

LAB 2

- a) Design a page that contains the syllabus of Web Technology using the concept of ordered and unordered list.

```
<!DOCTYPE html>

<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Course Description</title>
</head>
<body>
  <p> <strong>Course Description : </strong>This course introduces basic elements of the
design and analysis of computer algorithms. Topics include asymptotic notations and
analysis, divide and conquer strategy, greedy methods, dynamic programming, basic graph
algorithms, NP-completeness, and approximation algorithms. For each topic, beside in-depth
coverage, one or more representative problems and their algorithms shall be discussed. </p>
  <br>
  <h2>Course Objective</h2>
  <ul>
    <li> Analyze the asymptotic performance of algorithms.</li>
    <li> Demonstrate a familiarity with major algorithm design techniques</li>
    <li> Apply important algorithmic design paradigms and methods of analysis. </li>
    <li> Solve simple to moderately difficult algorithmic problems arising in
applications.</li>
    <li> Able to demonstrate the hardness of simple NP-complete problems</li>
  </ul>
  <h2>Course Content :</h2>
  <h2>Unit 1:Foundation of Algorithm Analysis(4)</h2>
  <p>1.1. Algorithm and its properties, RAM model, Time and Space Complexity, detailed
analysis
of algorithms (Like factorial algorithm), Concept of Aggregate Analysis</p>
  <p>1.2. Asymptotic Notations: Big-O, Big-Ω and Big-Θ Notations their Geometrical
Interpretation
and Examples.</p>
  <p>1.3. Recurrences: Recursive Algorithms and Recurrence Relations, Solving Recurrences
(Recursion Tree Method, Substitution Method, Application of Masters Theorem)</p>
  <h2>Unit 2:Iterative Algorithm(4)</h2>
  <p>2.1. Basic Algorithms: Algorithm for GCD, Fibonacci Number and analysis of their time
and
space complexity</p>
  <p>2.2. Searching Algorithms: Sequential Search and its analysis</p>
  <p>2.3. Sorting Algorithms: Bubble, Selection, and Insertion Sort and their Analysis</p>
</body>
</html>
```

OUTPUT

Course Description : This course introduces basic elements of the design and analysis of computer algorithms. Topics include asymptotic notations and analysis, divide and conquer strategy, greedy methods, dynamic programming, basic graph algorithms, NP-completeness, and approximation algorithms. For each topic, beside in-depth coverage, one or more representative problems and their algorithms shall be discussed.

Course Objective

- Analyze the asymptotic performance of algorithms.
- Demonstrate a familiarity with major algorithm design techniques
- Apply important algorithmic design paradigms and methods of analysis.
- Solve simple to moderately difficult algorithmic problems arising in applications.
- Able to demonstrate the hardness of simple NP-complete problems

Course Content :

Unit 1:Foundation of Algorithm Analysis(4)

- 1.1. Algorithm and its properties, RAM model, Time and Space Complexity, detailed analysis of algorithms (Like factorial algorithm), Concept of Aggregate Analysis
- 1.2. Asymptotic Notations: Big-O, Big-Ω and Big-Θ Notations their Geometrical Interpretation and Examples.
- 1.3. Recurrences: Recursive Algorithms and Recurrence Relations, Solving Recurrences (Recursion Tree Method, Substitution Method, Application of Masters Theorem)

Unit 2:Iterative Algorithm(4)

- 2.1. Basic Algorithms: Algorithm for GCD, Fibonacci Number and analysis of their time and space complexity
- 2.2. Searching Algorithms: Sequential Search and its analysis
- 2.3. Sorting Algorithms: Bubble, Selection, and Insertion Sort and their Analysis

- b) Prepare the restaurant menu using List tag and heading tags. Also apply some sorts of formatting in the menu. (you can also use table tag to generate the menu).

```
<!DOCTYPE html>

<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Document</title>
  <style>
    th,td
    {
      width: 2%;
    }
    table
    {
      border-radius: 10px;
      border-style: groove;
      font-size: larger;
    }
  </style>
</head>
<body>
  <div>
    <table>
      <th style="text-align: center;" colspan="3.5">CHINESE</th>
      <tr>
        <th style="text-align:left;" colspan="2">SOUPS-VEG</td>
        <th style="text-align:left;" colspan="2">STARTERS-VEG</td>
      </tr>
      <tr>
```

```

        <td>Sweet Corn Soup</td>
        <td>125</td>
        <td>Veg Crispy</td>
        <td>225</td>
    </tr>
    <tr>
        <td>Mushroom Soup</td>
        <td>130</td>
        <td>Veg Noodles</td>
        <td>195</td>
    </tr>
    <tr>
        <td>Hot and Sour Soup</td>
        <td>110</td>
        <td>Veg Pizza</td>
        <td>200</td>
    </tr>
    <tr>
        <td>Noodles Soup</td>
        <td>90</td>
        <td>Veg Spring Roll</td>
        <td>300</td>
    </tr>
    <tr>
        <td>Chicken Flavour Soup</td>
        <td>410</td>
        <td>Mushroom Chilly</td>
        <td>500</td>
    </tr>
    <tr>
        <th style="text-align: left;" colspan="2">SOUPS-NONVEG</td>
        <td>Butter Garlic Mushroom</td>
        <td>210</td>
    </tr>
    <tr>
        <td>Chicken Noodles Soup</td>
        <td>145</td>
        <td>Crispy Garlic Mushroom</td>
        <td>500</td>
    </tr>
    <tr>
        <td>Mutton Noodles Soup</td>
        <td>145</td>
        <td>Crispy Garlic </td>
        <td>200</td>
    </tr>
    <tr>
        <td>Chicken Thai Soup</td>

```

```

        <td>145</td>
        <td>Crispy Roasted Mushroom</td>
        <td>500</td>
    </tr>
    <tr>
        <td>Chicken Sweet Corn Soup</td>
        <td>145</td>
        <td>Mushroom Chilly</td>
        <td>300</td>
    </tr>
    <tr>
        <td>Chicken Rice Soup</td>
        <td>145</td>
        <td>Crispy Garlic Baby</td>
        <td>500</td>
    </tr>
    <tr>
        <td>Butter Garlic Mushroom</td>
        <td>210</td>
        <th style="text-align: left;" colspan="3">STARTERS NONVEG</th>
    </tr>
    <tr>
        <td>Fish Soup</td>
        <td>145</td>
        <td>Chicken Chilly</td>
        <td>300</td>
    </tr>
    <tr>
        <td>Sea Food Soup</td>
        <td>245</td>
        <td>Chicken Crispy</td>
        <td>260</td>
    </tr>
    <tr>
        <td>Chicken Lemon Soup</td>
        <td>245</td>
        <td>Chicken Hot Pot</td>
        <td>500</td>
    </tr>
    <tr>
        <td>Chicken Yum Yum Soup</td>
        <td>690</td>
        <td>Crispy Garlic Baby</td>
        <td>500</td>
    </tr>
    </table>
</div>
</body>
</html>

```

OUTPUT

CHINESE			
SOUPS-VEG		STARTERS-VEG	
Swweet Corn Soup	125	Veg Crispy	225
Mushroom Soup	130	Veg Noodles	195
Hot and Sour Soup	110	Veg Pizza	200
Noodles Soup	90	Veg Spring Roll	300
Chicken Flavour Soup	410	Mushroom Chilly	500
SOUPS-NONVEG		Butter Garlic Mushroom	210
Chicken Noodles Soup	145	Crispy Garlic Mushroom	500
Mutton Noodles Soup	145	Crispy Garlic	200
Chicken Thai Soup	145	Crispy Roasted Mushroom	500
Chicken Sweet Corn Soup	145	Mushroom Chilly	300
Chicken Rice Soup	145	Crispy Garlic Baby	500
Butter Garlic Mushroom	210	STARTERS NONVEG	
Fish Soup	145	Chicken Chilly	300
Sea Food Soup	245	Chicken Crispy	260
Chicken Lemon Soup	245	Chicken Hot Pot	500
Chicken Yum Yum Soup	690	Crispy Garlic Baby	500

c) Use HTML to create a Mark-Sheet as shown in figure.

```
<!DOCTYPE html>

<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Document</title>
  <style>
    p{
      display: inline;
    }
    table,th,td
    {
      border: 1px solid black;
      border-collapse: collapse;
    }
    hr
    {
      border-top: 1 px solid black;
    }
    .sign-table
    {
      border: hidden;
    }
    .dashed
    {
      border-top: 1px dashed black;
    }
  </style>
</head>
<body style="margin: 0 15%;border-style: solid;">
```

```

<h2 style="text-align: center;">First Terminal Examination</h2>
<h3 style="background-color: #03fcad;text-align: center;"><u>PROGRESS REPORTSHEET</u></h3>
<div>
  <p style="margin-left: 5px;">Name of STUDENT</p>
  <P style="margin-left: 50%;">REGD NO</P>
</div>
<div>
  <p style="margin-left: 15px;">CLASS</p>
  <p style="margin-left: 50%;">ROLL NO</p>
</div>
<div class="result-table">
  <table width ="100%">
    <thead>
      <tr>
        <th colspan="2" rowspan="2">SUBJECT</th>
        <th rowspan="2">CR HR</th>
        <th colspan="4">MARKS IN TERM 50%</th>
        <th rowspan="2">CAS 50%</th>
        <th rowspan="2">REMARKS</th>
      </tr>
      <tr>
        <th>FULL MARKS</th>
        <th>PASS MARKS</th>
        <th>FINAL GRADE</th>
        <th>GRADE POINT</th>
      </tr>
    </thead>
    <tbody>
      <tr>
        <td cellpadding="2" colspan="2">1 Nepali</td>
        <td>4</td>
        <td>50</td>
        <td>30</td>
        <td>B</td>
        <td>2.8</td>
        <td>A</td>
        <td></td>
      </tr>
      <tr>
        <td cellpadding="2" colspan="2">2 English</td>
        <td>4</td>
        <td>50</td>
        <td>40</td>
        <td>A+</td>
        <td>4.0</td>
        <td>A</td>
        <td></td>
      </tr>
      <tr>
        <td cellpadding="2" colspan="2">3 Mathematics</td>

```

```

        <td>4</td>
        <td>50</td>
        <td>32</td>
        <td>B</td>
        <td>2.8</td>
        <td>B</td>
        <td></td>
    </tr>
    <tr>
        <td cellpadding="2" colspan="2">4 Science</td>
        <td>4</td>
        <td>50</td>
        <td>38</td>
        <td>B+</td>
        <td>3.2</td>
        <td>B</td>
        <td></td>
    </tr>
    <tr>
        <td cellpadding="2" colspan="2">5 Social Studies</td>
        <td>4</td>
        <td>50</td>
        <td>24</td>
        <td>C</td>
        <td>2.0</td>
        <td>B</td>
        <td></td>
    </tr>
    <tr>
        <td cellpadding="2" colspan="2">6 Computer Science/GK</td>
        <td>4</td>
        <td>50</td>
        <td>44</td>
        <td>A</td>
        <td>3.6</td>
        <td>B</td>
        <td></td>
    </tr>
    <tr>
        <td cellpadding="2" colspan="2">7 English Language</td>
        <td>4</td>
        <td>50</td>
        <td>42</td>
        <td>A</td>
        <td>3.6</td>
        <td>B</td>
        <td></td>
    </tr>

```

```

        </thead>
    </table>
</div>
<div>
    <p><strong>TOTAL</strong></p>
    <p style="margin-left: 15%;">28</p>
    <p style="margin-left: 5%;">350</p>
    <p style="margin-left: 10%;">255</p>
</div>
<hr class="dashed">
<div>
    <p><strong>GRADE POINTS AVERAGE(GPA):</strong></p>
    <p style="margin-left: 45%;">3.14</p>
</div>
<hr class="dashed">
<div>
    <p><strong>AVERAGE GRADE</strong></p>
    <p style="margin-left: 58%;">B+</p>
</div>
<hr>
<div style="width: 100%; position:relative;"></div>
<ul style="list-style-type: none;padding-left: 0px;width: 30%;>
<li><strong>Percentage</strong> 91.5</li>
<li><strong>Poisiton</strong> 1</li>
<li><strong>Total Student</strong> 20</li>
<li><strong>Attendance:</strong> 0/0</li>
</ul>
<div style="position: absolute; left:390px; top: 434px;">
    <table>
        <thead>
            <tr>
                <th colspan="2">GRADE DESCRIPTION CAS</th>
            </tr>
        </thead>
        <tbody>
            <tr>
                <td>Interval in Percent</td>
                <td>GRADE</td>
            </tr>
            <tr>
                <td>70 to 100</td>
                <td>A</td>
            </tr>
            <tr>
                <td>40 to 70</td>
                <td>B</td>
            </tr>
            <tr>

```



```

        <td>0 to below 40</td>
        <td>C</td>
    </tr>
</tbody>
</table>
</div>
<div style="position: absolute; right: 220px;top:440px;">
<table>
    <thead>
        <tr>
            <th colspan="3">Grade Description in Terms</th>
        </tr>
    </thead>
    <tbody>
        <tr>
            <td>Interval in Percent</td>
            <td>Grade</td>
            <td>Grade Point</td>
        </tr>
        <tr>
            <td>90 to 100</td>
            <td>A+</td>
            <td>4.0</td>
        </tr>
        <tr>
            <td>80 to 90</td>
            <td>A</td>
            <td>3.6</td>
        </tr>
        <tr>
            <td>70 to 80</td>
            <td>B+</td>
            <td>3.2</td>
        </tr>
        <tr>
            <td>60 to 70</td>
            <td>B</td>
            <td>2.8</td>
        </tr>
        <tr>
            <td>50 to 60</td>
            <td>C+</td>
            <td>2.4</td>
        </tr>
        <tr>
            <td>40 to 50</td>
            <td>C</td>
            <td>2.0</td>
        </tr>
    </tbody>
</table>

```

```

</tr>
<tr>
<td>30 to 40</td>
<td>D+</td>
<td>1.6</td>
</tr>
</tbody>
</table>
</div>
<div style="margin: 5%;">
<p><strong>REMARKS</strong></p>
<span>Very Good</span>
</div>
<div style="margin: 5px 10px 5px; padding-right: 0px;">
<table width ="100%"class="sign-table">
<tr>
<td class="sign-table">
<hr style="border-top: 2px solid black;width: 60%;text-align: left;margin-left: 5px;">
<span style="margin-left: 30px;">CHECKED BY</span>
</td>
<td class="sign-table">
<hr style="border-top: 2px solid black;width: 60%;text-align: left;margin-left: 5px;">
<span style="margin-left: 30px;">CLASS TEACHER</span>
</td>
<td>
<hr style="border-top: 2px solid black;width: 60%;text-align: center;margin-left: 5px;">
<span style="margin-left: 30px;">PRINCIPAL</span>
</td>
</tr>
</table>
</div>
</body>
</html>

```

OUTPUT

PROGRESS REPORTSHEET							
Name of STUDENT			REGD NO				
CLASS			ROLL NO				
SUBJECT	CR HR	MARKS IN TERM 50%				CAS 50%	REMARKS
		FULL MARKS	PASS MARKS	FINAL GRADE	GRADE POINT		
1 Nepali	4	50	30	B	2.8	A	
2 English	4	50	40	A+	4.0	A	
3 Mathematics	4	50	32	B	2.8	B	
4 Science	4	50	38	B+	3.2	B	
5 Social Studies	4	50	24	C	2.0	B	
6 Computer Science/GK	4	50	44	A	3.6	B	
7 English Language	4	50	42	A	3.6	B	
TOTAL	28	350	255				
GRADE POINTS AVERAGE(GPA):					3.14		
AVERAGE GRADE					B+		
Percentage 91.5 Poisiton 1 Total Student 20 Attendance: 0/0		GRADE DESCRIPTION CAS				Grade Description in Terms	
		Interval in Percent		GRADE		Interval in Percent Grade Grade Point	
		70 to 100		A		90 to 100 A+ 4.0	
		40 to 70		B		80 to 90 A 3.6	
		0 to below 40		C		70 to 80 B+ 3.2	
REMARKS Very Good						60 to 70 B 2.8	
						50 to 60 C+ 2.4	
						40 to 50 C 2.0	
						30 to 40 D+ 1.6	
CHECKED BY		CLASS TEACHER			PRINCIPAL		

d) Design your classroom routine to implement the Table element of HTML.

```
<!DOCTYPE html>

<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <style>
    table th,td{
      border: 1px solid black;
      border-collapse: collapse;
    }
  </style>
  <title>Routine</title>
</head>
<body>
  <h1>Routine BSC CSIT 5th SEM 2077</h1>
  <table>
    <thead>
      <tr>
        <th>
          <th>Sunday</th>
          <th>Monday</th>
          <th>Tuesday</th>
          <th>Wednesday</th>
          <th>Thursday</th>
          <th>Friday</th>
        </th>
      </tr>
    </thead>
    <tbody>
      <tr>
        <td>11:15 - 12:15</td>
        <td>Simulation</td>
        <td>SAD</td>
        <td>Simulation</td>
        <td>SAD</td>
        <td>Simulation</td>
        <td>SAD</td>
      </tr>
      <tr>
        <td rowspan="2">12:15 - 01:15</td>
        <td style="background-color:grey;">Simulation Grp'A'</td>
        <td rowspan="2">Cryptograh</td>
        <td style="background-color:grey;">Simulation Grp'B'</td>
        <td style="background-color:grey;">Simulation Grp'A'</td>
        <td rowspan="2">Cryptograh</td>
        <td style="background-color:grey;">Simulation Grp'B'</td>
      </tr>
    </tbody>
  </table>

```

```

</tr>
<tr>
  <td style="background-color:grey;">SAD Grp'B'</td>
  <td style="background-color:grey;">SAD Grp'A'</td>
  <td style="background-color:grey;">SAD Grp'B'</td>
  <td style="background-color:grey;">SAD Grp'A'</td>
</tr>
<tr>
  <td>1:15 - 1:30</td>
  <td colspan="6" style="background-color:grey;"><strong>SHORT BREAK</strong></td>
</tr>
<tr>
  <td rowspan="2">1:30 - 02:30</td>
  <td style="background-color:grey;">Multimedia Grp'B'</td>
  <td style="background-color:grey;">Multimedia Grp'A'</td>
  <td rowspan="2">Multimedia</td>
  <td rowspan="2">Multimedia</td>
  <td style="background-color:grey;">Multimedia Grp'A'</td>
  <td rowspan="2">Multimedia</td>
</tr>
<tr>
  <td style="background-color:grey;">Cryptograhya Grp'A'</td>
  <td style="background-color:grey;">Cryptograhya Grp'B'</td>
  <td style="background-color:grey;">Cryptograhya Grp'A'</td>
</tr>
<tr>
  <td>2:30 - 3:00</td>
  <td colspan="6" style="background-color:grey;"><strong>LUNCH BREAK</strong></td>
</tr>
<tr>
  <td rowspan="2">3:00 - 4:00</td>
  <td rowspan="2">WebTech</td>
  <td style="background-color:grey;">WebTech Grp'B'</td>
  <td style="background-color:grey;">Cryptograhya Grp'A'</td>
  <td style="background-color:grey;">WebTech Grp'A'</td>
  <td style="background-color:grey;">WebTech Grp'B'</td>
  <td rowspan="2">WebTech</td>
</tr>
<tr>
  <td style="background-color:grey;">DAA Grp'A'</td>
  <td style="background-color:grey;">Multimedia Grp'B'</td>
  <td style="background-color:grey;">DAA Grp'B'</td>
  <td style="background-color:grey;">DAA Grp'A'</td>
</tr>
<tr>
  <td rowspan="2">4:00 - 5:00</td>
  <td style="background-color:grey;">WebTech Grp'A'</td>

```



```

        border-style: groove;
    }
</style>
</head>
<body>

    <form action="process_registration.php" method="post" enctype="multipart/form-data">
        <table>
            <th>Registration Form</th>
            <tr>

                <td>Name:</td>
                <td><input type="text" name="name" required></td>
            </tr>
            <tr>
                <td>Email:</td>
                <td><input type="email" name="email" required></td>
            </tr>
            <tr>
                <td>Password:</td>
                <td><input type="password" name="password" required></td>
            </tr>
            <tr>
                <td>Gender:</td>
                <td>
                    <input type="radio" name="gender" value="male" required> Male
                    <input type="radio" name="gender" value="female" required> Female
                </td>
            </tr>
            <tr>
                <td>Interests:</td>
                <td>
                    <input type="checkbox" name="interests[]" value="sports"> Sports
                    <input type="checkbox" name="interests[]" value="music"> Music
                    <input type="checkbox" name="interests[]" value="travel"> Travel
                </td>
            </tr>
            <tr>
                <td>Country:</td>
                <td>
                    <select name="country">
                        <option value="us">United States</option>
                        <option value="ca">Canada</option>
                        <option value="uk">United Kingdom</option>
                    </select>
                </td>
            </tr>
            <tr>

```

```

        <td>Profile Picture:</td>
        <td><input type="file" name="profile_picture"></td>
    </tr>
    <tr>
        <td>Address:</td>
        <td><textarea name="address" rows="4" cols="50"></textarea></td>
    </tr>
    <tr>
        <td colspan="2"><input type="submit" value="Register"></td>
    </tr>
</table>
</form>
</body>
</html>

```

OUTPUT

- f) Implement different HTML Events: Windows Event, Keyboard Event, Mouse Event and Form Element Event.

```

<!DOCTYPE html>

<html>
<head>
    <title>HTML Events Example</title>
    <script>
        // Window Event
        window.onload = function() {
            alert('The page has loaded!');
        };
    </script>

```

```

window.onresize = function() {
    document.getElementById('resize-info').innerHTML = 'Window resized!';
};

// Keyboard Event
document.onkeydown = function(event) {
    alert('Key pressed: ' + event.key);
};

// Mouse Event
document.getElementById('my-button').onclick = function() {
    alert('Button clicked!');
};

document.getElementById('my-div').onmouseover = function() {
    document.getElementById('mouse-info').innerHTML = 'Mouse over the div!';
};

// Form Element Event
function showValue() {
    var inputElement = document.getElementById('text-input');
    var value = inputElement.value;
    alert('Input value: ' + value);
}
</script>
</head>
<body>
    <h1>HTML Events Example</h1>

    <!-- Window Event -->
    <div id="resize-info"></div>

    <!-- Keyboard Event -->
    <p>Press any key to trigger the event.</p>

    <!-- Mouse Event -->
    <div id="my-div">Hover over me</div>
    <p id="mouse-info"></p>
    <button id="my-button">Click me</button>

    <!-- Form Element Event -->
    <input type="text" id="text-input" placeholder="Type something...">
    <button onclick="showValue()">Show Value</button>
</body>
</html>

```


OUTPUT

WINDOW EVENTS

This page says
The page has loaded!

OK

Window resized!

MOUSE EVENTS

127.0.0.1:5500 says
Button clicked!

OK

HTML Events Example

Press any key to trigger the event.

Hover over me

Mouse over the div!

Click me

Type something...

Show Value

KEYBOARD EVENTS

This page says
Key pressed: ArrowUp

OK

FORM EVENTS

Gmail f f May be an image o... Address

HTML Events Example

This page says
Input value: sam

OK

Window resized!

Press any key to trigger the event.

Hover over me

Click me

sam

Show Value