

CSE 154 Practice Exam 2 from 16au - Key

Name: _____ Quiz Section: _____
TA: _____ Student ID #: _____

Rules:

You have 110 minutes to complete this exam. You will receive a deduction if you keep working after the instructor calls for papers. This test is open-book, but closed notes. You may not use printed/written notes or practice exams. You may not use any computing devices, including calculators, cell phones, or music players. Unless otherwise indicated, your code will be graded on proper behavior/output, not on style.

Do not abbreviate code, such as writing ditto marks ("") or dot-dot-dot marks (...). **You may not use JavaScript frameworks such as jQuery or Prototype when solving problems.** If you enter the room, you must turn in an exam and will not be permitted to leave without doing so. You must show your Student ID to a TA or instructor for your submitted exam to be accepted.

Good luck!

#	Problem	Points	Score
1	HTML	10	
2	CSS/JS Selectors	5	
3	CSS	12	
4	JavaScript / DOM	20	
5	PHP Webservice	15	
6	JavaScript / AJAX	15	
7	SQL	12	
8	Regex	5	
9	Short Answer	8	

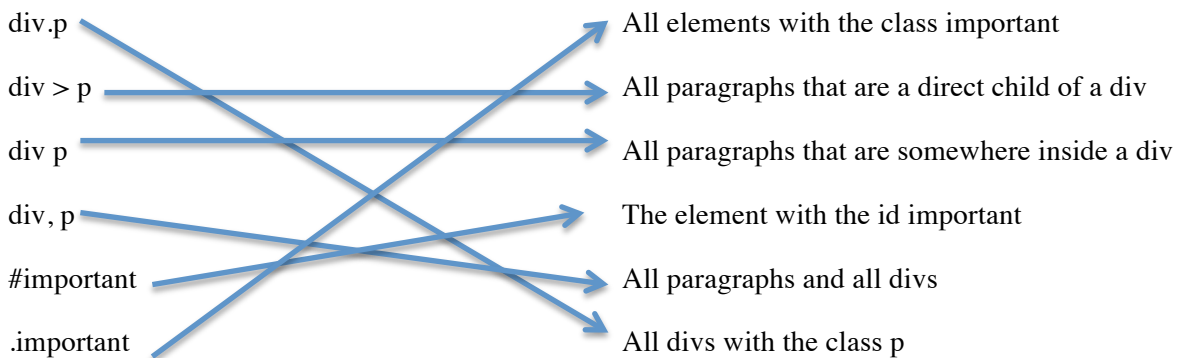
1.) HTML

<!DOCTYPE html>

```
<html lang="en">
  <head>
    <title>Best Resume Evar</title>
  </head>
  <body>
    <h1 id="important">Whitaaaab</h1>
    <div>
      Interests:
      <ul>
        <li class="interest">an interest.</li>
        <li class="interest">another interest.</li>
        <li>yet another interest.</li>
      </ul>
    </div>
    <div>
      
      <p id="important">Isn't this a cute puppy?</p>
    </div>
  </body>
</html>
```

Alternate solution: get rid of duplicate id="important" on p tag.

2.) CSS/JS Selectors



3.) CSS

```
body {  
    background-color: #123456;  
}  
  
h1, h2 {  
    color: teal;  
}  
  
.instruction {  
    border: 2px dashed red;  
}  
  
#recipe-list {  
    width: 40%;  
}  
  
#recipe-area {  
    width: 60%;  
}  
  
.ingredients li {  
    font-family: Arial, Helvetica, sans-serif;  
}
```

4.) JavaScript / DOM

```
(function() {  
  
var yellow = false;  
  
window.onload = function() {  
    document.getElementById("add").onclick = addItem;  
    document.getElementById("remove").onclick = removeItem;  
};  
  
function addItem() {  
    var item = document.createElement("li");  
    item.innerHTML = document.getElementById("item").value;  
    document.getElementById("list").appendChild(item);  
    document.getElementById("item").value = "";  
    if(yellow) {  
        item.style.backgroundColor = "yellow";  
    }  
    yellow = !yellow;  
}  
  
function removeItem() {  
    var item = document.getElementById("item").value;  
    var list = document.querySelectorAll("li");  
    document.getElementById("item").value = "";  
    var found = false;  
    for(var i = 0; i < list.length; i++) {  
        if(list[i].innerHTML.toLowerCase() ==  
            item.toLowerCase() && !found) {  
            document.getElementById("list").removeChild(list[i]);  
            found = true;  
        }  
        if(found) {  
            if(i % 2 == 0) {  
                list[i].style.backgroundColor = "yellow";  
            } else {  
                list[i].style.backgroundColor = "white";  
            }  
            yellow = !yellow;  
        }  
    }  
}  
}) ();
```

5.) PHP Webservice

```
<?php
$start = $_GET["start"];
$end = $_GET["end"];
$file = file("classes.txt");
$classCount = 0;
$classes = array();
for($i = 0; $i < count($file); $i++) {
    #CSE154 1:30 2:30 250 250 Web Programming
    $split = split(" ", $file[$i], 6);
    if($split[1] == $start && $split[2] == $end) {
        $classCount++;
        if($split[3] < $split[4]) {
            $class = array("code" => $split[0],
                "spaces" => ($split[4]-$split[3]),
                "name" => $split[5]);
            $classes[] = $class;
        }
    }
}
}
}
}
}
}

all = array("count" => $classCount, "classes" =>$classes);

header("Content-type: application/json");
print(json_encode($all));
```

6.) JavaScript / AJAX

```
(function() {
window.onload = function() {
    document.getElementById("search").onclick = search;
};

function search() {
    document.getElementById("count").innerHTML = "";
    document.getElementById("results").innerHTML = "";
    var start = document.getElementById("start").value;
    var end = document.getElementById("end").value;
    var request = new XMLHttpRequest();
    request.onload = processData;
    request.open("GET", "classes.php?start=" + start +
        "&end=" + end, true);
    request.send();
}

function processData() {
    var data = JSON.parse(this.responseText);
    for(var i = 0; i < data.classes.length; i++) {
        var item = document.createElement("li");
        item.innerHTML = data.classes[i].name + " - " +
            data.classes[i].spaces + " spaces"
        document.getElementById("results").appendChild(item);
    }
    document.getElementById("count").innerHTML = data.count +
        " total classes offered";
}
})();
```

7.) SQL

Given the imdb database:

id	name	year	rank
112290	Fight Club	1999	8.5
209658	Meet the Parents	2000	7
210511	Memento	2000	8.7
...			

movies

actor_id	movie_id	role
433259	313398	Capt. James T. Kirk
433259	407323	Sgt. T.J. Hooker
797926	342189	Herself
...		

roles

id	first_name	last_name	gender	film_count
433259	William	Shatner	M	162
797926	Britney	Spears	F	65
831289	Sigourney	Weaver	F	72
...				

actors

director_id	movie_id
24758	112290
66965	209658
72723	313398
...	

movies_directors

id	first_name	last_name
24758	David	Fincher
66965	Jay	Roach
72723	William	Shatner
...		

directors

movie_id	genre
209658	Comedy
313398	Action
313398	Sci-Fi
...	

movies_genres

Query for the first and last names of all the female actors that have been in at least 50 films:

```
SELECT first_name, last_name  
FROM actors  
WHERE gender = 'F'  
AND film_count >= 50;
```

Query all the columns out of the directors table for all directors that have directed a movie with a rank of 8 or higher, order by last name of director in alphabetical order. Return one row per unique director:

```
SELECT DISTINCT *  
FROM directors d  
JOIN movies_directors md ON d.id = md.director_id  
JOIN movies m ON m.id = md.movie_id  
WHERE m.rank >= 8  
ORDER BY d.last_name ASC;
```

8.) Regex

For each regex, circle all the string(s) that match it:

1. `/[A-Za-z]+@[0-9]/`

- `foo+@5`
- **`foo@123`**
- **`45foo@321`**
- `f8@8f`

2. `/^F*\..jpg$/`

- **`F.jpg`**
- `^FFF.jpg$`
- **`FFF.jpg`**
- `F\.`

9.) Short answer

1. What keeps track of your cookies?

The browser.

2. What line of code would be used in a php script to redirect to a page `foo.php` in the same relative directory?

```
header("Location: foo.php");
```

3. Is `` an inline or block HTML element?

Inline.

4. Why do we do validation of user input on the server side?

We can't trust whatever the user/browser has sent us and need to validate before processing input.

5. How do you get rid of a timer in JavaScript if you have a global variable `timerID`?

```
clearTimeout(timerID) or clearInterval(timerID) and for your own bookkeeping set timerID=null;
```

6. What does the tag `
` do?

Introduces a page break, like a new line character for your HTML.