University of Bahrain

ITCS333 - Midterm Exam

Second Semester 2024 - 2025
14 April 2025

Name: _____

ID: _____

Section: _____

Serial Number: _____

Time: 1 Hour and 30 Minutes

Grade Breakdown

Question	Possible Points	Score
1	8	
2	8	
3	9	

1 HTML and CSS (4 + 4 points)

1.1 Write a basic HTML document following to the following specifications:

- Include <html>, <head>, and <body> tags

- Set the page's < title > displayed in the browser tab to "CONTACT US".

- Inside the <head> section of your HTML document, include a < link > tag that points to the CSS framework located at https://cssframe.com/frame.min.css. Use the rel and href attributes.

- Embed a <main> tag within the <body>.

- Within the <main> tag, include a <section> tag assigned the class ="contact−form".

- Within the <section> tag, place a <form> tag with the id ="contact−form".

```
<html> 0.25 pt
<head> 0.25 pt
    <title >CONTACT US</title > 0.5 pt
    <link rel="stylesheet" href="https://cssframe.com/frame.min.css"> 1.5 pt
</head>
<body> 0.25 pt
    <main> 0.25 pts
        <section class="contact−form"> 0.5 pt
            <form id="contact−form"> 0.5 pt
            </form>
        </section >
    </main>
</body>
</html>
```

1.2 Create the necessary CSS rules to style the HTML document you created in the previous question with the following requirements:

- Apply a background−color of #f0f0f0 and a padding of 20px to all <section> elements on the page.

- Style all <input> tags (Assume they exist) located within the <form> element having the id ="contact−form" with the following properties:

  - Set the width to 100%
  - Give it a border of 1px solid #ccc.

```
section { 1pt
    background−color: #0c0c0c; 0.5 pt
    padding: 10px; 0.5 pt
}

#about−form input { 1pt
    width: 100%; 0.5 pt
    border: 2px dotted #ccc; 0.5 pt
}
```

2 JavaScript: Language Fundamentals (1 + 3 + 4 points)

Assume that this array is defined.

```
const products = [
  { name: "T-Shirt", price: 5.5 },
  { name: "Coffee Mug", price: 3.2 },
  { name: "Wireless Mouse", price: 9.6 },
  // Other Products
];
```

2.1 Write a JavaScript line to change the price of the "Coffee Mug" to 2.0.

```
products[0].price = 4.5; 1pt
```

2.2 Write JavaScript code to print the sum of the products prices in the console.log(). Use any method of looping you want.

```
let totalPrice = 0; 0.5pt
for (let i = 0; i < products.length; i++) { 1pt
    totalPrice += products[i].price; 1pt
}
console.log(totalPrice); 0.5pt
```

2.3 Write JavaScript code to print the product name in the console.log(), if the product is cheaper than 4BD. Use any method of looping you want.

```
for (let i = 0; i < products.length; i++) { 1pt
  if (products[i].price < 4) { 2pts
    console.log(products[i].name); 1pt
  }
}
```

3 JavaScript: DOM and Events (9 points)

Assume that this HTML snippet is defined.

```
<p>This page contains many paragraphs,
even if only two are shown in this snippet</p>
<div id="messageArea">
  <p>Click the button to change this message!</p>
</div>
<button id="myButton">Click Me</button>
```

3.1 Write JavaScript code that does the following:

- **Select Elements (getElementById, getElelmentsByTagName, querySelector):** Get references (i.e., store them in variables) to both the button element (using its id="myButton") and the paragraph element within the div with id="messageArea".

- **Event Listener (addEventListener):** Add an event listener to the button. Listen for the " click " event.

- **Event Handler:** When the button is clicked, the event listener should execute a function (the event handler) that change the textContent of the paragraph to the current hour. Use the JavaScript Built-in object Date(), create an instance of it, and call the function getHours() on that instance to get the hour.

```
const button = document.getElementById("myButton"); 1pts
const messageParagraph = document.querySelector("#messageArea p");
// or document.getElementById("messageArea").getElementsByTagName("p")[0];
// or document.getElementById("messageArea").querySelector("p");
2pts

button.addEventListener("click", function() { 2pts
    const now = new Date(); 2pts
    const currentHour = now.getHours(); 1pt
    messageParagraph.textContent = currentHour; 1pt
});
```