


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

21.12.2017

- 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.

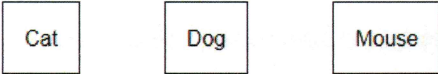
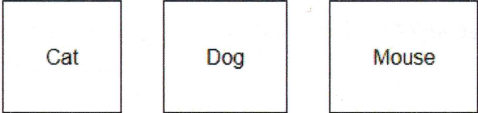

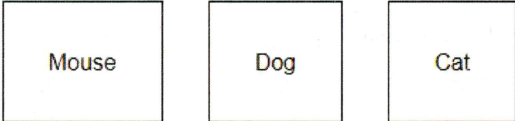
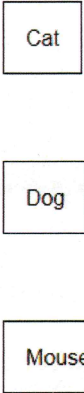
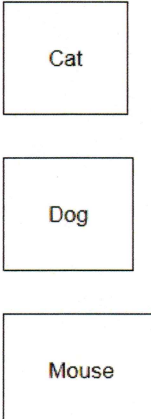
HTML & CSS

- 1)  Which statements about HTML elements are true? (1 point)
- a) h1, h2, ... h6 are meant for headings and subheadings in the text.
 - b) for paragraphs of text, div element is semantically the best choice
 - c) external style sheets can be loaded using the link element
 - d) ul element is meant to add numbered lists on the page

- 2) For the following fragments of HTML and CSS

<pre><ul id="species"> Cat Dog Mouse </pre>	<pre>#species li { border : 1px solid black; margin : 1em; padding : 2em; float : left; /* removes the ul bullet */ list-style-type: none; }</pre>
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Which of the a-f images best describes the resulting layout?

- a) 
- b) 
- c) 
- d) 
- e) 
- f) 

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**. How are the 200 and 304 responses different (1 point) and what do the browser and server do in the 304 case (1 point) ?
(max 4 sentences, **2 points**)
- 4) Consider the URL **http://www.example.com:404/foobar?q=banana&id=561** Explain briefly what are the following parts of the URL (**2 points**)
- a) http://
 - b) www.example.com
 - c) :404
 - d) /foobar
 - e) ?q=banana&id=561
- 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 car = {
 - 2) previous_owner: 'None',
 - 3) price: 20000
 - 4) };
 - 5)
 - 6) car.owner = 'None';
 - 7) console.log(car['owner']);
 - 8) console.log(car.user);
- 7) ★ Which of the following specify a function in JavaScript that will return a number?
- a) function myFunction() { return 3; }
 - b) public Number function myFunction() { return 3; }
 - c) var myFunction = function() { return 3; }
 - d) Number function myFunction() { return 3; }
 - e) def myFunction(): return 3

APIs

- 8) Explain briefly how HTTP methods are typically used in a RESTful service
(max 4 sentences, **2 points**)

Sessions & Security

- 9) Briefly explain the basic idea of Cross-Site Request Forgery (CSRF) attack. (Only the attack, not how to protect from it) (max 3 sentences) (1 point)

Django

- 10) ⚡ Which of the following statements are **true** for Django templates? (1 point)

- a) Templates have if statements and for-loops
- b) Variables can be used in templates this way: {{ variable_name }}
- c) All CSS code should be placed in the templates
- d) Templates have to be migrated before they can be used
- e) Templates can inherit other templates

- 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/05>

Use the line numbers if necessary.

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