CS142 Winter 2016 Sample Midterm Grading Rubric

Problem 1

The correct answer for question 1 is:
CSS rules: View
JavaScript: Controller
HTML: View
Angular Directive: View
Angular Service: Controller
Database data: Model
DOM event handlers: Controller
Animations: View

The most common mistake are:
JavaScript: Controller, not View
Although we can use javascript to change some of the view, such as display an animation, do some fancy mouseover event, javascript mainly controls the flow of the code. If you put both controller and view I will give you full point, if you only put view, I will not give point.

Angular Directive: View, not Controller
Angular Directive like ng-repeat, ng-if is written in the HTML template. Although angular has a lot of logics to control how will the angular directive behavior, when we use those directive, we use it in the HTML template. Since HTML is part of View, it is most associate with View, not Controller

Angular Service: Controller, not Model
Although Angular Service such as $http can help to get data from the server, itself doesn't contain any data. Thus, it is most associate with controller.

DOM event handlers: Controller, not View
The DOM event handlers handles the events which triggered by the users or other specific event, such as onclick. Although onclick is triggered by the user, event handlers has to contain the logic to respond to the event which is part of the control. For example, if a certain button, such as the submit button, is clicked, the controller need to determine what to do, like submit the form, make a POST request, update the database, etc.

Animations: View, not Controller
Some people thing animations are most associate with controller. However in this question animation is animation in general, not just angular animations, and the animations are what the user can see directly, it is being controller by some control code logic, so it is most associate with View

For anyone wrote more than one answers, if the correct answer is included and the explanation is correct, I will give full points.

I will not give points if the correct answer is not included because you can't ignore the part which is the most associate with.

I take half(1) point off if there is no explanation

Problem 2

Here is the rubric for part A:

$scope.favColors should be an ARRAY of OBJECTS [-2/4 points depending on severity of error]
A lot of people created a variable called 'c'. The variable should be named $scope.favColor (look into Angular directive ng-repeat for more details) [-2 points]
Missing Variables (e.g. $scope.person.name, $scope.buttonShow, and $scope.greeting were quite common) [-2 points]
Some people forgot to use $scope for variables to expose these to the View (many used var instead). [-3 points]
Some people ran into scope issues (e.g. defining a variable $scope.item1 but refering to it as item1 later) [-1 point]
Some people defined functions where they were not needed (e.g. for $scope.person.name) [-1/2 points depending on severity]
Note: General syntax and convention errors (e.g. missing semicolons, unmatched brackets/quotations etc.) were NOT penalized

Part B
This question was a bit more open eneded. You could argue a case for either ng-show or ng-if. We wanted you to show that you understood what the difference is "under the hood". You got 1 point if your explanation was similar to the following:

"ng-if loads an element into the DOM only if the expression evaluates to true. ng-show loads an element regardless of the expression evaluation but

uses CSS to hide/show elements"

The most common mistake was mentioning the ng-show still takes up space when the expression evaluates to false. THIS IS NOT TRUE! ng-show uses
the display attribute in CSS NOT the visibility attribute. However, because the lecture slides might have been confusing
(ng-show takes up DOM node structure space, not screen space), we gave you 1 point for this anyway.

As for why you would prefer one over the other, we were a bit more lenient. 1 point was awarded for a valid argument:

Example 1: I prefer ng-show, using ng-show loads all the elements in the DOM, eliminating the need for loading/removing an element every time (slight performance benefit).

Example 2: I prefer ng-if since using ng-show would result in a weird spacing issue where ODD and EVEN were displayed in different locations.

Note that Example 2 is actually false, but would make sense if we assumed that ng-show used the visibility attribute.

Problem 3

Solutions:
A.
I. http://www.example.com/starts/with/a/slash
II. http://www.example.com/initial-page/no/starting/slash

B. The browser will navigate/scroll to where the fragment is anchored in the page. The server does not handle the fragment. (It is not sent to the server.)

Rubric:
A.
-2   Both URLS correct but swapped I & II
-2   Incorrect URL for I or II (each worth 2 pts)

B.
-2   Stating that the server utilizes the fragment at all
-2   Incorrect explanation of how the browser handles the fragment
-1   Stating that the browser renders the page but not specifying the role of the fragment

Problem 4

4a

A **CSS breakpoint** is the term used to describe a system of CSS rules that alter the web app based on display size. It is part of what is known as responsive design and uses mechanism such as the @media CSS selector to make rules apply based on different screen sizes.
Full credit was given for connecting the term CSS breakpoints with responsive design and/or handling different screen sizes. No credit was given for guessing it was a CSS debugging mechanism.

4b

Switching the browser's location to another domain causes it to kill off the JavaScript running in the current page. This is bad for single page applications is they need to keep at least some state in the JavaScript runtime. Full credit was given for describing this problem. Only a few points were given for saying it was due to poor user experience.

Problem 5

Problem 5 Rubric/Answers:
Solution:

I. "d d"
    "d b"
    "d a"

II. "d d"
    "d b"
    "d a" (same as above because order is based on bubbling)

III. "c a"
     "c c"

Rubric:

I. No bubbling (-2 pts)
   Print order incorrect (on one row) (-1 pts)

Order of rows incorrect (-1 pts)
II. Answer not same as in I (-3pts)
III. Similar rubric to pt 1. If no knowledge of bubbling was demonstrated anywhere in the problem I took of an extra point.

Problem 6

Line A: DaimlerChrysler
Line B: blue
Line C: DaimlerChrysler
Line D: red
Line E: DaimlerChrysler
Line F: green
Line G: DaimlerChrysler
Line H: red

Each question was 1 point.

Problem 7

Problem 7 Rubric
I.
awarded 2 pts for one of:
mention css selector
mention class, id

awarded 1 pt for one of:
mention linking of css spreadsheet

II.
awarded 2 pts for one of:
communicating that it depends on the element
mentioning width:auto or height:auto
stating browser defaults or that it's up to the browser

awarded 1 pt for one of:
stating that for all elements, the element inherits the width and height from parent

III.
awarded 2 pts for one of:

mentioning fixed positions the element with respect to the viewport while absolute positions the element with respect to its closest ancestor
mentioning fixed means that the element is fixed in place as scrolling occurs, but this is not the case with absolute
identifying some other reasonable difference between the two properties

awarded 1 pt for one of:
mixing up the definitions
stating the definition of only one property correctly

IV.
awarded 2 pts for one of:
mentioning that difference is that visibility:hidden takes up space in the document while display:none does not
mentioning that display:none removes the element from the document flow while visibility:hidden does not
identifying some other reasonable difference between the two properties and their values

awarded 1 pt for one of:
mixing up the definitions
stating correctly what the value for only one property does

also:
-1 if they mentioned that the element was removed from the DOM from either property being set

Problem 8

1) 3 pts - Browser, Server, Database
    0 pts for MVC as an answer

2a) 2pts - Service
     1 pt partial credit if controller was written instead of Service

2b) 2pts - Directive
     1 pt partial credit if template was written instead of Directive
     1 pt partial credit if everything was written (template, controller, directive, scope, service, etc...) Need to be more specific

Points might have also been deducted for poor or missing explanations.

Problem 9 Rubric

Part i.
Mentions Hoisting (2/2)
Mentions another good reason but doesn't mention Hoisting (1/2)

Common mistakes:
● Didn't mention hoisting or describe the hoisting process

Part ii.
Answer: [5, undefined, undefined]
All three correct (2/2)
One or two wrong (1/2)
All wrong (0/2)

Common mistakes:
● assumed array indexing skipped the empty index and made the last one out of bounds
● put null instead of undefined for a[2]. undefined is the default that JS sets data types too if it isn't defined. It never sets an empty space to null

Part iii.
Answer:
2
1

Two correct (2/2)
One wrong (1/2)
All wrong (0/2)

Common mistakes:
● Not realizing the x=3 inside the closure only affects the local parameter and the x on the outside remained unchanged (x = 1)