NGEE ANN
SCHOOL OF INFOCOMM TECHNOLOGY

Front End Development	Week 13
Diploma in CSF 2021/22 Semester 2	2 Hours
FrontEnd Security	

Activities

Materials

1. Download the following file from MeL for this practical exercise:
   - Week13Practical.zip

References:

- Content-Security-Policy to Secure Your Web Application

  https://www.youtube.com/watch?v=pBKB4wsQK48

Task 1: Display information from a server using onclick() event

1. Create a new project from Blank Solution template in Visual Studio and name it as **Week13Practical**.

2. Change to the Folder View.

3. Add folders **css** and **js** into the project.

4. Add a new HTML page and name it as **index.html**.

5. In the index.html file,

   a) Add the code in the Appendix to index.html.

   b) Add meta tag for author and your name as content.

   c) Add meta tag for description and "Week 13 Practical – Content Security Policy" as content.

   d) Add the title "CSP Demo".

   e) Copy styles.css and index.js downloaded from MEL into css and js folder respectively.

6. Run the project solution in Google Chrome browser.
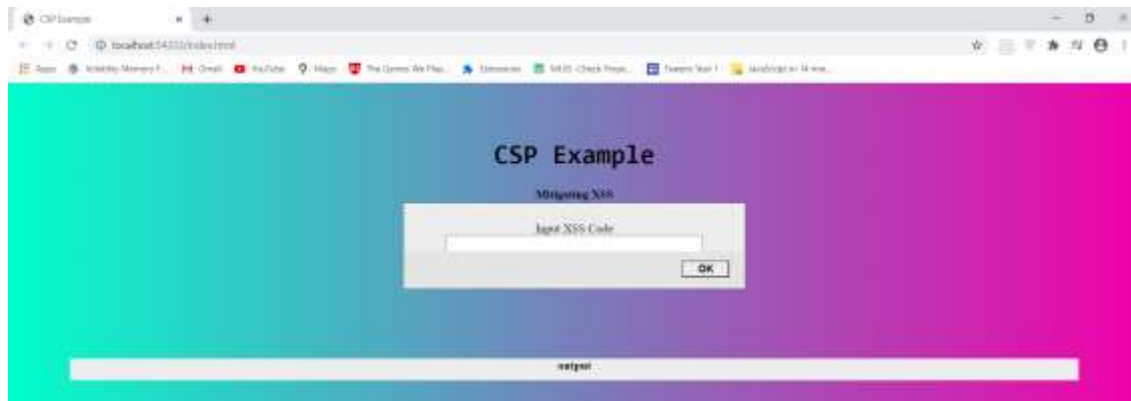   You should get an output similar to Figure 1 below.

Figure 1: Index.html output in Goolge Chrome Browser

7. Answer the following questions:-

   a) What is the XSS code to enter in the input box that will register an alert box value 1 as shown in Figure 2 below?

      Please note that simply enter *<script>alert(1)</script>* will not work.
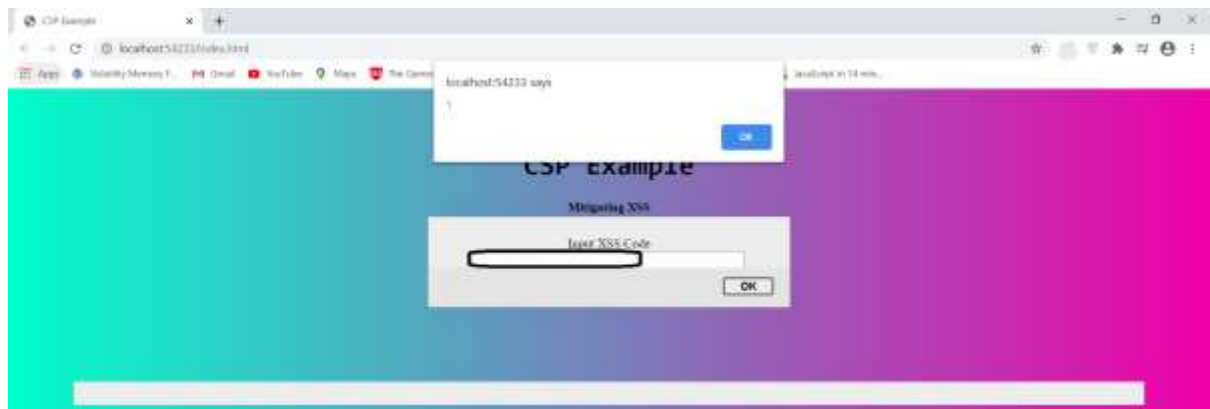

Figure 2: XSS Output

   b) If you found the code, is this the only XSS code that will register an alert box as shown in Figure 2? List other XSS codes, if there are any.

Note: Proceed to Step 8 only after you resolve Step 7.

8. Mitigate the XSS attack using content security policy (CSP). What is the content security policy code that will mitigate the XSS attack?

<meta http-equiv="Content-Security-Policy" content="default-src 'self'">

   Hint: Refer to the video link in the reference.

9. Enter the content security policy code in index.html.

10. Test the code in that it works in mitigating XSS attack. Save all the files. (If done correctly, there should not be an alert box popup even if an alert XSS code is entered.)

11. Zipped the entire **Week13Practical** folder and submit in MEL submission.

    (Zip filename format as instructed in ppt slides)

== End of Worksheet ==

Appendix

index.html

```html
<!DOCTYPE html>
<html lang="en" >

<head>
    <meta charset="UTF-8">
    <title>CSP Example</title>
    <link rel="stylesheet" href="css/style.css">
</head>

<body>

    <div id="wrapper-div">
        <h1>CSP Example</h1><p>
            <h4>Mitigating XSS</h4>
            <div id="displayInput-box">
                <label class="input" for="input">Input XSS Code</label>
                <br>
                <input type="text" id="input" class="input">
                <div id="confirm">
                    <button id="confirm-button">OK</button>
                </div>
            </div>
            <br>

    </div>
    <div id="wrapper-div">
            <div id="output">
                output
            </div>

            <script src="js/index.js"></script>
        </div>
</body>

</html>
```