

CSE-C3210 / CS-C3170 Web Software Development : Exam

13.01.2017

- All answers should easily fit on a single answer sheet.
- Write on each paper your **name**, your **student number** including any checking characters, the **code and name of this course**, **examination hall**, **date**, the **number of papers returned** and **your signature**.
- **If the question number is followed by an asterisk ***, you should select all options that apply. If there is no asterisk, select only one.
- 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 snippet do? (correct outcome, 1 point) (explanation, 1 point)

```
h1.calm {
  color: blue;
}
h1, h2 {
  color: red;
  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://sample:stuff@www.example.com/foobar?q=banana&id=561** Explain briefly what are the following parts of the URL (2 points)

- a) https:// protocol
- b) sample:stuff@ ~~user~~ credential
- c) www.example.com domain
- d) /foobar
- e) ?q=banana&id=561 query

- 5) Please describe briefly some key differences between GET and POST? (2 points)

JavaScript & jQuery

- 6) The following JavaScript code is executed. What (if anything) is printed in the console on lines 7 and 8 ? (2 points)

```
1) var blob = {  
2)   origin: 'unknown',  
3)   weight: 10  
4) };  
5)  
6) blob.owner = 'unknown';  
7) console.log( blob.unknown );  
8) console.log( blob['owner'] );
```

- 7) With jQuery, the easiest way to load new HTML content from URL /products/2/ and replace element's (id examplediv) content is (1 point):

```
a) $("#examplediv").update("/products/2/");  
b) $("#examplediv").load("/products/2/");  
c) $.get("/products/2/").update("#examplediv");  
d) $.get("/products/2/").html("#examplediv");
```

APIs

- 8) Explain briefly the REST concepts of addressability and statelessness. (max 4 sentences, 2 points)

Sessions & Security

- 9) 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)
- a) `Cat<script>` rest of the text not shown
- b) `Cat': INSERT INTO` rest of the text not shown

Django

- 10) ☆ Which of the following statements are **true** for Django templates? (1 point)
- a) All javascript code should be written in the templates
 - b) Templates have if statements and for-loops
 - c) Variables can be used in templates this way: {% variable_name %}
 - d) Templates can contain and execute arbitrary Python code
 - e) Templates can specify HTTP Headers for the response

11) (total 4 points)

The following snippets are a Django view and the corresponding urls.py that could have been in someone's course project (they weren't) 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/5>
Use the line numbers if necessary.

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