

# Phạm Thùy Dung – 20521214

## Assignment 1:

1. Write a JavaScript program to display the current day and time in the following format.

Today is : Thursday.

Current time is : 1 PM : 00 : 00

```

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   <title>Current Day and Time</title>
7   <style>
8     body {
9       font-family: Arial, sans-serif;
10      display: flex;
11      justify-content: center;
12      align-items: center;
13      height: 100vh;
14    }
15    div {
16      text-align: center;
17    }
18  </style>
19 </head>
20 <body>
21   <div>
22     <p id="currentDay">Today is : </p>
23     <p id="currentTime">Current time is : </p>
24   </div>
25
26   <script>
27     function updateDateTime() {
28       const days = ["Sunday", "Monday", "Tuesday", "Wednesday", "Thursday", "Friday", "Saturday"];
29       const currentDate = new Date();
30
31       const day = days[currentDate.getDay()];
32       const hours = currentDate.getHours();
33       const minutes = currentDate.getMinutes();
34       const seconds = currentDate.getSeconds();
35
36       // Convert 24 hour format to 12 hour format and set AM or PM
37       let period = "AM";
38       let hour12Format = hours;
39       if(hours > 12) {
40         hour12Format = hours - 12;
41         period = "PM";
42       }
43       if(hours === 0) {
44         hour12Format = 12;
45       }
46       if(hours === 12) {
47         period = "PM";
48       }
49
50       document.getElementById("currentDay").textContent = `Today is : ${day}.`;
51       document.getElementById("currentTime").textContent = `Current time is :
52       ${hour12Format} ${period} :
53       ${String(minutes).padStart(2, '0')} :
54       ${String(seconds).padStart(2, '0')}`;
55     }
56
57     // Update time immediately and then every second
58     updateDateTime();
59     setInterval(updateDateTime, 1000);
60   </script>
61 </body>
62 </html>
63

```

Output:

Today is : Wednesday.

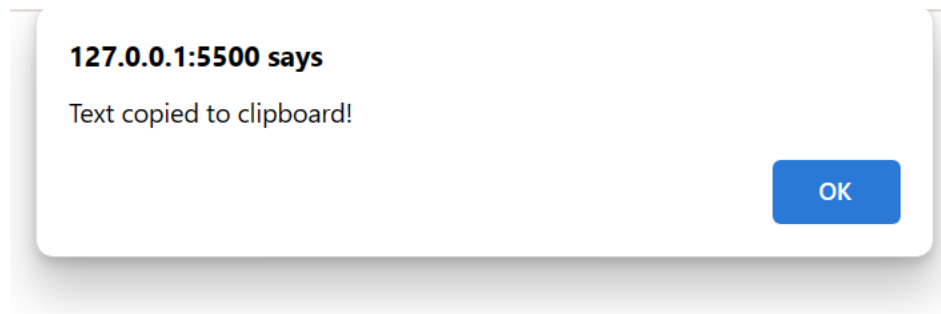
Current time is : 11 PM : 00 : 39

2. Write a JavaScript program to copy a string to the clipboard.



```
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      <title>Copy to Clipboard</title>
7      <style>
8          body {
9              font-family: Arial, sans-serif;
10             display: flex;
11             justify-content: center;
12             align-items: center;
13             height: 100vh;
14             flex-direction: column;
15         }
16         button {
17             margin-top: 20px;
18             padding: 10px 20px;
19         }
20     </style>
21 </head>
22 <body>
23     <input type="text" id="copyText" value="This is the text to be copied.">
24     <button onClick="copyToClipboard()">Copy to Clipboard</button>
25
26     <script>
27         function copyToClipboard() {
28             const textArea = document.getElementById('copyText');
29
30             // Select the content of the text area
31             textArea.select();
32             textArea.setSelectionRange(0, 99999); // For mobile devices
33
34             // Use the copy command
35             document.execCommand('copy');
36
37             alert("Text copied to clipboard!");
38         }
39     </script>
40 </body>
41 </html>
42
```

Output:

3. Write a JavaScript program to parse an HTTP Cookie header string and return an object of all cookie name-value pairs.

```

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      <title>Parse Cookie Header</title>
7      <style>
8          body {
9              font-family: Arial, sans-serif;
10             display: flex;
11             justify-content: center;
12             align-items: center;
13             height: 100vh;
14             flex-direction: column;
15         }
16         button, textarea {
17             margin-top: 20px;
18         }
19     </style>
20 </head>
21 <body>
22     <textarea id="cookieInput" rows="4" cols="50" placeholder="Enter the HTTP Cookie header string here."></textarea>
23     <button onClick="parseCookies()">Parse Cookies</button>
24     <pre id="output"></pre>
25
26     <script>
27         function parseCookies() {
28             const input = document.getElementById('cookieInput').value;
29
30             const cookies = input.split('; ').reduce((acc, cookie) => {
31                 const [name, value] = cookie.split('=');
32                 acc[name] = value;
33                 return acc;
34             }, {});
35
36             const output = document.getElementById('output');
37             output.textContent = JSON.stringify(cookies, null, 4);
38         }
39     </script>
40 </body>
41 </html>
42

```

Output:

```

Name=Value; Path=/; Expires=Wed, 21 Oct 2025
07:28:00 GMT; Secure; HttpOnly

```



Parse Cookies

```

{
  "Name": "Value",
  "Path": "/",
  "Expires": "Wed, 21 Oct 2025 07:28:00 GMT"
}



```

4. Write a JavaScript program to write a JSON object to a file.

```
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      <title>Write JSON to File</title>
7      <style>
8          body {
9              font-family: Arial, sans-serif;
10             display: flex;
11             justify-content: center;
12             align-items: center;
13             height: 100vh;
14             flex-direction: column;
15         }
16         button, textarea {
17             margin-top: 20px;
18         }
19     </style>
20 </head>
21 <body>
22     <textarea id="jsonInput" rows="10" cols="50" placeholder="Enter JSON here."></textarea>
23     <button onClick="downloadJSON()">Download JSON</button>
24
25     <script>
26         function downloadJSON() {
27             const jsonText = document.getElementById('jsonInput').value;
28
29             try {
30                 JSON.parse(jsonText); // Attempt to parse to ensure it's valid JSON
31
32                 const blob = new Blob([jsonText], { type: 'application/json' });
33                 const url = URL.createObjectURL(blob);
34
35                 const a = document.createElement('a');
36                 a.style.display = 'none';
37                 a.href = url;
38                 a.download = 'data.json';
39
40                 document.body.appendChild(a);
41                 a.click();
42                 document.body.removeChild(a);
43             } catch (e) {
44                 alert("Invalid JSON");
45             }
46         }
47     </script>
48 </body>
49 </html>
50
```

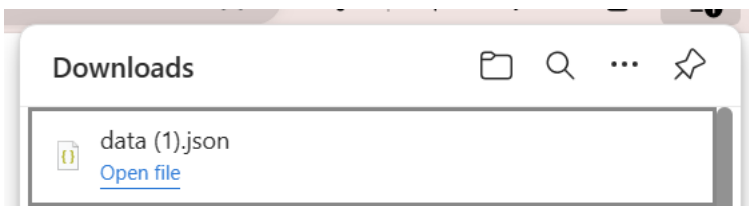
Output:

```
{
  "firstName": "John",
  "lastName": "Doe",
  "age": 30,
  "address": {
    "street": "123 Main St",
    "city": "Springfield",
    "state": "IL",
    "postalCode": "12345"
  },
  "phoneNumbers": [
    {
      "type": "home",
      "number": "555-555-5555"
    },
    {
      "type": "work",
      "number": "555-555-5556"
    }
  ],
  "isEmployee": false
}
```



Download JSON

Result:





## Assignment 2:

1. Use javascript to create a submit button. After that changing the text on it.

```
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      <title>Change Button Text</title>
7  </head>
8  <body>
9      <button id="submitButton" onClick="changeText()">Submit</button>
10
11      <script>
12          function changeText() {
13              const button = document.getElementById('submitButton');
14              button.textContent = "Text Changed!";
15          }
16      </script>
17  </body>
18  </html>
19
```

Output:

Submit

Text Changed!

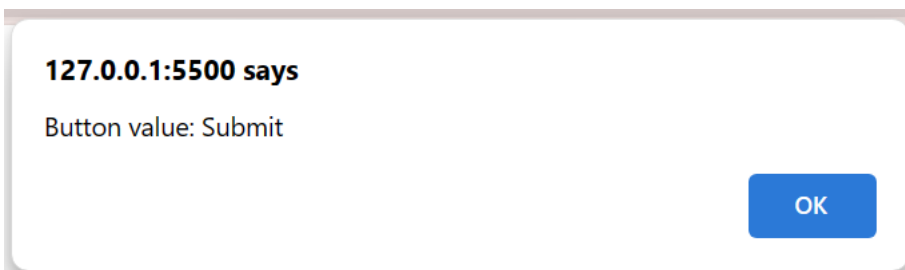
2. Use javascript to create a form. Next, write a JavaScript function to get the value of submit button that you create on Exercise 1.

```

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      <title>Retrieve Button Value</title>
7      <style>
8          form {
9              display: flex;
10             flex-direction: column;
11             max-width: 300px;
12             margin: 50px auto;
13         }
14         input[type="text"], button {
15             margin-bottom: 20px;
16         }
17     </style>
18 </head>
19 <body>
20     <form id="sampleForm">
21         <input type="text" placeholder="Enter some data" />
22         <button id="submitButton" type="button" value="Submit" onClick="retrieveValue()">Submit</button>
23     </form>
24
25     <script>
26         function retrieveValue() {
27             const button = document.getElementById('submitButton');
28             alert("Button value: " + button.value);
29         }
30     </script>
31 </body>
32 </html>
33

```

Output:



- Write javascript code to create a form to calculate age of other people.

```

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      <title>Calculate Age</title>
7      <style>
8          form {
9              display: flex;
10             flex-direction: column;
11             max-width: 300px;
12             margin: 50px auto;
13             padding: 20px;
14             border: 1px solid #ddd;
15             border-radius: 5px;
16         }
17         label, input, button {
18             margin-bottom: 10px;
19         }
20     </style>
21 </head>
22 <body>
23     <form id="ageForm" onsubmit="calculateAge(event)">
24         <label for="birthYear">Enter Birth Year:</label>
25         <input type="number" id="birthYear" required>
26         <button type="submit">Calculate Age</button>
27         <p id="result"></p>
28     </form>
29
30     <script>
31         function calculateAge(event) {
32             event.preventDefault(); // Prevent the form from submitting
33
34             const currentYear = new Date().getFullYear();
35             const birthYear = parseInt(document.getElementById('birthYear').value);
36
37             if (!isNaN(birthYear) && birthYear > 0 && birthYear <= currentYear) {
38                 const age = currentYear - birthYear;
39                 document.getElementById('result').textContent = `The age is: ${age} years.`;
40             } else {
41                 document.getElementById('result').textContent = "Please enter a valid birth year.";
42             }
43         }
44     </script>
45 </body>
46 </html>
47

```

Output:

Enter Birth Year:

Calculate Age

The age is: 21 years.

4. Write a JavaScript application that, when a user hovers over a certain link, highlights the bold words of the following text.

```

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      <title>Highlight Bold Words</title>
7      <style>
8          /* This style is applied when bold words are to be highlighted */
9          b.highlighted {
10              background-color: yellow;
11          }
12
13          /* Hover effect for the link */
14          a:hover {
15              text-decoration: underline;
16          }
17      </style>
18  </head>
19  <body>
20
21  <p>
22      This is a <b>sample</b> text with some <b>bold</b> words that will be highlighted when hovering over the link below.
23  </p>
24  <a id="highlightLink" href="#">Hover over me to highlight the bold words</a>
25
26  <script>
27      const link = document.getElementById('highlightLink');
28
29      link.addEventListener('mouseover', function() {
30          const boldWords = document.querySelectorAll('b');
31          boldWords.forEach(word => {
32              word.classList.add('highlighted');
33          });
34      });
35
36      link.addEventListener('mouseout', function() {
37          const boldWords = document.querySelectorAll('b.highlighted');
38          boldWords.forEach(word => {
39              word.classList.remove('highlighted');
40          });
41      });
42  </script>
43
44  </body>
45  </html>
46

```

Output:

This is a **sample** text with some **bold** words that will be highlighted when hovering over the link below.

[Hover over me to highlight the bold words](#)

5. Create a Javascript application to get the window's width and height (any time the window is resized).

```
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   <title>Window Dimensions on Resize</title>
7   <style>
8     body {
9       font-family: Arial, sans-serif;
10      display: flex;
11      justify-content: center;
12      align-items: center;
13      height: 100vh;
14      flex-direction: column;
15    }
16  </style>
17 </head>
18 <body>
19
20 <h1>Window Dimensions</h1>
21 <p id="dimensions">Width: ???, Height: ???</p>
22
23 <script>
24   function displayDimensions() {
25     const width = window.innerWidth;
26     const height = window.innerHeight;
27     const dimensionsElem = document.getElementById('dimensions');
28     dimensionsElem.textContent = `Width: ${width}px, Height: ${height}px`;
29   }
30
31   // Display dimensions initially
32   displayDimensions();
33
34   // Update display on window resize
35   window.addEventListener('resize', displayDimensions);
36 </script>
37
38 </body>
39 </html>
40
```

Output:

## Window Dimensions

Width: 1272px, Height: 678px

# Window Dimensions

Width: 630px, Height: 668px

Hint: Find out more about `Document.querySelector`, `Document.createElement`, `Document.getElementById` and other functions related to `Document`.

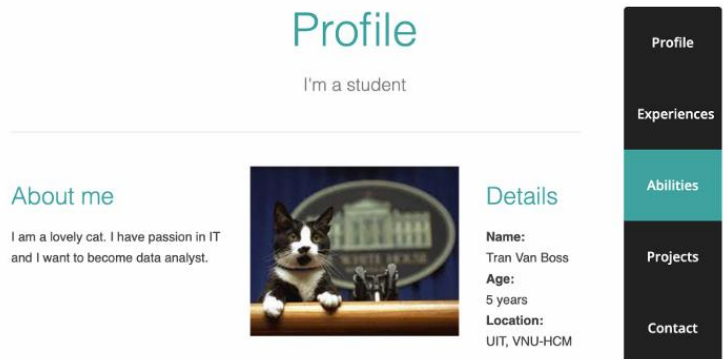
The Document Object Model (DOM) represents HTML in the browser after it has been rendered. The DOM API is how JavaScript is able to change content on a page.





# Javascript – Homework

- Do you remember about your CV? Please add some javascript code to make it great. For example, you can add menu on the left of this website. When people click on each part, your website will direct them here.





Detail in github

Output:


ProfileExperiencesAbilities

Profiles

I am a student

About me

I love English and IT, and in the future, I want to become a Business Analysis (BA).



Details

Name: Pham Thuy Dung

Age: 21

Location: UIT, VNU-HCM

Experiences

Educations

My major is Information Systems, and in UIT. I

Work experiences

I do many project in University, there are some skill I

## Javascript – Homework 2.1 (Option 1)

- Develop a website similar to this and add sound to each button.



Input:



```
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      <title>Drum Kit</title>
7      <link rel="stylesheet" href="2-1.css">
8  </head>
9  <body>
10     <h1>Drum Kit</h1>
11     <div class="drum-buttons">
12         <button class="drum" data-key="a">w</button>
13         <button class="drum" data-key="a">a</button>
14         <button class="drum" data-key="s">s</button>
15         <button class="drum" data-key="d">d</button>
16         <button class="drum" data-key="j">j</button>
17         <button class="drum" data-key="k">k</button>
18         <button class="drum" data-key="l">l</button>
19     </div>
20     <script src="2-1.js"></script>
21 </body>
22 </html>
23
```

Output:

## Drum Kit

w

a

s

d

j

k

l

## Javascript – Homework 2.2



- Access to this link and do exercise 3:

<https://drive.google.com/file/d/1hr4hTelyL6oGvwE6hIdQXIwDNZZ0UOqO/view?usp=sharing>



```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <meta http-equiv="X-UA-Compatible" content="IE=edge">
6      <meta name="viewport" content="width=device-width, initial-scale=1.0">
7      <title>Multi Filter Function</title>
8      <link rel="stylesheet" href="2-2.css">
9  </head>
10 <body>
11     <div id="results"></div>
12     <script src="2-2.js"></script>
13 </body>
14 </html>
15
```

Output:

---

# Javascript – Homework 2.3



- Access to this link and do exercise
- <https://drive.google.com/file/d/12ej5SRd873oFS4TJ8csu4WkusNyU-DXX/view?usp=sharing>

```
1 <html Lang="vi">
2 <head>
3   <meta charset="UTF-8">
4   <title>Đăng nhập</title>
5   <link rel="stylesheet" href="2-3.css">
6   <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/font-awesome/4.7.0/css/font-awesome.min.css">
7   <script type="text/javascript" src="2-3.js" async></script>
8 </head>
9 <body>
10  <div class="login-page" id="login">
11    <h1>Đăng Nhập Tài Khoản</h1>
12    <div class="input-box">
13      <i class="fa fa-user"></i>
14      <input type="text" placeholder="Họ và Tên" id="user">
15    </div>
16    <div class="input-box">
17      <i class="fa fa-key"></i>
18      <input type="password" placeholder="Mật khẩu" id="pwd">
19      <span class="eye" id="eye-icon">
20        <i class="fa fa-eye" id="hide-eye"></i>
21        <i class="fa fa-eye-slash" id="hide-eye-slash"></i>
22      </span>
23    </div>
24    <button type="button" class="login-button" onClick="LoginClick()">Đăng nhập</button>
25  </div>
26  <div class="login-page" id="Hello">
27    <h3>Xin chào</h3>
28    <h1 id="user-name">Tên Đăng Nhập</h1>
29    <p><a href="#" onClick="LogoutClick()">Đăng xuất?</a></p>
30  </div>
31 </body>
32 </html>
33
```

Output:



# Đăng Nhập Tài Khoản



Họ và Tên



Mật khẩu



ĐĂNG NHẬP

Github link: <https://github.com/amenosakura/lab2-20521214>