider.js")
```


```
const sliderRoots = // ...
```


```
const sliders = sliderRoots.map(root => new Slider(root))
```


```
<html>  
  <head><!-- ... --></head>  
  <body>  
    <!-- ... -->  
    <script src="./app.js"></script>  
  </body>  
</html>
```


Developer Tools - Modules - http://localhost:5000/


 Inspector


 Console


 Debugger


 Style Editor
















 Filter output

☐ Persist Logs

23:32:55.007  ▶ ReferenceError: require is not defined [\[Learn More\]](#) app.js:3:7

>> |

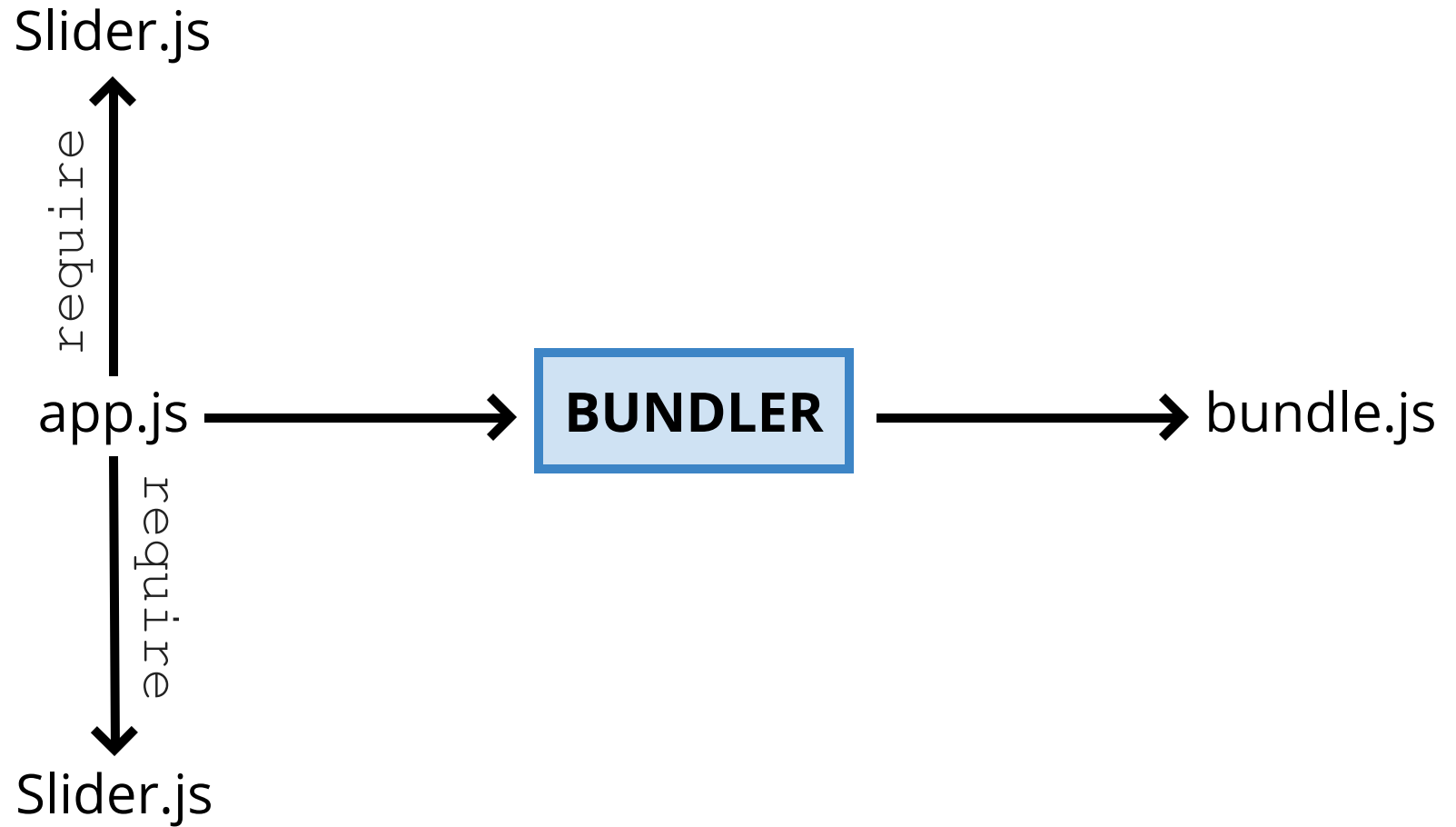


*CommonJS n'est pas une API qui a été inventée par le TC39 dans le but d'être implémentée par les navigateurs, mais plutôt par des gens qui tentaient de sortir JS du navigateur. L'implémentation la plus utilisée est celle de NodeJS.*

# Les bundlers



PARCEL



# Les modules ECMAScript

```
// Slider.js
```

```
class Slider {  
  // ...  
}
```

```
export default Slider
```

```
// app.js
```

```
import Slider from "./Slider.js"
```

```
const sliderRoots = // ...
```

```
const sliders = sliderRoots.map(root => new Slider(root))
```

```
<html>  
  <head><!-- ... --></head>  
  <body>  
    <!-- ... -->  
    <script src="./app.js"></script>  
  </body>  
</html>
```



```
// math-helpers.js
```

```
const add = (a, b) => a + b
```

```
const subtract = (a, b) => a - b
```

```
const multiply = (a, b) => a * b
```

```
const divide = (a, b) => a / b
```

```
export {  
  add,  
  subtract,  
  multiply,  
  divide  
}
```

```
// math-helpers.js
```

```
export const add = (a, b) => a + b
```

```
export const subtract = (a, b) => a - b
```

```
export const multiply = (a, b) => a * b
```

```
export const divide = (a, b) => a / b
```

```
// app.js
```

```
import {  
    add,  
    subtract,  
    multiply,  
    divide  
} from "./math-helpers.js"
```

```
add(3, 2)  
subtract(5, 2)  
multiply(2, 4)  
divide(10, 5)
```

**Des questions ?**



TD

- Une plongée illustrée dans les modules ECMAScript
- ES6 In Depth: Modules
- `import` (MDN)
- `export` (MDN)
- JavaScript Modules: From IIFEs to CommonJS to ES6 Modules