

Web Engineering Multiple Choice Questions

Midterm Test 1

You send an HTTP POST request with a JSON payload to a web server and receive a response. What can you tell from the headers of the response, which are given below?

```
HTTP/1.1 200 OK
Date: Mon, 30 Mar 2020 13:00:42 GMT
Server: nginx
Set-Cookie: sessionId=e8bb43229de9
Content-Type: application/json;
Content-Length: 232
```

You are given the vague description to design a URL for a secure HTTP resource available on port 5000: it should serve a path to users, query a username, and target the profile fragment within the resource.

Which of the following URLs is the most compatible with this description?

You want to send an idempotent HTTP request with a message body. Which method can you use?

You are navigating to a large HTML document which includes three CSS files and ten images. How does your browser react?

What is wrong with the following HTML structure?

```
<section class="important label">
  <strong style="border-bottom: 1px solid black;"><h2>Important
Announcement</h2></strong>
  <section>
    <em>Beware: </em> of all the wrong things in this HTML.
  </section>
</section>
```

You want to display an image on your website. The image on your server has a resolution of a 12000x12000 pixels, but you only need 200x200 pixels. Initially, you write the following code ``.

Which of the following statements best describes what the browser is doing?

You are reviewing code for an HTML form. While the markup looks the way it should in the browser, you can see how it could create accessibility issues. Which of the following changes are best suited to improve accessibility?

```
<form action="/login">
  <b>Login</b><br>
  <table>
    <tr>
      <td>
        Username<br>
        Password
      </td>
      <td>
        <input name="field_1"><br>
        <input name="field_2"><br>
        <input type="submit" value="Login">
      </td>
    </tr>
  </table>
</form>
```

Which of the following selectors would you use to target the HTML element (and only that element) highlighted in bold below?

```
<section id="siblingSec" class="sibling">
  <h2>Style my sibling</h2>
  <p class="sibling">
    <div class="listContainer" id="firstContainer">
      <ul class="bigList">
        <li>First</li><li>Second</li>
      </ul>
    <div>
      <ul class="bigList">
        <li>Third</li><li>Forth</li>
      </ul>
    </div>
  </div>
</p>
<div>
  <p class="sibling">
    <ul class="bigList">
      <li>First</li><li>Second</li>
    </ul>
    <div class="listContainer">
      <ul class="bigList">
        <li>Last</li><li>Actually Last</li>
      </ul>
    </div>
  </p>
</div>
</section>
https://jsfiddle.net/r26y3et1/4/
```

Which of the following CSS declarations is most likely to result in the following rendering in the browser given this markup/style declaration:

```
<div style="border: 4px solid black;">
  <div id="outer">
    <span id="inner"
      style="font-size: 2em;">Some text</span>
  </div>
</div>
```

Which one of the following HTML elements have we heard about in the lecture that is used to link to an external CSS stylesheet for integration into HTML?

Which one of the following CSS properties for the selector `section#content` do you think is most likely to have produced this output in the browser?

The HTML for the relevant part of the page is given as follows:

```
<section id="content">
  <div>Cats</div>
  <div>Dogs</div>
  <div>Tigers</div>
  <div>Tortoises</div>
  <div>Ducks</div>
  <div>Pumas</div>
  <div>Hyenas</div>
  <div>Pigs</div>
  <div>Cows</div>
  <div>Foxes</div>
  <div>Wolfs</div>
  <div>Bison</div>
</section>
```

And here part of the CSS:

```
section#content div {
  padding: 10px;
  margin: 4px;
  border: 1px solid black;
  width: 100px;
  height: 40px;
}
```

<https://jsfiddle.net/ertk8L0y/1/>

You are given this CSS code and have to figure out which of the following resulting CSS rules are true for the element `<h1 class="alarm">...</h1>` on a device with 300px width.

```
h1 {
  --alarm-color: darkred;
}

h1.alarm {
  font-size: 2em;
  color: var(--alarm-color, red);
}

@media only screen and (max-width: 400px) {

  h1.alarm {
    font-size: 1em;
  }
}
```

You are given the following HTML and JavaScript code. What is the browser output if you enter 100 into the input?

```
<label for="speed">Speed (km/h)</label>
<input type="text" id="speed">
<div>
  Speed <span id="output"></span>
</div>

var el = document.getElementById('speed')
// Beware that event.target.value returns a string
el.addEventListener('change', event =>
  addSpeedClassification(document.getElementById('speed').value));

function addSpeedClassification(speed, classification) {
  const output = document.getElementById('output');
  //reset markup
  output.innerHTML = '';
  output.border = 'none';
  if(isSpeedLimit(speed, [30, 50, 100, 130])) {
    output.style.border = '4px dashed red';
  }

  if(!classification) {
    classification = {
      text: {'slow' : 50, 'normal' : 90, 'fast' : 130},
      overText: 'too fast'
    }
  }

  let classificationOutputText;
  for(let key in classification.text) {
    if(speed <= classification.text[key]) {
      classificationOutputText = key;
    }
  }
  if(!classificationOutputText) {
    classificationOutputText = classification.overText;
  }

  const strongText = document.createElement('strong')
  strongText.innerHTML = `${speed} (${classificationOutputText})`
  output.appendChild(strongText);
}

function isSpeedLimit(speed, limits=[15, 40, 90]) {
  for(let limit of limits) {
    if(speed == limit) {
      return true;
    }
  }
  return false;
}
```

<https://jsfiddle.net/q5y60knb/1/>

What are promises in JavaScript?

Why are promises a solution to "callback hell" in JavaScript?

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