ourdiu.com | Shared by H@DY_222

Daffodil International University

Faculty of Science & Information Technology
Department of Computer Science & Engineering
Midterm Examination, Fall 2025
Course Code: CSE415, Course Title: Web Engineering
Level: 4 Term: 1 Batch: 63

Time: 01:30 Hrs **Marks: 25**

Answer ALL Questions

[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially]

1		You are assigned to analyze the relationship between the client-server paradigm and the process of requirement engineering for modern web-based systems		CO1
	a)	**Discuss** how this paradigm influences the elicitation and definition of both functional and non-functional requirements	[5]	
	b)	You are reviewing the requirements for a new software system. The constraints include high availability, secure handling of sensitive data, support for many concurrent users, adherence to internal coding standards, an intuitive user interface, and compliance with legal regulations. **Identify** two distinct non-functional requirements and **analyze** them based on their classes.	[5]	
2		You are tasked with building an interactive cost estimator for a web design agency. Clients should be able to select from a list of services, and a price should be calculated and displayed in real-time on the page. The entire functionality must be self-contained and run on the client-side.		CO4
	a)	Now **Create** an HTML document with a form containing a fieldset of checkboxes for three services: Web Design (৳25500), SEO Optimization (৳9250), and E-commerce Integration (৳88750). Below the form, add a section with an heading, showing an unordered list for chosen services, the total cost (initially ৳0.00), and a reset button.	[5]	
	b)	Then **Write** CSS to style the service selection form and cost estimation summary section. Use Flexbox so they appear side-by-side on screens wider than 600px and stack vertically on smaller screens. Finally, style the "Reset" button differently when disabled, and on hover.	[3]	
	c)	Finally **Implement** JavaScript that ensures the following- 1. The summary list and total value must update immediately when options are selected or deselected. 2. Implement event delegation by attaching a single listener to a parent container, so that it efficiently handles click events for dynamically added child elements. 3. Add/remove items in a list to reflect selections, and calculate total cost. 4. Show total with 2 decimal points; if >100,000, add 15% tax and show separately. 5. A reset button should be disabled by default, enabled when at least one option is selected, and reset everything when clicked.	[7]	