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2	CSS text	2	Multiple Choice
3	CSS links 2020	2	Multiple Choice
4	HTML event 2020	2	Text Entry
5	Vue classes	2	Multiple Choice
6	Flask guess 2020	2	Multiple Choice
7	HTTP Guess 2020	2	Multiple Choice
8	Cookies and Sessions guess 2020	2	Multiple Choice
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Coding			
Question	Question title	Marks	Question type
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i Info 2020t

This is a trial exam for DAT310.

The exam is available in Inspira until Sunday 26.April.

Exam questions and solutions will also be available on github.

The exam is designed to be solved within 4 hours.

The exam contains 17 questions/exercises. You can collect 100 points in total.

You may use all available online and offline resources.

But you have to solve the exam yourself, so **it is not allowed to ask others, chat, ...**

Remember, if you spend a lot of time searching for answers online, you may not have time to complete the exam.

The exam contains two parts.

Part 1 contains multiple-choice and text questions.

Answers should be given using the available forms.

The scoring of multiple choice questions is as follows

- The correct solution is 2 points
- Wrong answer is -1 point

Part 2 contains several programming exercises related to example applications.

Starter files for all exercises are provided as a zip archive.

Download the starter files and use your IDE to solve the exercises.

To submit your solutions to part 2, submit a single zip file, containing the starter files and your added code.

You have 4 hours to solve the exam and submit your solution.

Start in time (5-10 minutes) before the deadline to create your archive and upload it.

This zip file can be uploaded on the last page of the exam.

Code added in the individual solution forms will not be considered if a zip file is available.

This should only be a last resort.

1 CSS border 2020



The following is part of an html document:

HTML document:

`<h4>Some Title</h4>`

Which of the following css-selectors will display the heading above as shown on the image?

Select one alternative:

- ☐

```
h4 {  
  border-width: 0px 0px 2px 1px;  
  padding: 1em;  
  margin: 0;  
  border-style: solid;  
  border-color: blue;  
  background-color: yellow;  
}
```
- ☐

```
h4 {  
  border-width: 0px 2px 1px 0px;  
  padding: 1em;  
  margin: 0;  
  border-style: solid;  
  border-color: blue;  
  background-color: yellow;  
}
```
- ☐

```
h4 {  
  border-width: 0px 2px 1px 0px;  
  padding: 0;  
  margin: 1em;  
  border-style: solid;  
  border-color: blue;  
  background-color: yellow;  
}
```
- ☐

```
h4 {  
  border-width: 0px 0px 2px 1px;  
  padding: 0;  
  margin: 1em;  
  border-style: solid;  
  border-color: blue;  
  background-color: yellow;  
}
```



Maximum marks: 2

2

CSS text

Hvordan få du hvert ord i en tekst til å starte med et stor bokstav med CSS?
E.g. "hellow world" displays "Hello World"

Select one alternative:

- ☐ text-decoration: capitalize;
- ☐ this is not possible using CSS
- ☒ text-transform: capitalize;
- ☐ text-transform: uppercase;



Maximum marks: 2

3

CSS links 2020

How do you make links (<a> elements) display without underline?
Select one alternative:

- ☐ a { underline: none; }
- ☐ a { text-decoration: no-underline; }
- ☒ a { text-decoration: none; }
- ☐ a { decoration: no-underline; }



Maximum marks: 2

4 **HTML event 2020**

Fill in the HTML-code below. *(2 points, no points taken for wrong answer)*
The validateEmail function should be run when the user finished writing or moves to the next form field.

HTML:

<input type="email" name="email"

(onblur, onchange) ="validateEmail();">

Maximum marks: 2

5 **Vue classes**

```
1  Vue.component('my-comp', {
2    template: `
3      <div class="blue" v-bind:class="{red: isred, green: isgreen}"></div>
4    `,
5    data: function(){
6      return {
7        red: false,
8        isred: true,
9        isgreen: false
10      }
11    }
12  })
```

The component above will replace
<my-comp></my-comp>
with which of the following:

Select one alternative:

- ☐ <div class="blue"></div>
- ☐ <div class="blue green"></div>
- ☐ <div class="red"></div>
- ☐ <div class="blue red"></div>



Maximum marks: 2

6

Flask guess 2020

```
@app.route("/")
def index():
    ...
    return render_template("index.html", notes=notes)

@app.route("/style")
def stlye():
    return redirect(url_for("index"))
```

The image above shous two routes from a flask application.

What does an HTTP request to the /style URL return?

Select one alternative:

- ☐ the file index.html
- ☐ the same as a request to /
- ☒ a response with status code 302
- ☐ a css style file



Maximum marks: 2

7

HTTP Guess 2020

Which of the following is **wrong** about GET requests?
Select one alternative:

- ☐ they contain a limited amount of data
- ☒ should be used to send sensitive information
- ☐ can be buffered/cached
- ☐ can be bookmarked
- ☐ the data is displayed in the URL




Maximum marks: 2

8

Cookies and Sessions guess 2020

Which of these is **wrong** about cookies and sessions?
Select one alternative:

- ☐ cookies are used to store data in the browser
- ☐ cookies set by the application are sent along with each http request to the application
- ☒ sessions function well, even if cookies are disabled 
- ☐ data stored in a session is either not available or encrypted in the browser

Maximum marks: 2

9

AJAX guess

In which of the following options is AJAX useful?
Select one alternative:

- ☐ to load a css file (style sheet)
- ☐ when submitting an HTML form containing personal information
- ☒ to load additional data that should be displayed on the page
- ☐ to load a html document



Maximum marks: 2

10

AJAX guess 2

Which of these is **false** about AJAX calls and their responses?
Select one alternative:

- ☐ several requests can be sent at the same time
- ☒ responses always contain JSON data
- ☐ responses can be delivered out of order
- ☐ responses should be handled in Java Script



Maximum marks: 2

i Info coding 2020t

Part 2: In the next exercises you have to complete code that is provided as a zip file.

Some of the exercises have many minor tasks. Read the complete exercises before starting on the tasks. Make sure you do not forget one of the tasks.

You can download all start files as a zip archive below.

The zip file includes the following folders:

- 11_html
- 12_css
- 13_js_bug
- 14_js_coding_colors
- 15_flask_templates
- 16_vue
- 17_AJAX

Vennligst behold mappestrukturen og last opp hele mapper, inkludert dine løsninger i spørsmål 18.

Each folder contains starting code for one exam question.

Please solve exercises in place and upload your code in question 18.

You are not allowed to use/include additional frameworks, e.g. jQuery, ...

Unless noted differently, you may change the existing code, but this should not be necessary.

Download starting files here: [start-files.zip](#)

11 **HTML coding 2020t**

Name

Email

Comment

Notify me about: ☐ News ☐ Offers ☐ Events

Send

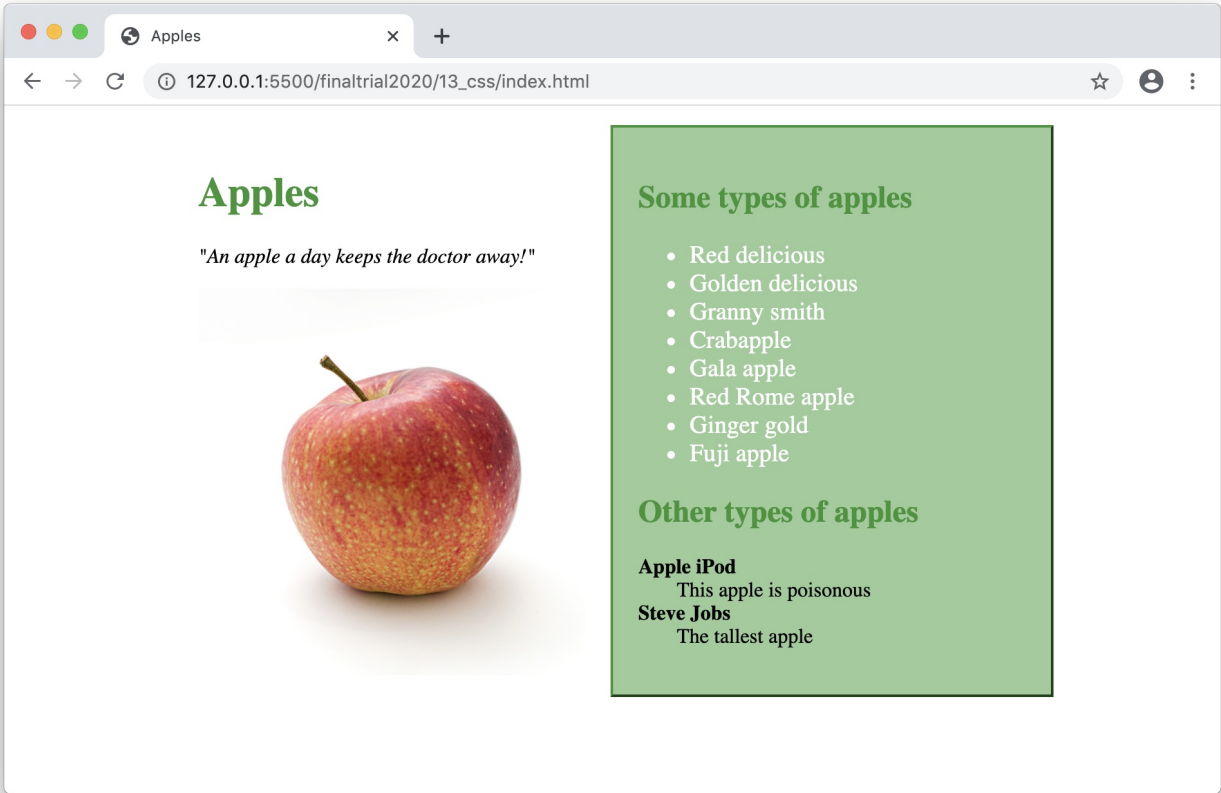
Create the above form in HTML. (7 points)
Create a complete HTML document in the folder 11_html (I11_html/index.html).

- Name (name="name") is a text field.
- Email (name="email") is an email field (use the corresponding HTML5 element!)
- Comment (name="comment") is a textarea with 40 characters width and 5 lines height.
- The notification options are checkboxes (names: "notify_news", "notify_offers", "notify_events").
- It is impossible to submit the form without a valid email address.
- The submit button has the label "Send".
- Upon submission, the form is sent to feedback.php using the POST method.
- Use the <label> tag to label the input fields.
- You don't need to write the entire HTML page, only the form part.

Write HTML code here

Maximum marks: 7

12 CSS styling 2020t



Write an external CSS file that displays the given HTML page as shown. (10 points)

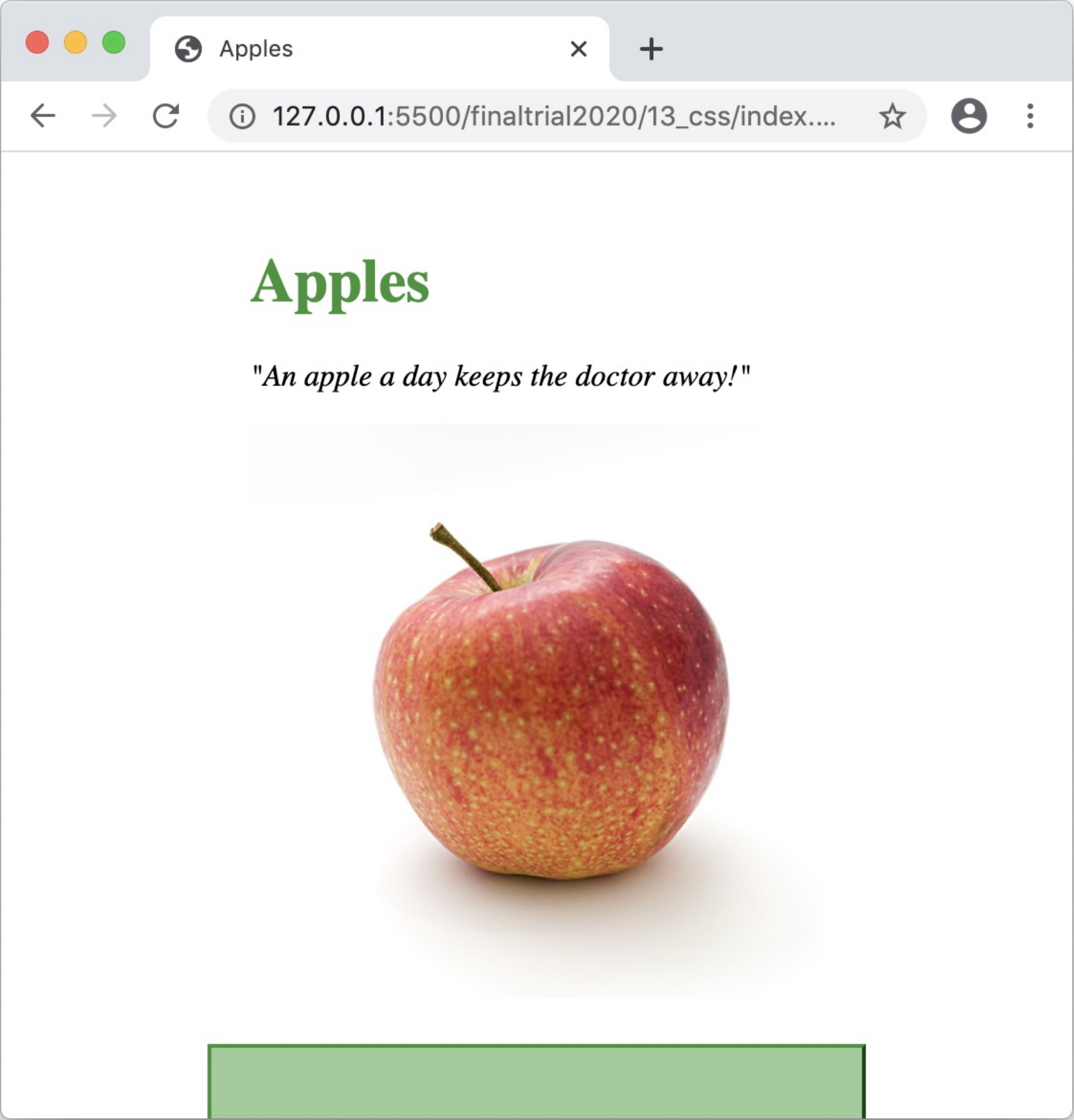
You are not allowed to make changes to the HTML source.

You can find the html side at **start-files/12_css/index.html**.

Write your css queries into **start-files/12_css/style.css**.

Specific requirements:

- Notice that there are two distinct sections on the page (apples and links)
 - Set the width of each main section to 300px
 - The content inside each section should be 20 pixels away from all edges
 - The right section has a 2 pixel wide outset green (#359636) border and a background of #99cc99
- Display the two main sections next to each other and centered (the easiest way to achieve this is through flex on the <body>)
- On small screens the sections should be shown below each other, as in the image below.
- Make all headings green (#359636) and make them use the font Garamond. Use a serif font if Garamond is not available.
- The quote should be italicized.
- The "some types of apples" list is white and the font size is 120%
- The "other types of apples" section contains two lists
 - These lists don't use any list marker
 - The outer list items are bolded
 - The indentation is 0px for the outer list and 30px for the inner list
 - Keep in mind that the inner list will not inherit all properties (for example, list markers) from the outer list

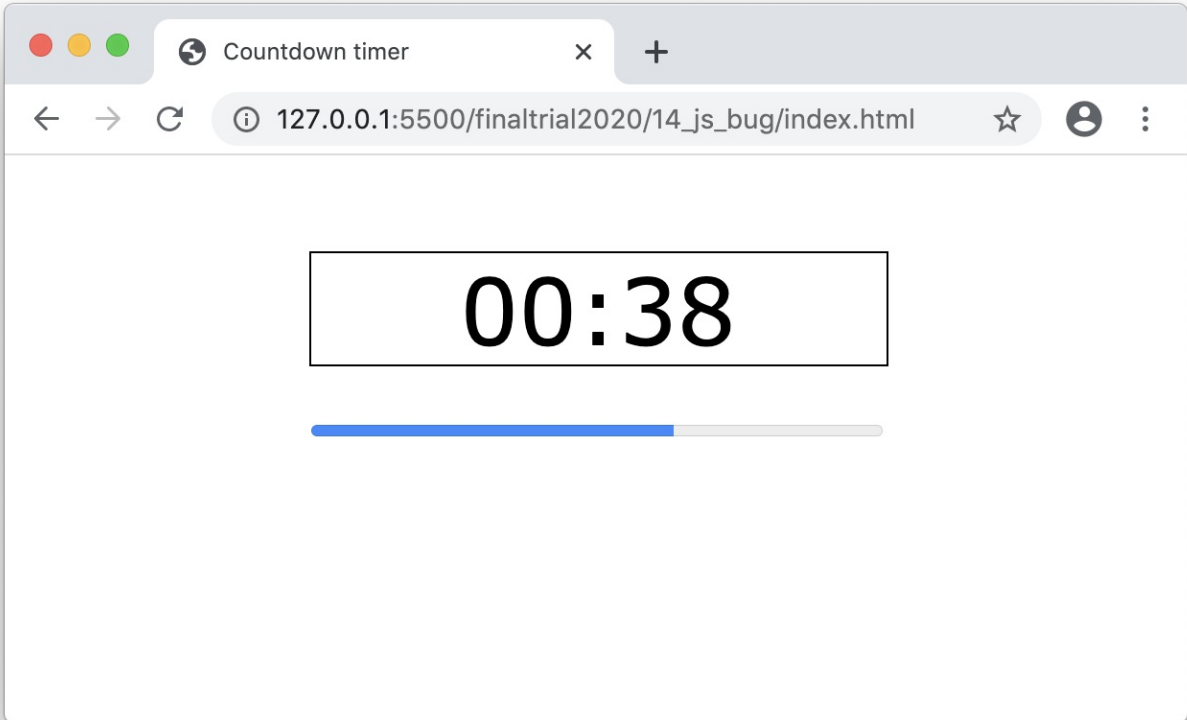


Write the contents of the CSS file here

Maximum marks: 10

13

JS find bug 2020t



In this exercise you have to find and correct a bug in a javascript application (5 points)

You can find the application in **start-files/13_js_bug/**. Run it by opening the index.html file.

If you start the timer, the display will not work.

- In the field below, or as a comment in the code, write in which line the error occurs and what you think is the error. (3 points)
- If possible, fix the error. (2 points)

Fill in your answer here

Maximum marks: 5

14

JS coding 2020t



In this exercise you have to write some functions in Javascript (14 points)

You can find starting foiles in **start-files/14_js_coding_colors/**.
You have to implement some functions in **start-files/14_js_coding_colors/script.js**.
Do not change the index.html file.

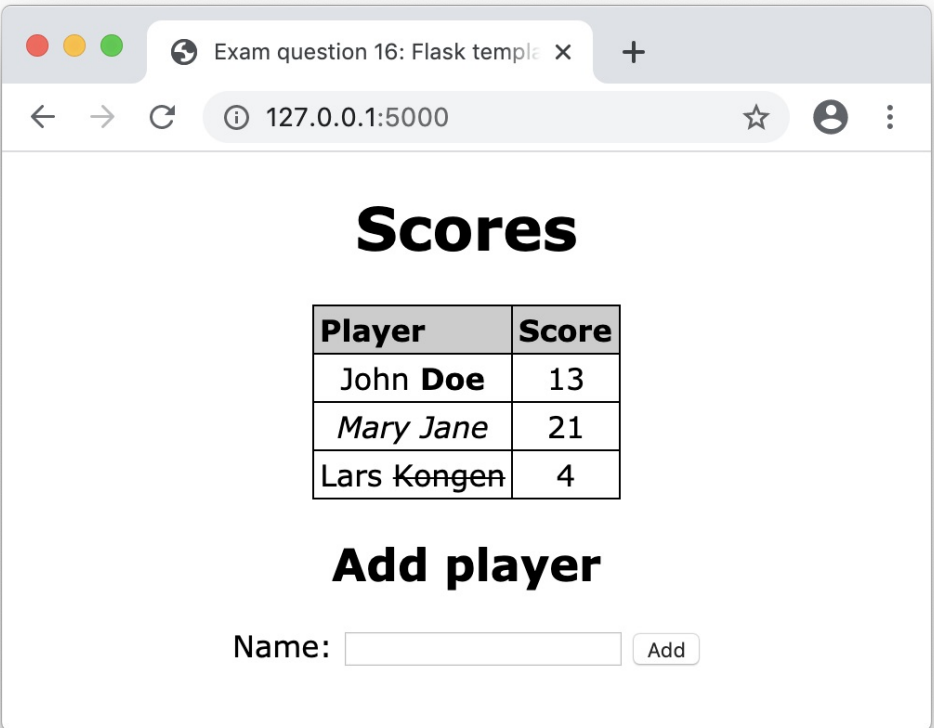
Implement the following functionality:

- When you click on the blue box it must change color. Use at least 3 colors (e.g. blue -> red -> green -> blue).
 - You can use the *init* function to add an event handler to the box.
- On double-click remove the box from the DOM.
 - You can use the *init* function to add an event handler to the box.
- On clicking the **Add box** button, the *addBox* function runs. Implement the function so that:
 - A div element is added to the gray box with id *boxes*.
 - The new element has the class *box*.
 - On click, the new element changes color, independent of other boxes.
 - On double-click, the new element is removed from the DOM again.
- When the **All blue** button is clicked, the function *allBlue* runs. Implement the function so that:
 - All the boxes get the color blue.
 - Note that there may be a variable number of boxes.
 - After this, it should still be possible to click on a box to change the color.

Fill in your answer here

Maximum marks: 14

15 **Flask templates 2020t**



In this assignment you need to complete a flask application. (12 points)

You can find the application in **start-files/15_flask_templates/**.
To test the application, run the **app.py** file.

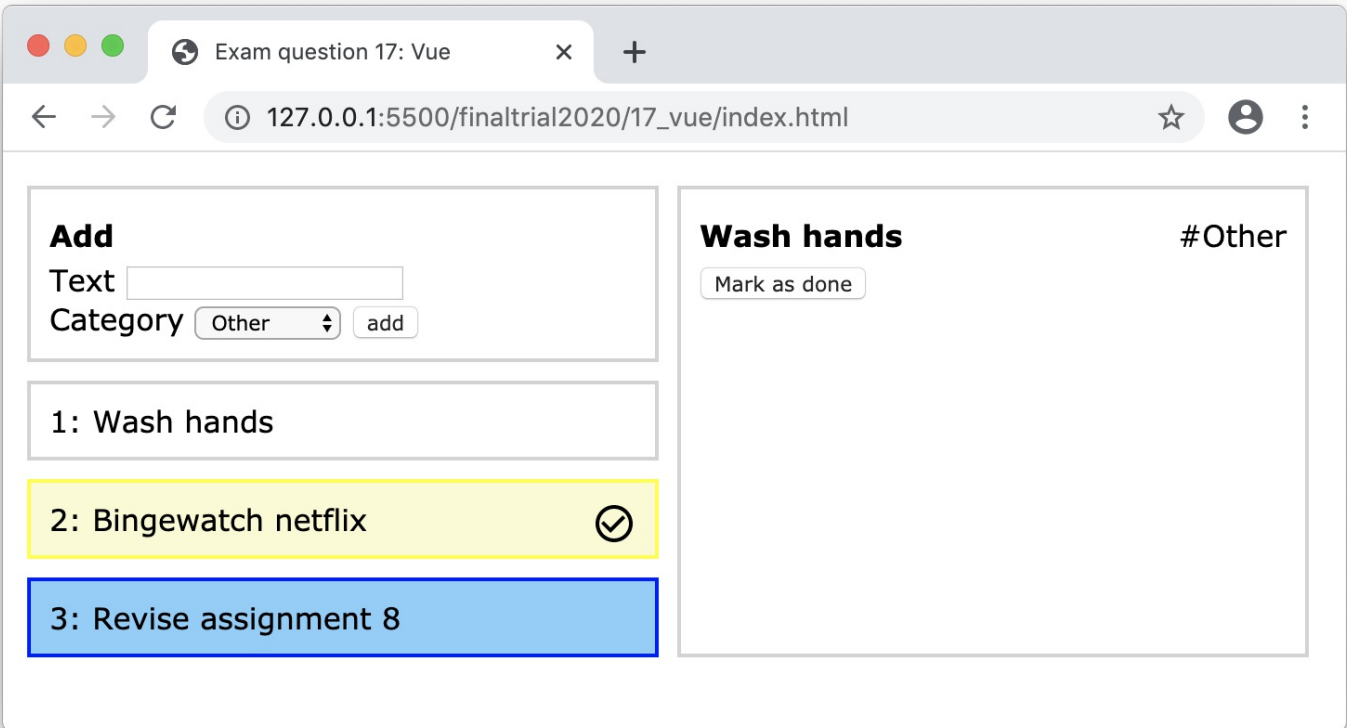
You need to implement the following functionality:

- 1. Create the **index.html template**. Include the following:
 - The template should extend *base.html*.
 - When the template is opened from the *"/empty"* route (with `players = []`), the page displays exactly as in */static/empty.html*.
 - When the template is opened from the *"/"* route with `players = PLAYERS`, it displays the page just like in */static/index.html*.
 - The rows in the players table should be generated using one *for* loop and reflect changes in `PLAYERS`.
 - Highlights in the names, e.g. done through **** or ** should appear in the template.
- 2. Implement a new route **/add** in *app.py*. This route should
 - process the POST request from the form in *index.html*.
 - add new players with names and "score" = 0 in `PLAYERS`.
 - redirect the user to the index page (*"/"*).

Fill in your answer here

Maximum marks: 12

16 **Vue coding 2020t**



In this assignment you need to complete a vue application. (22 points)

You can find the application in **start-files/16_vue/** .
To test the application, just open the **index.html** file in the browser.
In this exercise, you have to use the different vue primitives. Avoid writing document.getElement...

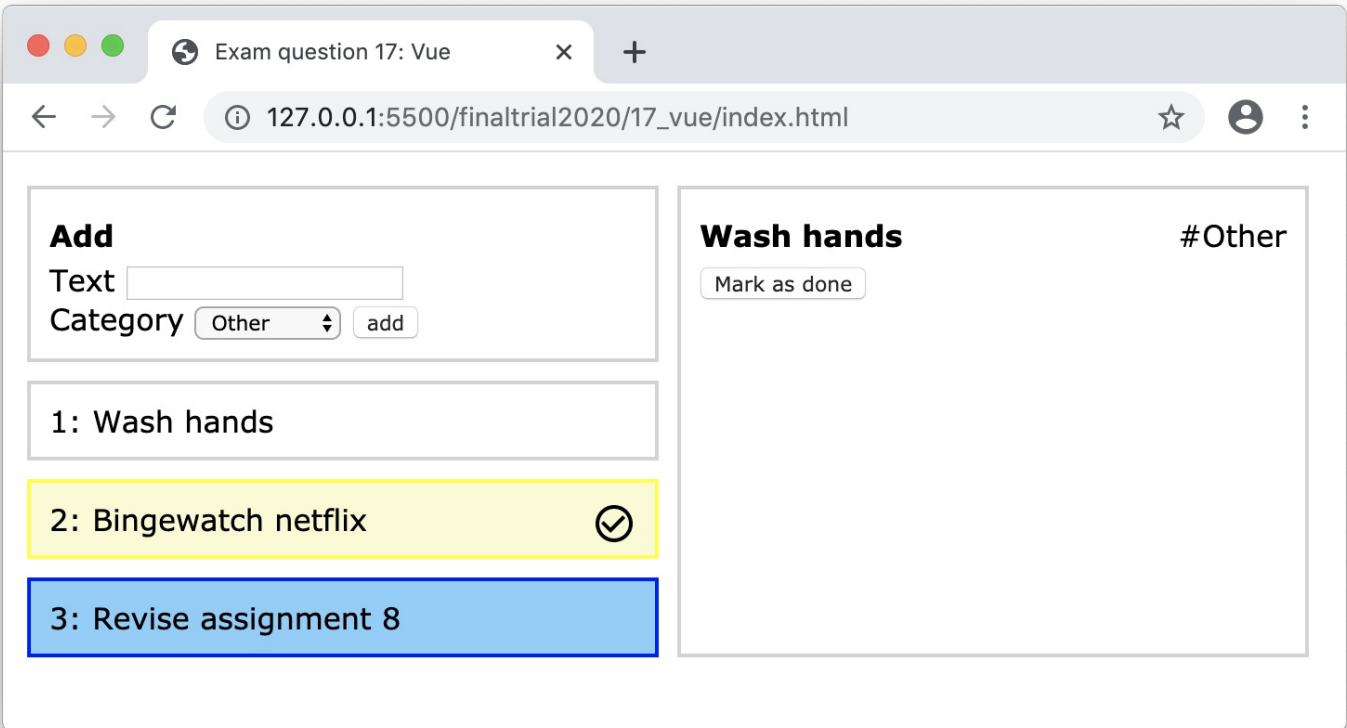
You need to implement the following:

1. The current application contains 3 hard coded items. Remove this and instead **display the elements in notes using v-for**.
The resulting HTML should be the same as shown, including:
 - The category of the note is a class of the item.
 - If the note is done, the checked symbol is shown.
 - Text includes index numbers starting with 1.
 - When the is clicked, show function is run with correct index argument.
2. The application includes a form to add new items to the notes list.
Implement functionality that allows items to be added.
 - Add **v-on** and **v-model** directives to the form.
 - When **add** is clicked, add the new note to the data.
 - Only add if the text is not empty.
 - Set done=false for the new note.
 - After adding, reset the text in the input.
3. The application includes a div with class bignote.
Replace the bignote div with a new component, showing the same content.
 - Write the new component in the *bignote.js* file.
 - Use **props** to pass in the note that should be shown.
 - When the mark as done button is clicked, **emit** an event.

Legg til kommentarer her:

17

AJAX coding 2020t



In this assignment you need to code some AJAX calls. (10 points)

You can find the application in **start-files/17_AJAX/** .
To test the application, run the **app.py** file.
You should only make change to the file **start-files/17_AJAX/static/script.js** .

You need to implement the following:

1. Implement the **getList()** function.
This function runs when the page is loaded. It should:
 - Make an AJAX call to **/list**.
 - Parse the list in the response from JSON.
 - Call *addListElement(item)* for each item (string) in the list.
 - You can use XMLHttpRequest or fetch/await, as you want.
2. Rewrite the **addToList()** function to **use fetch** instead of XMLHttpRequest.
You can choose if you want to use **async/await**, or **.then()**

Legg til kommentarer her:

Maximum marks: 10

18

Upload

Rename the start-files folder, including your changes to files-{candidate-number}, including your candidate-number.

Create a zip archive from the whole folder and upload it here:

The file must be a zip archive, with file extension .zip.
Create a zip archive, do not use gzip, 7zip.

Maximum marks: 0