

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

Date: 11.5. 2017

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- All answers should 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) HTTP is a stateless protocol.
 - a) What does it mean that the protocol is stateless? **(1 point)**
 - b) How web services (e.g., REST APIs) benefit from HTTP being stateless? **(1 point)**
- 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)

```
function foo(x) {  
  return function(y) {  
    return x + y;  
  };  
}  
var bar = foo(5);  
console.log(bar(2));
```

- 6) Look at the code below. Explain 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 does. (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) Explain how CSRF works, and how CSRF tokens can be used to prevent this (**3 points**)

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 different scenarios that can 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.)