



Course:	Web Programming	Course Code:	CS-406
Program:	BS (Computer Science)	Semester:	Fall 2019
Duration:	60 Minutes	Total Marks:	50
Paper Date:	09/25/2019	Weight	12.5
Section:	A & B	Page(s):	6
Exam:	Midterm-I	Reg. No.	

Instruction/Notes: *The code is given in the paper. You just have to fill the missing code and write your own code in specific section where needed.*

Question 1**(40 points)**

The university has decided to develop an application to analyze student results and activities. The students data is given in JSON file having hundreds of records. The JSON file contains the student information including: profile, courses, activities. The sample JSON data is given below:

```
{"students": [  
  {  
    "rollno": "15L-1000",  
    "name": "Ahmed",  
    "program": "BSCS",  
    "subjects": {  
      "web": 80, "oop": 60  
    },  
    "activities": ["cricket", "video games", "table tennis"]  
  }, {  
    "rollno": "15L-2000",  
    "name": "Ali",  
    "program": "BSCS",  
    "subjects": {  
      "web": 45, "oop": 55  
    },  
    "activities": ["cricket"]  
  }, {  
    "rollno": "16L-3000",  
    "name": "Usman",  
    "program": "BSCS",  
    "subjects": {  
      "web": 65, "oop": 40  
    },  
    "activities": ["football", "table tennis"]  
  }  
]  
}]
```



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The HTML code is given below. You have to fill the missing code section and write the code to achieve a specific output. The HTML structure contains the Bootstrap structure. It contains the input field, a button and divs. The JavaScript will be called on click event. The output from the JSON file will be displayed on div with id (output).

```

<div class="container">
    <h2>Mid 1 - Web Programming, 2019</h2>
    <input type="text" value="" id="studentrollno" class="form-control"/>
    <button type="button" class="btn btn-primary"
onclick="loadJsonData()">Search Student</button>

    <div id="header" class="_____">
        <div class="_____"><b>Student Information</b></div>
        <div class="_____"><b>Courses</b></div>
        <div class="_____"><b>No. of Activities</b></div>
    </div>
    <div id="output" class="_____">
        <div id="student-information" class="_____"></div>
        <div id="student-courses" class="_____"></div>
        <div id="student-activities" class="_____"></div>
    </div>
</div>

```

- Fill in the blank spaces in the above code and use Bootstrap classes or CSS media queries to achieve the following:
 - Create a row column structure such that
 - On desktop screen, it displays 3 columns in one row and all columns should have equal width. **(3)**
 - On mobile or small screen, the div with id (student-information) should be full width and div with ids (student-courses, student-activities) should be displays in two columns. **(3)**
- Write CSS for div id (header) as follows
 - Add border **(1)**
 - Add background color i.e. #3333 and change font family to “arial” and font color to white. **(3)**
 - Change font to uppercase **(1)**



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	Write CSS here

3. The JavaScript code is given below and you have to write down the missing code and the missing logic in specific code section. The user enters the Student Roll no. and that students information will be displayed on the screen if the roll no. matches the record.
- Code section 1: **(3)**
 - Write code to implement GET request from JSON file (data.json) using AJAX.
 - Code section 2: **(3)**
 - Write code to get the value from the input field and save it in a variable.
 - Code section 3: **(5)**
 - Write down the regular expression to validate the Roll No. The pattern is as follows: ##L-#### (where # is an integer)
 - Code section 4: The output result is shown below **(18)**
 - Write the logic to display the students information as follows
 - Display the student name with program in which the student is enrolled. **(3)**
 - Display the students courses (Web & OOP) with “Pass or Fail” status **(10)**
 - Display total number of activities **(5)**

Mid 1 - Web Programming, 2019

Student Information

Ahmed:BSCS

Courses

Web: Pass

OOP: Pass

No. of Activities

3



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```
<script>
function loadJsonData() {
    var xhttp = new XMLHttpRequest();
```

Code Section 1	
-------------------------------	--

```
xhttp.onreadystatechange = function() {
    if (this.readyState == 4 && this.status == 200) {

        var obj = JSON.parse(xhttp.responseText);
```

Code Section 2	var student_rollno = _____
-------------------------------	----------------------------

```
        const student_information =
document.getElementById("student-information");
        const student_courses =
document.getElementById("student-courses");
        const student_activities =
document.getElementById("student-activities");
```

Code Section 3	var student_rollno_validation = student_rollno.search(_____);
-------------------------------	---

```
if (student_rollno_validation == -1 || student_rollno == ""){
    alert("Please enter valid roll no (##L-####).");
}else{
    for(let i=0; i < obj.students.length; i++){

        if(student_rollno == obj.students[i].rollno){
```



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```
var s_info = document.createElement('span');
```

Code Section 4 Part 1	<pre>s_info.innerHTML = _____; _____;</pre> <pre>student_information.appendChild(s_info);</pre>
Code Section 4 Part 2	
Code Section 4 Part 3	

```

    }
    }
}
};
</script>

```



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Question 2

(10 points)

Short questions

1. What will the code below output to the console? Write the answer into the blank space. (4)

- | | |
|------------------------------------|-------|
| a) console.log(1 + "2" + "2"); | _____ |
| b) console.log(1 + +"2" + "2"); | _____ |
| c) console.log(1 + -"1" + "2"); | _____ |
| d) console.log(+ "1" + "1" + "2"); | _____ |

2. What's Wrong with the following HTML? Highlight and correct the errors. (6)

```
<!DOCTYPE html>
```

```
<head>
```

```
    <h1>Mowgli's Magical Muffins</h1>
```

```
    <link src='mypage.css' type='text/css' rel='stylesheet' />
```

```
</head>
```

```
<body>
```

```
    <p>For Doggies' Best Friends: <span></p>
```

```
    <ul>
```

```
        <li>Multi-grain Melody</li>
```

```
        <li>Merry-Mint-Chip</li>
```

```
    </ul>
```

```
    <ol>
```

```
        <li>The Malt-ese</li>
```

```
        <li>Malamint Magic</li>
```

```
        <li>Meow Meows</li>
```

```
    </ol>
```

```
</body>
```

```
</!DOCTYPE html>
```

Good Luck!