44-563 Developing Web Applications and Services Spring 2013

Exam 2

*Part 1 JavaScript and jQuery*

*Questions 1-11 refer to the web page shown below.*

<body id="ticketPage">

<img id="airlineLogo" src="bearcat.jpg" alt="Airline Logo"><br>

Passenger Name: <input type="text" id="pName"><br>

Destination<br>

<select id="destination">

<option value="dfw">Dallas</option>

<option value="lax">Los Angeles</option>

<option value="jfk">New York</option>

</select><br>

Drink<br>

<input type="radio" id="tea">Tea<br>

<input type="radio" id="pepsi">Pepsi<br>

Snack<br>

<input type="checkbox" id="pretzels">Pretzels<br>

<input type="checkbox" id="peanuts">Peanuts<br>

Airline Mottos

<ul id="mottos">

<li>We'll get there eventually</li>

<li>BYOP (Bring Your Own Parachute)</li>

</ul>

<input type="button" id="purchase" value="Purchase Ticket">

<p id="message"></p>

</body>

1. (5 pts) Write JavaScript code to set the background color of the web page to blue.

document.getElementById("ticketPage").style.backgroundColor = "blue";

2. (5 pts) Write JavaScript code to change the image to "dog.jpg".

document.getElementById("airlineLogo").src = "dog.jpg";

3. (5 pts) Write JavaScript code to assign the value the user entered in the passenger name field to the variable passenger.

var passenger = document.getElementById("pName").value;

4. (5 pts) Write JavaScript code to assign the value selected by the user in the dropdown list to the variable city.

var city = document.getElementById("destination").value;

5. (5 pts) Write JavaScript code to

* Assign the value "t" to the variable drink if the user selected the tea radio button.
* Assign the value "p" to the variable drink if the user selected the pepsi radio button.

if (document.getElementById("tea").checked) {

drink = "t";

}

else if (document.getElementById("pepsi").checked) {

drink = "p";

}

6. (5 pts) Write JavaScript code that adds 2.50 to the variable ticketPrice if the peanuts checkbox is checked.

if (document.getElementById("peanuts").checked) {

ticketPrice += 2.50;

}

7. (5 pts) Write JavaScript code to add the motto "All of our pilots are over the age of 12" to the unordered list of mottos.

var item = document.createElement("li");

item.appendChild(document.createTextNode("All of our pilots are over the age of 12"));

document.getElementById("mottos").appendChild(item);

8. (5 pts) Write JavaScript code to insert the text "Be Brave" to the paragraph at the end of the web page.

document.getElementById("message").innerHTML = "Be Brave";

9. (5 pts) Write JavaScript code to assign the function reserveSeat as the event handler for clicking the button.

document.getElementById("purchase").onclick = reserveSeat;

10. (5 pts) Write jQuery code to hide the image.

$('#airlineLogo").hide();

11. (5 pts) Write jQuery code to remove the paragraph.

$('#message').remove();

12. (5 pts) JavaScript is executed

A. by a browser on the client side.

B. by Glassfish on the server side.

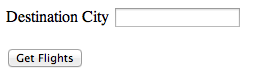
13. (5 pts) jQuery is

A. a JavaScript library

B. a collection of Java methods

*Part 2 Servlets*

14. (6 pts) The web page shown below contains a form. When the button is clicked, the servlet getFlightsServlet handles the request.



The code for the form is shown below. Fill in the blanks to complete the code.

<form \_\_\_\_\_action\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_="getFlightsServlet">

Destination City

<input type="text" \_\_\_\_\_\_\_name\_\_\_\_\_\_\_\_\_\_\_\_\_="destCity">

<br><br>

<input type="\_\_\_\_\_submit\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_" value="Get Flights">

</form>

15. (5 pts) Write servlet code that assigns the value of the request parameter named destCity to the string variable cityName.

String cityName = request.getParameter("destCity");

16. (5 pts) Servlet code is executed

A. By a browser on the client side.

B. By Glassfish on the server side.

*Part 3 AJAX*

The code in the questions is from the CourseList AJAX example covered in class. The user selects a subject, a list of courses in that subject is obtained from a servlet, and the list is displayed in the unordered list on the web page.

17. Here is part of the code for the web page:

**<p>**

**Select Subject:<br />**

**<select id="subject">**

**<option value="cs">Computer Science</option>**

**<option value="math">Math</option>**

**<option value="physics">Physics</option>**

**</select>**

**</p>**

**<p>**

**<input type=" " id="getCourseList"**

**value="Find Available Courses" /><br />**

**</p>**

**<ul id="courseList"></ul>**

(a) (4 pts) Does this code have to be inside a <form> tag?

YES NO

(b) (4 pts) What value should be used for the type of the input element?

button submit

18. Here is the header for the servlet:

**@WebServlet(name="CourseServlet",**

**urlPatterns={"/courses"})**

**public class CourseServlet extends HttpServlet {**

and here is the code for the action handler for the button:

**function getCourses() {**

**clearCourses();**

**request = createRequest();**

**if (request == null) {**

**alert("Unable to create request");**

**return;**

**}**

**var url = // See part (a)**

**request.open("GET", url, true);**

**request.onreadystatechange = displayCourses;**

**request.send(null);**

**}**

(a) (4 pts) Complete the code that assigns a value to the variable url. Be sure to include the request parameter.

var url = "courses?subject=" + document.getElementById("subject").value;

(b) (4 pts) What is the name of the callback function? displayCourses

19. (3 pts) Here is part of the code for the callback function:

**if (request.readyState == 4)**

**{**

**if (request.status == 200)**

**{**

**var courses = // See question below**

**var courseList = courses.split("\n");**

**for(var i = 0; i < courseList.length - 1; ++i)**

**{**

**var item = document.createElement("li");**

Complete the statement that assigns the information returned from the server to the variable courses. Assume the information is being returned as text.

var courses = request.responseText;

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