



Web-Based Interface Design

(CSF 3133)

LAB REPORT 6

NAME: WONG CAI YI

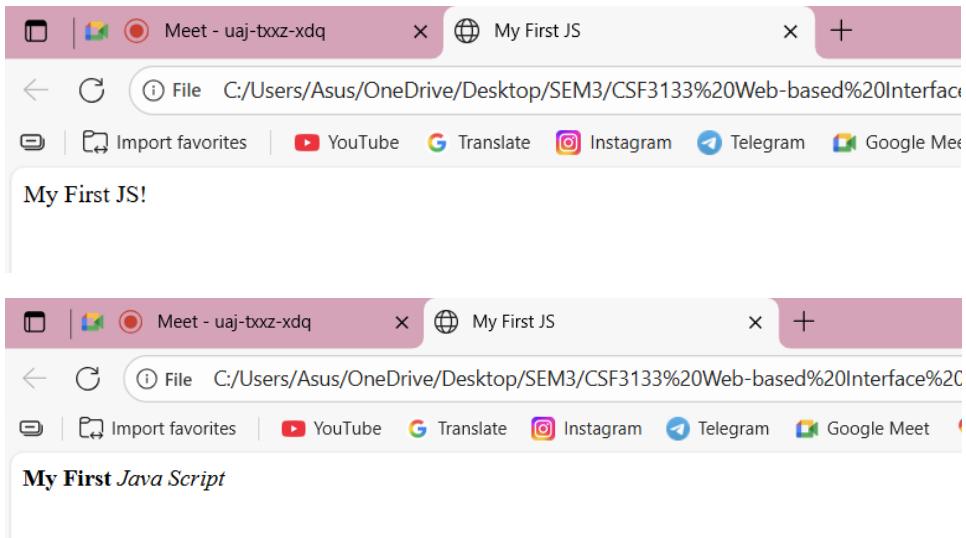
MATRIC NO: S76084

DATE: 03 December 2025

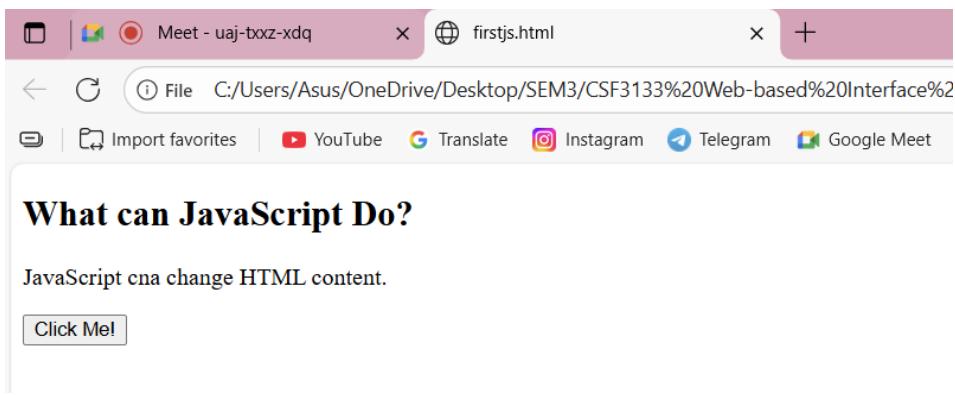
GROUP: K4

PROGRAMME: COMPUTER SCIENCE (SOFTWARE ENGINEERING)

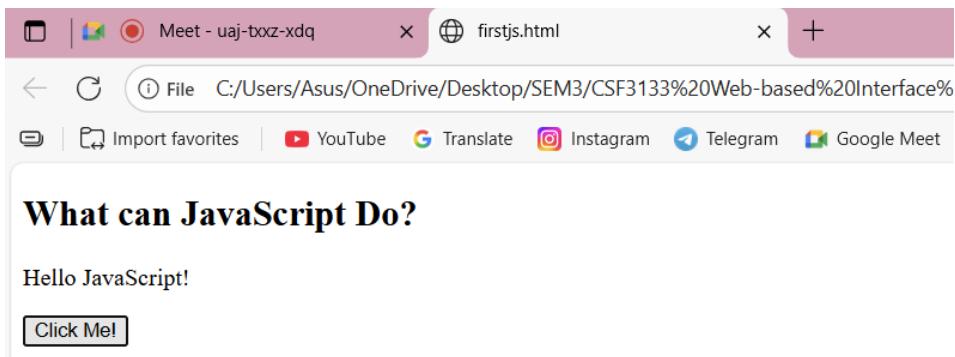
6.3 Basic JavaScript



6.4 getElementById()



After click the click me button,



6.5 Date and Time

A screenshot of a web browser window. The title bar shows three tabs: 'Meet - uaj-txxz-xdq', 'firstjs.html', and 'Date and Time'. The 'Date and Time' tab is active. The main content area contains a button with the text 'Click me to display Date and Time'. Below the button, there is a blank space where the date and time will be displayed.

After click the button,

A screenshot of a web browser window, identical to the previous one but with the date and time displayed below the button. The text 'Wed Dec 03 2025 10:19:00 GMT+0800 (Malaysia Time)' is now visible in the blank space.

After add the script and click the button,

A screenshot of a web browser window, identical to the previous ones but with a yellow background highlighting the date and time. The text 'Wed Dec 03 2025 10:24:36 GMT+0800 (Malaysia Time)' is displayed in yellow.

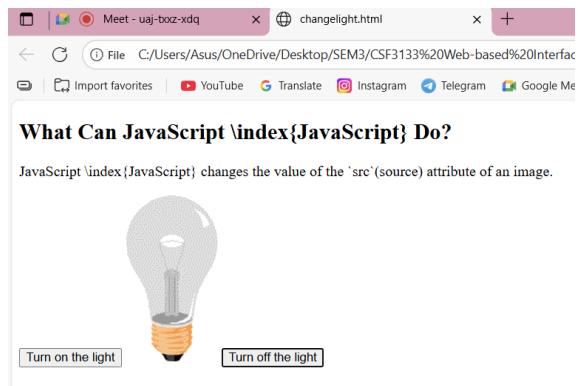
6.6 Change HTML Attribute Values

A screenshot of a web browser window. The title bar shows three tabs: 'Meet - uaj-txxz-xdq', 'changelight.html', and another tab whose title is partially visible. The 'changelight.html' tab is active. The main content area features a graphic of a lit lightbulb. Below the bulb are two buttons: 'Turn on the light' on the left and 'Turn off the light' on the right.

When click the turn on the light button,



When click the turn off the light button,



6.7 Link to file JavaScript

Click the Button and See the Message

Click Me

After click button,

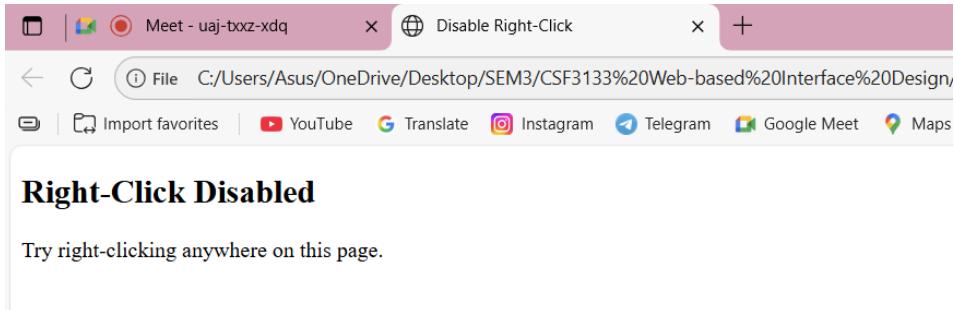
Click the Button and See the Message

Click Me

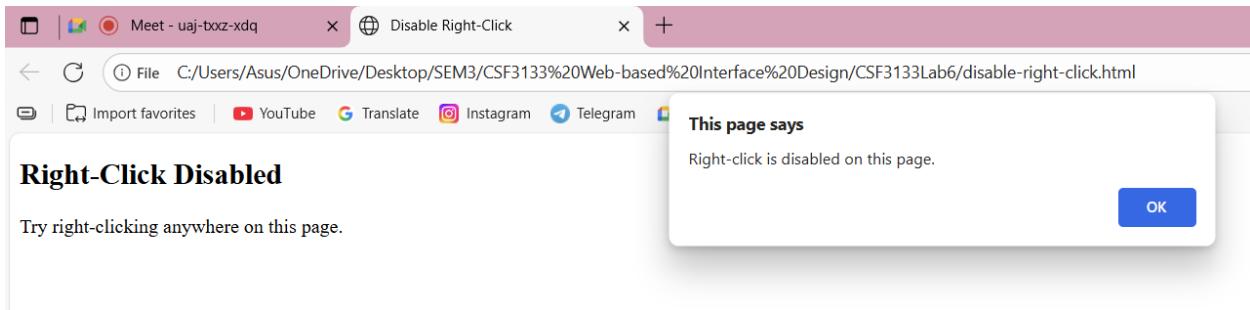
This page says
Hello UMT Student

OK

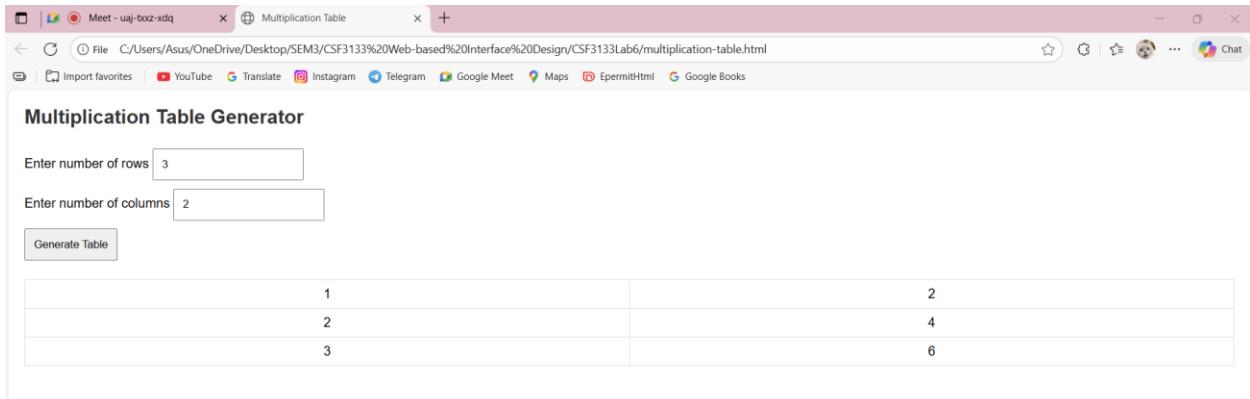
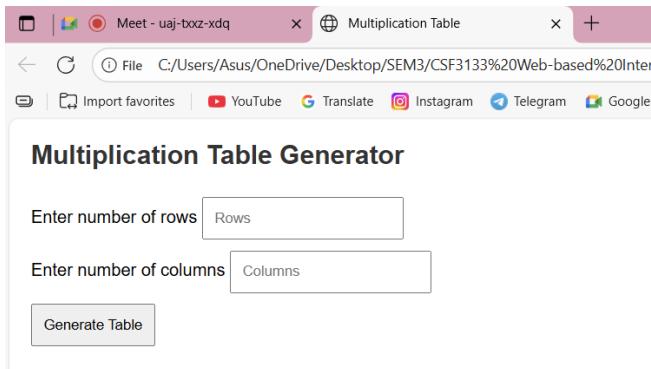
6.8 Working with events



When I right-click in the page,



6.9 Multiplication Table



6.10 Client-side validation

6.10.1 Form Validation

Form Validation Example

First Name:

Submit

If I left the first name empty and submit,

Form Validation Example

First Name:

Submit

This page says

First Name must be filled out.

OK

Else, successful (changed in website address)

Form Validation Example

First Name:

Submit

6.10.2 Numeric Input Validation

Case1: Empty input

A screenshot of a web browser window titled "Numeric Validation". The address bar shows the file path: C:/Users/Asus/OneDrive/Desktop/SEM3/CSF3133%20Web-based%20Interface%20Design/CSF3133Lab6/numeric-validation.html. The page content is titled "Numeric Input Validation Example". It contains a form with a label "Enter Your Age:" and a text input field containing "Enter a number". Below the input is a blue "Submit" button. A modal dialog box is displayed with the heading "This page says" and the message "Age field cannot be empty." An "OK" button is at the bottom right of the dialog.

Case2: Non-numeric value

A screenshot of a web browser window titled "Numeric Validation". The address bar shows the file path: C:/Users/Asus/OneDrive/Desktop/SEM3/CSF3133%20Web-based%20Interface%20Design/CSF3133Lab6/numeric-validation.html. The page content is titled "Numeric Input Validation Example". It contains a form with a label "Enter Your Age:" and a text input field containing "abc". Below the input is a blue "Submit" button. A modal dialog box is displayed with the heading "This page says" and the message "Please enter a valid numeric value." An "OK" button is at the bottom right of the dialog.

Case3: Number outside range

A screenshot of a web browser window titled "Numeric Validation". The address bar shows the file path: C:/Users/Asus/OneDrive/Desktop/SEM3/CSF3133%20Web-based%20Interface%20Design/CSF3133Lab6/numeric-validation.html. The page content is titled "Numeric Input Validation Example". It contains a form with a label "Enter Your Age:" and a text input field containing "-3". Below the input is a blue "Submit" button. A modal dialog box is displayed with the heading "This page says" and the message "Please enter a number between 1 and 120." An "OK" button is at the bottom right of the dialog.

Case4: Valid number

A screenshot of a web browser window titled "Numeric Validation". The address bar shows the file path: C:/Users/Asus/OneDrive/Desktop/SEM3/CSF3133%20Web-based%20Interface%20Design/CSF3133Lab6/numeric-validation.html. The page content is titled "Numeric Input Validation Example". It contains a form with a label "Enter Your Age:" and a text input field containing "25". Below the input is a blue "Submit" button. A modal dialog box is displayed with the heading "This page says" and the message "Form submitted successfully!" An "OK" button is at the bottom right of the dialog.

6.11 Math Function

6.11.1 Guess a Number

The screenshot shows a web browser window with three tabs open: 'Meet - uaj-txxz-xdq', 'Numeric Validation', and 'Guess the Number Game'. The current page is 'guess-number.html' located at 'C:/Users/Asus/OneDrive/Desktop/SEM3/CSF3133%20Web-based%20Interface%20Design/CSF3133Lab6/'. Below the tabs is a toolbar with links to 'Import favorites', 'YouTube', 'Google Translate', 'Instagram', 'Telegram', 'Google Meet', 'Maps', 'EpermithHtml', 'Google Books', and a file menu. The main content area has a title 'Guess the Number Game' and a message 'Try to guess the random number between 1 and 10!'. A blue 'Start Game' button is visible.

After click button,

The screenshot shows the same browser window after clicking the 'Start Game' button. A modal dialog box titled 'This page says' appears in the center. It contains the text 'Guess a number between 1 and 10:' followed by an input field containing a single character '1'. At the bottom of the dialog are 'OK' and 'Cancel' buttons. The main content area of the page is partially visible.

Not matched.

The screenshot shows the browser window again. The modal dialog now displays the message 'Not matched. The correct number was 4.' with an 'OK' button at the bottom right. The main content area shows the game instructions and the 'Start Game' button.

Matched.

The screenshot shows the browser window once more. The modal dialog now displays the message 'Good Work! You guessed it right.' with an 'OK' button at the bottom right. The main content area shows the game instructions and the 'Start Game' button.

6.12 Lab Exercise 6

6.12.1 Quiz Application

```
LabExercise > index.html > html > body > header.header > h1
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <meta name="viewport" content="width=device-width, initial-scale=1.0">
6      <link rel="stylesheet" href="style.css">
7      <script src="script.js" defer></script>
8      <title>Queue Quiz</title>
9  </head>
10 <body>
11
12     <header class="header">
13         <h1>Queue Quiz</h1>
14         <p class="subtitle">
15             This quiz is designed to test your understanding of the queue data structure,
16             including its concepts, operations, and applications. <br>
17             Answer each question carefully and apply what you have learned about how queues
18             work in real-life and computer systems.
19         </p>
20     </header>
21
22     <div class="quiz-container">
23         <div class="timer">
24             Time Left: <span id="time">30</span>s
25         </div>
26
27         <div class="question" id="question">
28             Question will appear here
29         </div>
30
31         <div class="options" id="options"></div>
32
33         <p id="result"></p>
34
35         <div class="result">
36             Your score: <span id="score">0</span>
37         </div>
38
39             <button class="restart-btn" id="restartBtn">Restart Quiz</button>
40         </div>
41
42     </body>
43 </html>
44
45
```

```
1  /* Header */
2 < header {
3   text-align: center;
4   background-color: #rgb(207, 240, 207);
5   color: #237626;
6   padding: 20px;
7   width: 97%;
8 }
9
10 /* Page Layout */
11 < body {
12   font-family: Arial, sans-serif;
13   background-color: #f4f4f9;
14   color: #333;
15   margin: 0;
16   padding: 0;
17
18   display: flex;
19   justify-content: center;
20   align-items: center;
21
22   height: 100vh;
23   flex-direction: column;
24 }
25
26 /* Quiz Box */
27 < .quiz-container {
28   background: #fff;
29   border-radius: 12px;
30   box-shadow: 0 4px 6px #rgba(0, 0, 0, 0.1);
31
32   width: 90%;
33   max-width: 600px;
34   padding: 20px;
35
36   text-align: center;
37   margin-top: 20px;
38 }
```

```
39
40 /* Question Text */
41 .question {
42   font-size: 1.2em;
43   margin-bottom: 20px;
44 }
45
46 /* Options */
47 .options {
48   display: flex;
49   flex-direction: column;
50   gap: 10px;
51 }
52
53 .option {
54   padding: 10px;
55   border: 2px solid #ccc;
56   border-radius: 8px;
57   cursor: pointer;
58   transition: 0.3s;
59 }
60
61 /* Hover Effect */
62 .option:hover {
63   background-color: #007bff;
64   color: #fff;
65 }
66
67 /* Timer */
68 .timer {
```

```
69     font-size: 1.2em;
70     margin-bottom: 20px;
71     color: #fff5722;
72   }
73
74 /* Score Result */
75 .result {
76   font-size: 1.5em;
77   color: #4caf50;
78   display: none;
79   margin-top: 15px;
80 }
81
82 /* Restart Button */
83 .restart-btn {
84   background-color: #007bff;
85   color: #fff;
86
87   border: none;
88   padding: 10px 20px;
89   font-size: 1em;
90
91   border-radius: 8px;
92   cursor: pointer;
93
94   margin-top: 20px;
95   display: none;
96 }
97
98 .restart-btn:hover {
99   background-color: #0056b3;
100 }
```

```

LabExercise > JS script.js > quizData
1 const quizData = [
2   {
3     question: "What is the basic principle of a queue?",
4     options: ["LIFO", "FIFO", "FILO", "Random"],
5     answer: "FIFO"
6   },
7   {
8     question: "Which operation removes an item from a queue?",
9     options: ["Push", "Pop", "Dequeue", "Insert"],
10    answer: "Dequeue"
11  },
12  {
13    question: "Which operation adds an item to a queue?",
14    options: ["shift", "Enqueue", "Pop", "Remove"],
15    answer: "Enqueue"
16  },
17  {
18    question: "Where is an element inserted in a queue?",
19    options: ["Front", "Middle", "Rear", "Anywhere"],
20    answer: "Rear"
21  },
22  {
23    question: "Where is an element removed from a queue?",
24    options: ["Front", "Back", "Middle", "Bottom"],
25    answer: "Front"
26  },
27  {
28    question: "Which of the following is NOT a type of queue?",
29    options: ["Circular Queue", "Priority Queue", "Double Queue", "Simple Queue"],
30    answer: "Double Queue"
31  },
32  {
33    question: "Which data structure is best for task scheduling?",
34    options: ["Tree", "Queue", "Stack", "Graph"],
35    answer: "Queue"
36  },
37  {
38    question: "What happens when a queue is full?",
39    options: ["Underflow", "Overflow", "Crash", "Reset"],
40    answer: "Overflow"
41  }
42];
43
44 let currentQuestion = 0;
45 let score = 0;
46 let timeLeft = 30;
47 let timerInterval;
48 const timerEl = document.getElementById('time');
49 const questionEl = document.querySelector('.question');
50 const optionsEl = document.querySelector('.options');
51 const resultEl = document.querySelector('.result');
52 const scoreEl = document.getElementById('score');
53 const restartBtn = document.querySelector('.restart-btn');
54
55 // Function to load the question
56 function loadQuestion() {
57   if (currentQuestion >= quizData.length) {
58     endQuiz();
59     return;
60   }
61   clearInterval(timerInterval);
62   timeLeft = 30;
63   timerEl.textContent = timeLeft;
64   startTimer();
65   const currentQuiz = quizData[currentQuestion];
66   questionEl.textContent = currentQuiz.question;
67   optionsEl.innerHTML = ''; // Clear previous options
68   currentQuiz.options.forEach(option => {
69     const button = document.createElement('button');
70     button.classList.add('option');
71     button.textContent = option;

```

```
72     button.onclick = () => checkAnswer(option);
73     optionsEl.appendChild(button);
74   });
75 }
76
77 //check ans
78 function checkAnswer(selectedOption) {
79   let result = document.getElementById("result");
80   let correctAnswer = quizData[currentQuestion].answer;
81
82   if (selectedOption === correctAnswer) {
83     result.textContent = "Correct!";
84     result.style.color = "green";
85     score++;
86   } else {
87     result.textContent = "Incorrect! The correct answer is: " + correctAnswer;
88     result.style.color = "red";
89   }
90
91   currentQuestion++;
92   loadQuestion();
93 }
94
95 // Start the timer
96 function startTimer() {
97   timerInterval = setInterval(() => {
98     timeLeft--;
99     timerEl.textContent = timeLeft;
100    if (timeLeft <= 0) {
101      clearInterval(timerInterval);
102      endQuiz();
103    }
104  }, 1000);
105 }
106
107 // End the quiz and show the results
108 function endQuiz() {
109   clearInterval(timerInterval);
110   questionEl.style.display = 'none';
111   optionsEl.style.display = 'none';
112   resultEl.style.display = 'block';
113   scoreEl.textContent = score;
114   restartBtn.style.display = 'block';
115 }
116
117 // Restart the quiz
118 restartBtn.addEventListener('click', () => {
119   // Reset variables
120   currentQuestion = 0;
121   score = 0;
122   timeLeft = 30;
123   timerEl.textContent = timeLeft;
124
125   // Reset the display
126   questionEl.style.display = 'block';
127   optionsEl.style.display = 'flex'; // Ensure options are displayed correctly
128   resultEl.style.display = 'none';
129   restartBtn.style.display = 'none';
130
131   // Load the first question
132   loadQuestion();
133 });
134
135 // Initialize the quiz with the first question
136 loadQuestion();
```

The screenshot shows a web browser window with the title bar "Labreport5.pdf" and "Queue Quiz". The address bar displays the URL "C:/Users/Asus/OneDrive/Desktop/SEM3/CSF3133%20Web-based%20Interface%20Design/CSF3133Lab6/LabExercise/index.html". Below the address bar is a toolbar with various icons for "Import favorites", "YouTube", "Translate", "Instagram", "Telegram", "Google Meet", "Maps", "EpermitHtml", and "Google Books". The main content area has a green header bar with the title "Queue Quiz". Below it, a message reads: "This quiz is designed to test your understanding of the queue data structure, including its concepts, operations, and applications. Answer each question carefully and apply what you have learned about how queues work in real-life and computer systems." A white box contains the question "What is the basic principle of a queue?" with four options: "LIFO", "FIFO", "FILO", and "Random". Above the box, a red text "Time Left: 28s" is displayed.

If correct, the correct will show below the option.

The screenshot shows a web browser window with the title bar "Labreport5.pdf" and "Queue Quiz". The address bar displays the URL "C:/Users/Asus/OneDrive/Desktop/SEM3/CSF3133%20Web-based%20Interface%20Design/CSF3133Lab6/LabExercise/index.html". Below the address bar is a toolbar with various icons for "Import favorites", "YouTube", "Translate", "Instagram", "Telegram", "Google Meet", "Maps", "EpermitHtml", and "Google Books". The main content area has a green header bar with the title "Queue Quiz". Below it, a message reads: "This quiz is designed to test your understanding of the queue data structure, including its concepts, operations, and applications. Answer each question carefully and apply what you have learned about how queues work in real-life and computer systems." A white box contains the question "Which operation removes an item from a queue?" with four options: "Push", "Pop", "Dequeue", and "Insert". Below the box, the word "Correct!" is displayed in green text.

If the answer is incorrect, the incorrect will show below and the correct answer also will show.

The screenshot shows a web browser window titled "Queue Quiz". The page content is as follows:

Queue Quiz

This quiz is designed to test your understanding of the queue data structure, including its concepts, operations, and applications. Answer each question carefully and apply what you have learned about how queues work in real-life and computer systems.

Time Left: 28s

Which operation adds an item to a queue?

Shift

Enqueue

Pop

Remove

Incorrect! The correct answer is: Dequeue

Final, the website will show the overall score.

The screenshot shows a web browser window titled "Queue Quiz". The page content is as follows:

Queue Quiz

This quiz is designed to test your understanding of the queue data structure, including its concepts, operations, and applications. Answer each question carefully and apply what you have learned about how queues work in real-life and computer systems.

Time Left: 30s

Correct!

Your score: 4

[Restart Quiz](#)