

TIE-23500 / TIE-23506 Web Software Development : Exam

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Examiner: Petri Ihantola

- All answers should easily fit on a single answer sheet.
- Write on each paper your **name** and your **student number**
- No additional materials, calculators etc. allowed.

HTML & CSS

1. What is the key difference between div and span elements? (max 2 sentences) **(1 point)**
2. What does the following CSS style definition make italic? (Max 1 sentence) **(1 point)**

```
p i {  
  font-style: italic;  
}
```

HTTP

- 3) When some web page is browsed for the first time, we get a HTTP response code **200 OK** for most of the items the browser loads. The next time some items return a response code **304 Not Modified**. What is going on (1 point) and how does it work (1 point)?
(max 2 sentences, **2 points**)
- 4) Consider the URL **https://www.example.com/foobar?q=banana&id=561** Explain briefly what are the following parts of the URL **(2 points)**
 - a) `https://`
 - b) `www.example.com`
 - c) `/foobar`
 - d) `?q=banana&id=561`

JavaScript & jQuery

- 5) The following JavaScript code is executed. What (if anything) is printed in the console? (2 points)

```
var foo = function () {  
  var i = 0;  
  
  return function () {  
    console.log(i)  
    i++;  
  };  
}();  
  
foo();  
foo();
```

Handwritten annotations: An arrow points to the first function definition. A bracket groups the inner function definition with a handwritten '2' above it. A handwritten '= 0' is next to the 'i = 0;' line. A handwritten '0 → 1' is to the right of the inner function definition.

- 6) Look at the code below. What happens when you click the link (2 points)

```
<!doctype html>  
<html>  
<head>  
<title>Demo</title>  
</head>  
<body>  
  <a href="http://jquery.com/">jQuery</a>  
  <script src="jquery.js"></script>  
  <script>  
    $( document ).ready(function() {  
      $( "a" ).click(function( event ) {  
        alert( "Hello" );  
      });  
    });  
  </script>  
</body>  
</html>
```

APIs

- 7) You see a client sending the following requests to a REST API at example.com. Explain what you assume each request to do. (one sentence per request, **3 points**)
- `GET http://www.example.com/customers/12345`
 - `GET http://www.example.com/customers/12345/orders`
 - `POST http://www.example.com/customers/12345/orders`

Sessions & Security

- 8) Mallory is writing a blog post on a blogging service where she wrote the following as a title for the post. The **beginnings** of the texts she wrote are shown below. What is she trying to do in the two cases? Explain briefly. (**2 points**, 1 for each)
- `Cat<script>` rest of the text not shown
 - `Cat'); INSERT INTO` rest of the text not shown

Django

9) (total 4 points)

The following snippets are a Django view and the corresponding urls.py. The service hosts **private** photo albums for a number of users.

`views.py`

```
1 @login_required(login_url='/login/')
2 def del_page(request, album, page_num):
3     page = Page.objects.get_object_or_404(album=album, number=page_num)
4     page.delete()
5     return HttpResponseRedirect("/albums/")
```

`urls.py`

```
urlpatterns = [
    url(r'^delete/(?P<album>\w+)/(?P<page_num>[0-9]{2})$', views.del_page),
    ...other urls...
```

(**3 points**) Briefly explain 3 different scenarios that can what happen when a user visits the URL: `http://someserver.com/delete/vacation/42`
Use the line numbers if necessary.

(**1 point**) There is an authorization problem in the code. What is it? (Max 2 sentences.)