

front-end

Concepts & Principles

lab 3/8

today

I. Recap w1&2

II. Coding principles

III. JavaScript concepts

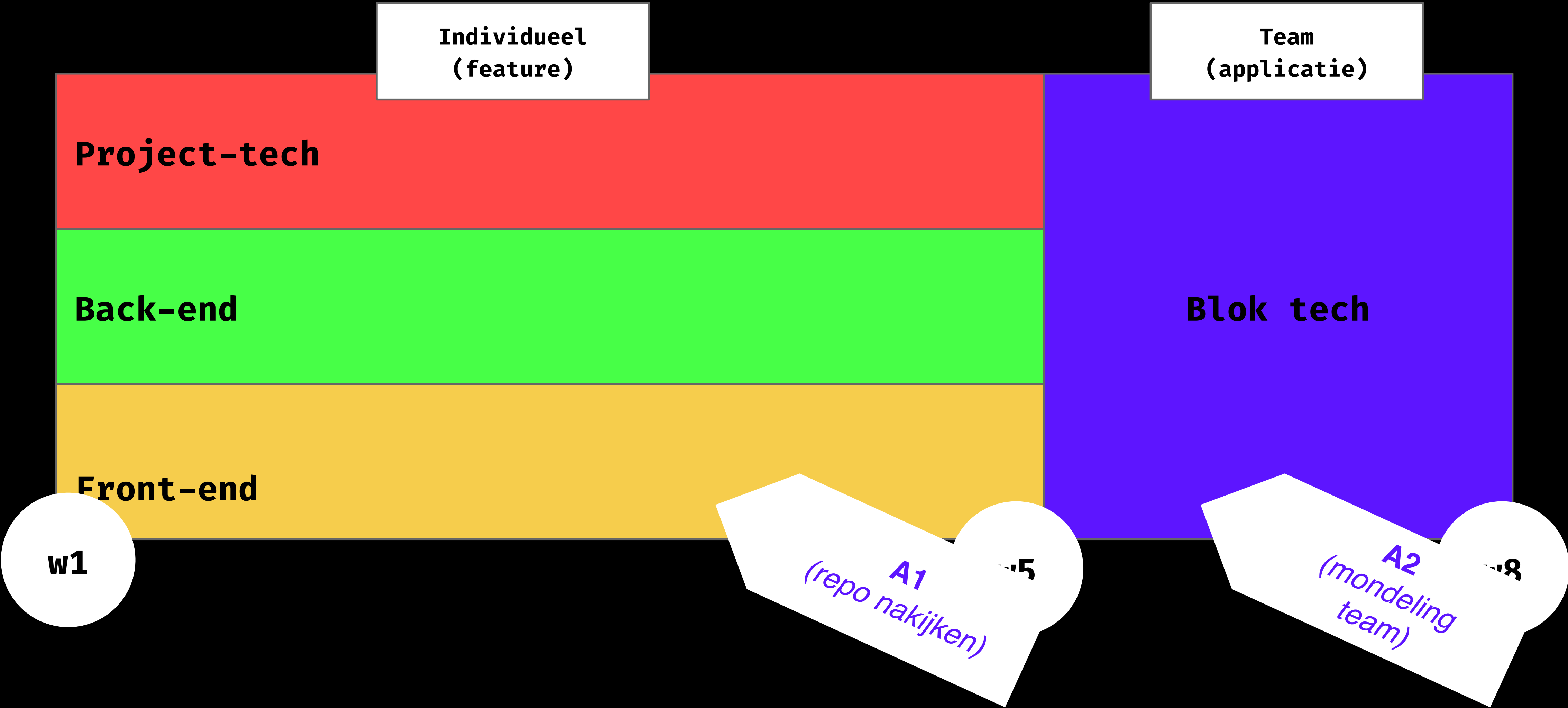
IV. Applied PE (using Forms)

Assessment

description

For your A1 assessment, you're going to implement a *progressively enhanced component*. In short, you're going to enhance the client-side experience of the user by doing research, documenting patterns and implement the principle of *progressive enhancement* using JavaScript.

[/readme.md](#)



Recap

Week 1

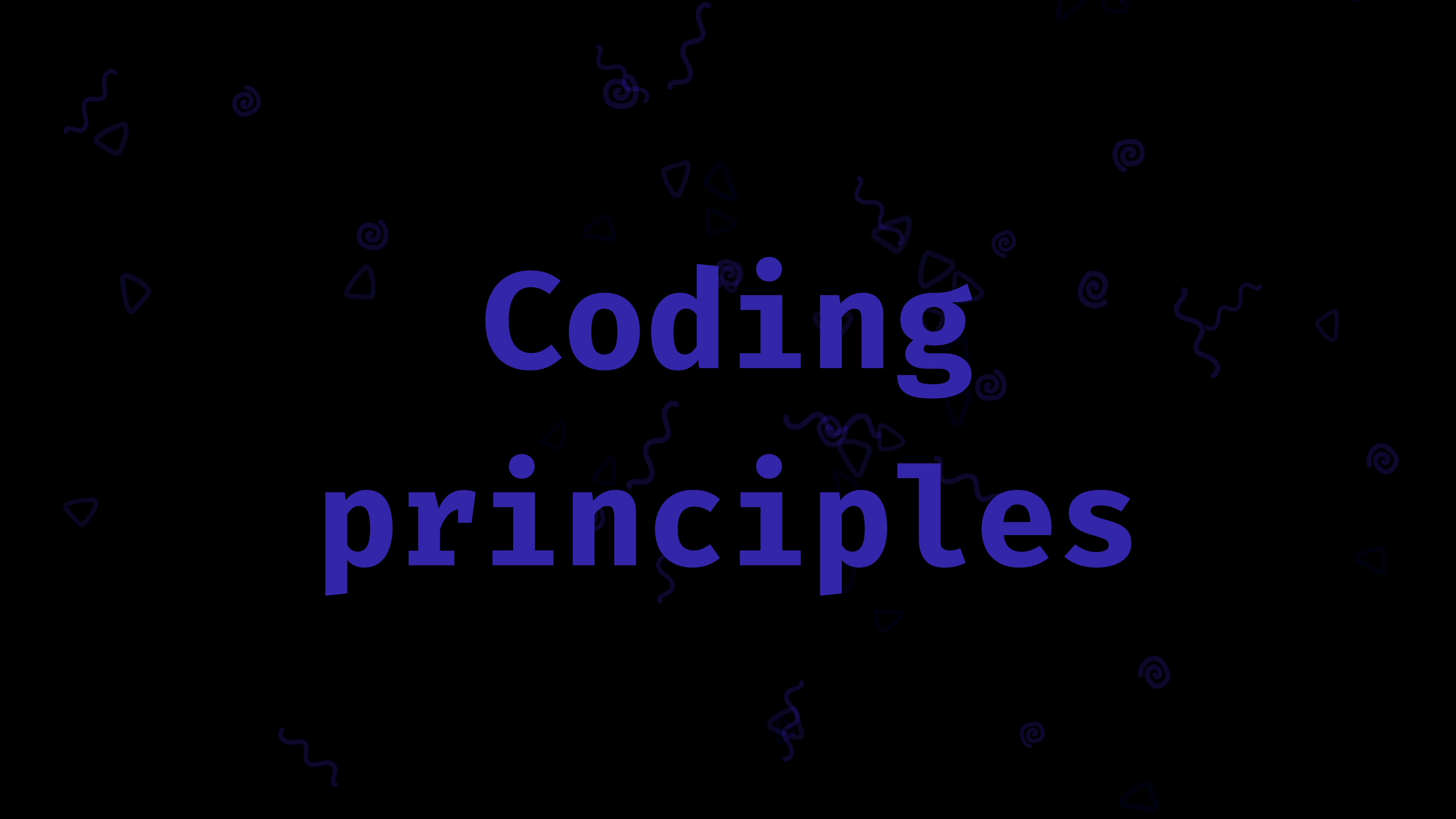
- Progressive Enhancement
- Build using HTML, CSS **and** JavaScript
- Using JS basics + principles

Recap

Week 2

- Events in JavaScript
- Functions & Scoping?
- The Document Object Model
- Web API's

Coding principles

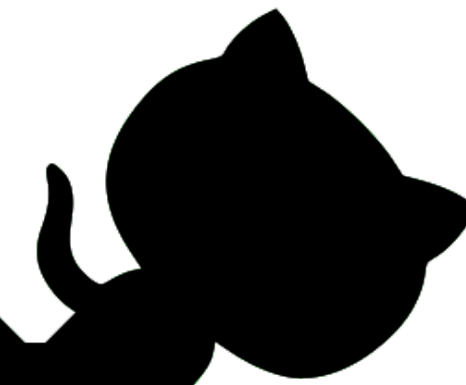
The background is a solid dark blue. It is decorated with various light blue geometric shapes and lines scattered across the surface. These include small triangles, squares, circles, and wavy lines, some of which are grouped together to form larger, more complex patterns. The overall effect is a subtle, abstract texture.

Coding principles

What ?

Coding principles are a set of **guidelines** we use while writing code. It allows us to write cleaner, better, easier maintainable and transferrable code.

Assignment (30m)



Read into the usage of [Clean Code in JavaScript by Ryan McDermott](#) until chapter 4 (Objects & Data Structures). Now look to the code you've written so far, what can be better? Is it already following these guidelines?

Coding principles

Variables

- Use meaningful and pronounceable variable names
- Use the same vocabulary for the same type of variable
- Use searchable names
- Use explanatory variables
- Avoid Mental Mapping
- Don't add unneeded context

Coding principles

Functions

- Function arguments (2 or fewer ideally)
- Functions should do one thing
- Function names should say what they do
- Functions should only be one level of abstraction
- Remove duplicate code
- Don't over-optimize

General principles

KISS/DRY

Can I go ice-skating?

Water can have many forms, gas as in steam, liquid as we usually know and frozen, also known as ice. During different temperatures, water behaves differently. When water reaches a temperature of 0 or lower, it starts to freeze. When this process has been going on for a while, the layer of water frozen may be thick enough to support the weight of an adult. During last night, there was an approximate temperature of -2 degrees for a continuous period of 2 hours. The given amount of ice that aggregated is insufficient to support an adult male for ice skating

General principles

KISS/DRY

Can I going ice-skating?

No.

General principles

KISS/DRY

[illegible]

General principles

KISS/DRY

WARNING:

FALLING ROCKS AHEAD

General principles

KISS/DRY



```
let value = document.querySelector('input').value;
```

```
if(value == 1) {  
  return "it's 1";  
} else if(value == 2) {  
  return "it's 2"  
} else if(value == 3) {  
  return "it's 3"  
} else if(value == 4) {  
  return "it's 4"  
} else if(value == 5) {  
  return "it's 5"  
} else if(value == 6) {  
  return "it's 6"  
}
```


General principles

KISS/DRY



```
let value = document.querySelector('input').value;  
return `It's ${value}`;
```



Break!

JavaScript concepts





```
let hello = "world" // global
```

```
function myFunction() {  
  let world = "hello" // local  
}
```

```
console.log(hello);  
console.log(world);
```



```
const button = document.querySelector('button');

button.addEventListener('click', function() {
  this.classList.add('is-clicked');
})

button.addEventListener('click', e => {
  e.target.classList.add('is-clicked');
})
```



```
console.log(counter);  
let counter = 1;
```

```
// ReferenceError: Cannot access 'counter' before initialization
```



```
let x = 20,  
    y = 10;  
  
let result = add(x,y);  
console.log(result);  
  
function add(a, b){  
    return a + b;  
}
```

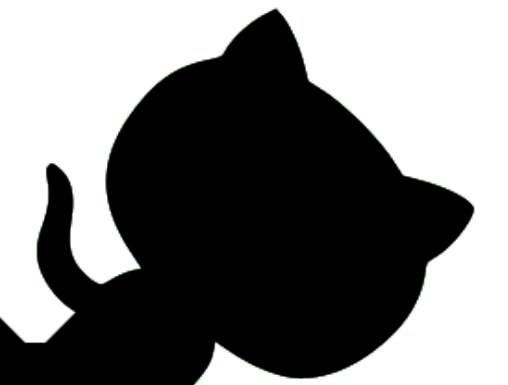


```
function outer() {  
    var name = 'Robert';  
  
    function inner() {  
        console.log(name);  
    }  
  
    inner();  
}  
  
outer();
```


Applied PE

(Using forms)

Assignment (60m)



Now work together (group). We've [made a codepen](#) with a form. It is your task to create three layers of Progressive Enhancement. If you have any questions:

Talk to your teacher.



Synopsis

- Regular lesson
- Time: 1:40h

Table of Contents

- [Practicum](#)
- [Homework](#)
- [Hand In](#)

Practicum

work on **self-study week-3**



exit;

see you in **lab-4!**