

Case study

- Start: 13.00
- End: 16.00 (ATTENTION: if you hand it in after 16.00 your exam will not be examined!!)
- Some students are entitled to have some extra time. They all have 20% extra time, for this exam it is 36 minutes in total. You can hand the answers in until 16.36.
- Tools you are allowed to use: internet, homework assignments and examples from the course. You cannot use social media and you are not allowed to ask any answers or code from anyone else.
- Ownership: the code you hand-in is written by you.
- You can hand-in your assignment via HZ Learn. Hand-in your project as a zip-file.

Description

Startscreen

Grade of vaccination

Please check the checkbox to find out the vaccination grade of that province

Average vaccination grade: **Please choose at least two provinces**

Provinces	Vaccination grade
<input type="checkbox"/> Zeeland	
<input type="checkbox"/> Noord-brabant	
<input type="checkbox"/> Limburg	
<input type="checkbox"/> Noord-Holland	
<input type="checkbox"/> Zuid-Holland	

Screen after someone checked 2 provinces

Grade of vaccination

Please check the checkbox to find out the vaccination grade of that province

Average vaccination grade: **39**

Provinces	Vaccination grade
<input type="checkbox"/> Zeeland	
<input checked="" type="checkbox"/> Noord-brabant	• Noord-Brabant - 68 %
<input checked="" type="checkbox"/> Limburg	• Limburg - 10 %
<input type="checkbox"/> Noord-Holland	
<input type="checkbox"/> Zuid-Holland	

Given is the HTML and CSS in the directory **start** and the pictures above. In these pictures you can see a list of provinces.

Requirements

When you click on a province the correspondending data is found in an object array with all vaccination grades per province.

This data (name of province and percentage) is written to the DOM.

When two provinces are checked out the average vaccination grade of these two provinces is added to the span with id **averageVaccinationGrade**.

Suggested steps

1. Handle the click event of the checkbox.
2. Find out if a province has been checked or not.
3. Find the corresponding percentage in the object array **vaccinationGradePerProvince**

```
//global variables
const vaccinationGradePerProvince = {
  name: "Vaccination grade per province",
  grade: [
    {
      province: "Zeeland",
      vaccinationGrade: 32,
    },
    {
```

```
    province: "Noord-Brabant",
    vaccinationGrade: 68,
  },
  {
    province: "Limburg",
    vaccinationGrade: 10,
  },
  {
    province: "Noord-Holland",
    vaccinationGrade: 60,
  },
  {
    province: "Zuid-Holland",
    vaccinationGrade: 80,
  },
],
};
```

4. Write the province and the vaccination grade percentage to the DOM
5. calculate the average vaccination grade
6. Write the average vaccination grade to the DOM

Conditions

1. You can only use native Javascript or TypeScript, for example: you may not use jQuery.
2. The application will only be graded when checkboxes in the DOM are clickable

Criteria

Nr	Criteria	Points
1	Is consistent in their naming practice	5
2	Is using let or const in the right circumstances	5
3	Is using an array to store (related) data	5
4	Is using conditionals (if/else)	10
5	Is using a loop in order to avoid repeating the same steps	10
6	Writes a function to structure code	10
7	Writes a function to avoid repetition (code duplication)	5
8	Writes comments according to the AirBnB specification	5
9	Chooses the right operator in the equations	10
10	Uses console.log() for debugging purposes	5
11	Uses higher-level functions (map, filter, reduce)	5

Nr	Criteria	Points
12	Uses types (with TypeScript) when declaring variables (even for return types and parameters)	5
13	Uses a object to store structured data.	5
14	Uses Events for interaction	5
15	Uses DOM methods (interfaces) to create and add HTML elements in the DOM.	5
16	Uses DOM methods (interfaces) to walk through the DOM	5

Grading

Appreciation	Grade	Points
Insufficient	4	< 60
Moderate insufficient	5	60 - 70
Sufficient	6	70 - 80
Almost good	7	80 - 85
good	8	85 - 90
very good	9	90 - 95
outstanding	10	95 - 100