**ACC Software Bootcamp - Week 24 Review**

**Part 1 - Concepts Review (60% weightage)**

Feb 18, 2017

**Your name: \_\_\_\_Matthew\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**INSTRUCTIONS (read carefully):**

* Please make a copy of this document and write your answers within this document itself. After you are done, please share a link to your doc back to the instructors.
* This test is open book. You may use all resources available to you, including discussions among your peers. Please keep the discussion on Slack, so others do not get distracted. Only use **finalreview** channel. Share tips, links, advice, but not answers and code. All discussions on Final Review channel will not be considered when evaluating your submission.
* There is no time limit for this portion of the review. We suggest to try to complete this in the morning.
* If a code snippet on the review has a bug, please feel free to fix it and then answer.
* To make sure you have enough time for all questions, return to the difficult ones later. Do not get stuck on them and spend all your time.
* When providing code, we prefer codepen or plunker. Copy paste of code is fine as well.
* If you have any questions for the instructors, please ask on the finalreview channel as well.

**EVALUATION CRITERIA:**

* Evidence of understanding of the underlying concepts related to the question (50% weightage). Can you answer the "why?" in each question?
* How complete is your answer and/or your code (25% weightage). Code is complete if it can handle all possible inputs, e.g. user error.
* Does your code work, where applicable? (25% weightage).

**QUESTIONS:**

1. In JavaScript, how do you append a value to an array? Does it have to be the same type as the previous elements?
2. Consider the following JS:

**var** myvar = {**this**:1,that:2,nothing:['one','two','three']};

What would be the value of the following:

myvar.that

myvar['this']

myvar.nothing[1]

myvar['nothing']

1. What do the following CSS selectors select? For bonus points, please provide an example via a Plunker, jsbin or CodePen (come back to this after you have attempted other questions).

* div + p
* div p
* div, p
* div > p

1. Let's say you are scraping a website. How would you select every anchor tag that points to a page on nytimes.com? For bonus points, please explain how this selector works.
2. What does the following code snippet do?  
     
    div.black {

color: #fff;

}

1. Please explain the Cascading in CSS. Describe how,
   1. who owns the stylesheet (browser, reader or author),
   2. where is the styles are loaded from (linked, embedded, inline) and
   3. specificity

define which style is used.

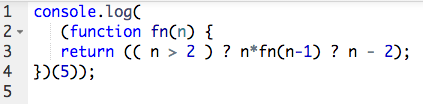
1. Please explain what the following snippet does

div {

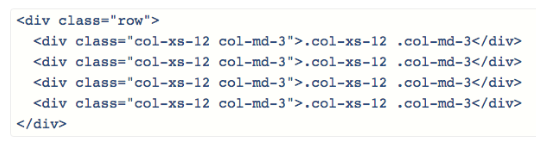
line-height: 125%;

}

1. Please write, test and copy here code that would create a navigation bar and pin it to the top of the viewport (it should not move as you scroll down the page). If you use a plunker or similar test environment, please paste its link here.
2. What would be the output of the following code snippet (this has been altered from what was shared earlier)



1. Please describe what would be the output of the following code snippet



1. What steps can you take to optimize your CSS?
2. Write a JS function that returns prime numbers upto a specified max (pass the **max** as an argument to this function) (60% credit). For additional 30% credit, do not return 17 and 53 in the results. Now wrap it in an immediately invoked function expression (IIFE) for extra 10% credit.
3. What steps can you take to optimize your CSS?
4. What will the following code output? Why?

person = 'Nolan Ryan';

**var** sport = {

person: 'Jose DeLeon',

thrower: **function**(){

**return** person + ' threw an awesome ball.';

}

}

**var** announcement = sport.thrower()

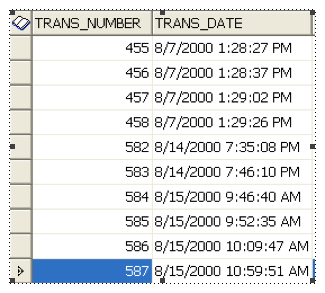
console.log(announcement);

1. What will the following code output? Why?

console.log(5 != '5' ? 'Match' : 'Unmatched');

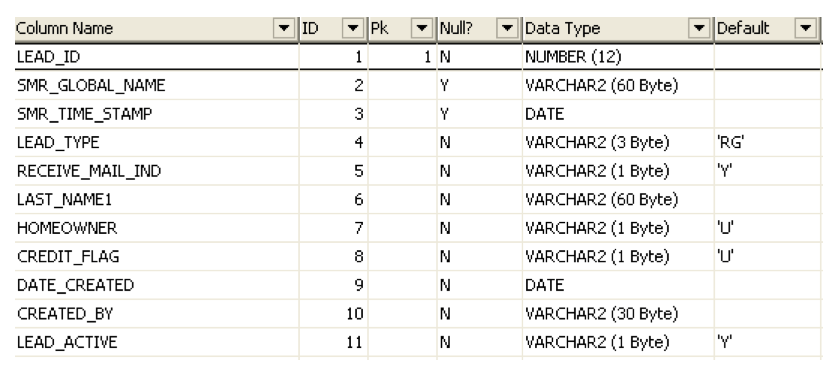
1. Write a query to return all transactions for a given date. You may use any flavor of SQL.

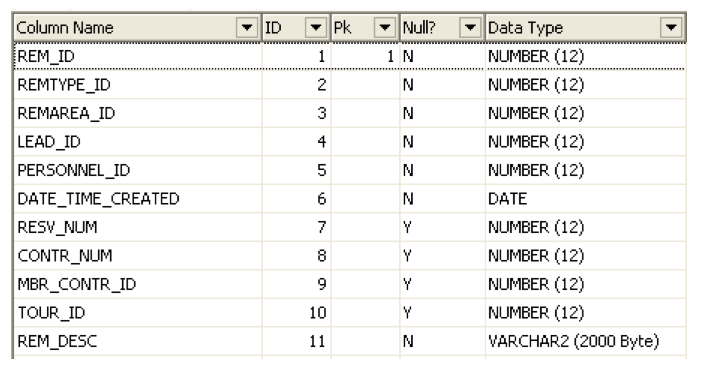
TRANSACTION TABLE



1. Write a Query that returns data from the LEADS and REMARKS tables below such that
   1. All leads are returned, even if there are no remarks for that lead. (Hint: you would need an outer join).
   2. List LEAD\_ID.
   3. List FULLNAME (First and Last Name separated by a space).
   4. If the LEAD\_ACTIVE = ‘Y’, return the text “Lead is Active”. (Hint: you may use CASE). Else, return the text “Lead is Unknown”.
   5. REMARKS from REM\_DESC column (display only the first 100 characters, hint: use SubString function)

LEAD TABLE:



REMARKS TABLE: 

To test your query, you may connect to the same Oracle database we were using in class using SQL Developer. Both tables are available on this database with the data loaded. In case you do not have it, here are the connection details:

Host: 52.23.119.163

Port: 1521

SID: accora

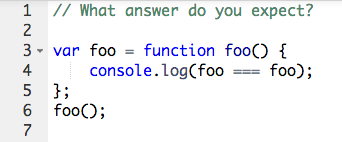
User: hr

password: oracle2016

1. What color would you expect the item Sweet Halwa to show as



1. What response do you expect from the following



1. What do you expect the following snippet to output?

Number("1") - 1 == 0;

1. What do you expect the following snippet to output? Please explain. This explores the understanding of coercion.

(true + false) > 2 + true;

1. What is the output of the following? Please explain (credit given for the explanation only and not the answer). This tests your understanding of the 2 pass execution model discussed in Advanced JS lecture. I suggest tracing through it to explain why you get the answer that you get.

function bar() {

return foo;

foo = 10;

function foo() {}

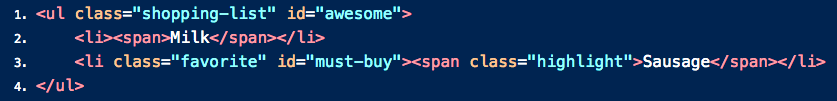
var foo = '11';

}  
 console.log(typeof bar());

1. Write a JS function that takes a sentence, splits it into an array of words and capitalizes the first letter of each word. Every other word needs to be lower case. Provide working code (a Plunk links works as well).
2. What is the output of the following? Why?

var arr = [];  
arr[0] = 'a';  
arr[1] = 'b';  
arr.foo = 'c';  
console.log(arr.length);

1. Does adding margin-top and padding-top have any effect on inline elements? If you do not know, try a simple test in plunker. Should not take much time.
2. What would be color of the text "Sausage"





1. What would be color of the text "Sausage". Why?

HTML

<ul class="shopping-list" id="awesome">

<li>

<span>Milk</span>

</li>

<li class="favorite" id="must-buy">

<span class="highlight">Sausage</span>

</li>

</ul>

CSS

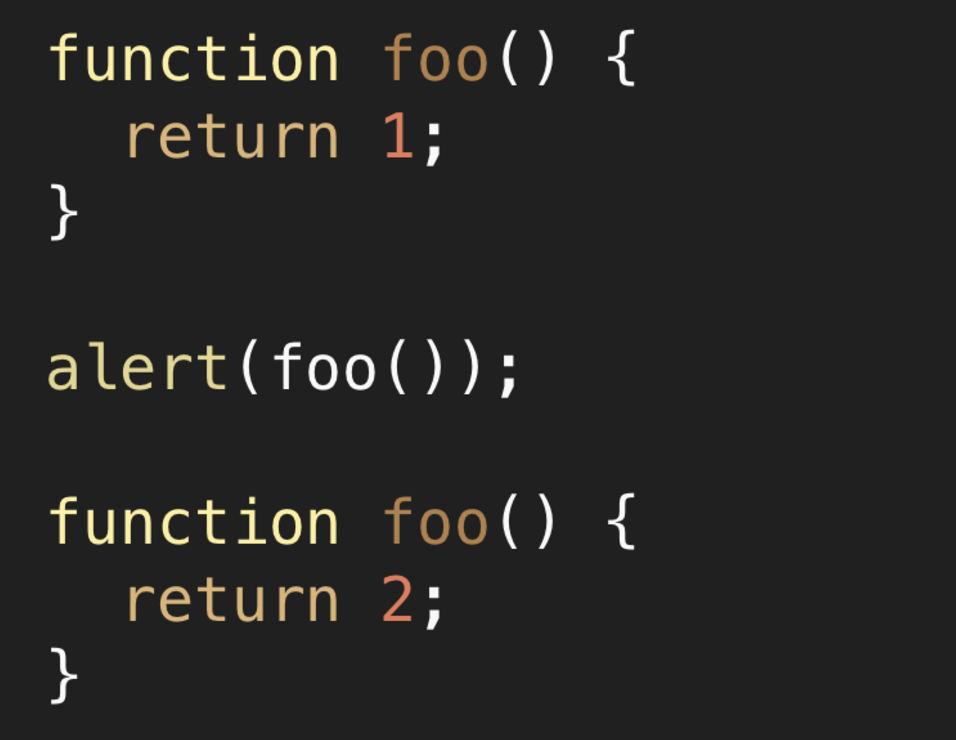
ul#awesome #must-buy {  
 color: red;  
 }  
 .favorite span {  
 color: blue!important;  
 }

1. While using ExpressJS, what is the difference between the following headers

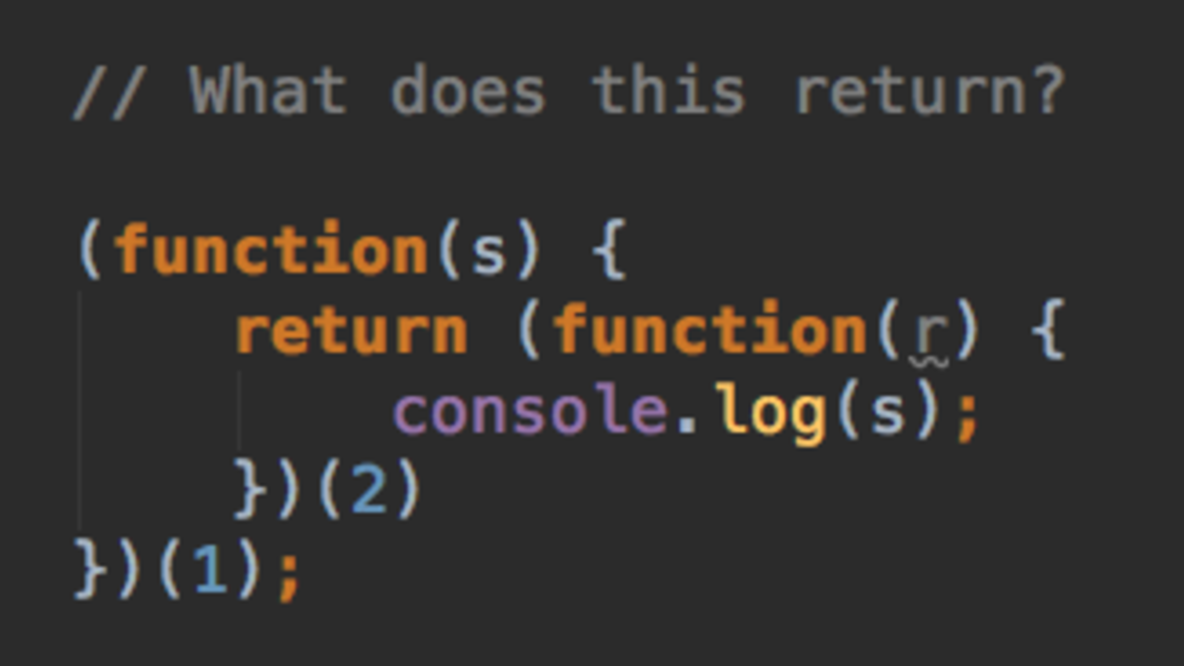
content-type

accept

1. In the following code, what would you get? Why?



1. What does the following snippet output? Why? Credit granted only for explanation.



1. What would the following code output? Why?

**var** x = 0.1;

**var** y = 0.2;

console.log(x + y == 0.3);

1. What would the following code output to the browser? Why? (Hints: Consider how the event loop works. What happens to events? What order are they executed?)

<!DOCTYPE **html**>

<**html**>

<**head**>

<**meta charset="utf-8"**>

<**title**></**title**>

</**head**>

<**body**>

<**p id="demo"**></**p**>

<**script type="text/javascript"**>

**var message** = **"1 "**

setTimeout(**function**(){

**message** += **'2 '**

**document**.getElementsById(**'demo'**).**innerHTML** = **message**;

}, 0);

**message** += **'3 '**

</**script**>

</**body**>

</**html**>

1. What does the following code do? How can you reverse the order?

**var points** = [40, 100, 1, 5, 25, 10];

**points**.sort(**function**(roo,raa){**return** roo-raa});

1. You have committed and pushed a bad change to a git repo. How can you fix it, without destroying history, since others might have pulled your bad change and based their changes on yours?
2. Can you think of 2-3 methods you refer to a particular commit? Briefly describe each method.
3. How do you delete a branch after completing work on it.
4. What is the difference between "cloning" and "forking" a repository? Why would you use one or the other?
5. Review this code. What would happen to the p#example element?

HTML:

<p id="example">Hello</p>

CSS:

#example {  
 margin-bottom: -5px;  
}

* 1. It would move #example up by 5 pixels
  2. It would move #example down by 5 pixels
  3. It would move all later elements up by 5 pixels
  4. None, but this is what would happen ...

1. Does the HTML below trigger a HTTP request when the page first loads?

<img src="mypic.jpg" style="visibility: hidden" alt="My Pic">

1. What do the following two expressions evaluate to, in JS:

"1" + 2 + "3" + 4

4 + 3 + 2 + "1"

1. Can time of creation be determined from system generated ObjectID in MongoDB?
2. Consider the following snippet of code. Please explain what everything does or means

>db.mycol.find({},{"title":1,\_id:0}).limit(2)

{"title":"MongoDB Overview"}  
{"title":"NoSQL Overview"}

CONGRATULATIONS !

END OF PART 1