CSE2015 - INTERNET PROGRAMMING AND WEB TECHNOLOGIES

LAB ACTIVITY - 2

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Github Repo Link for all assignments -

https://github.com/Abhii-Agarwal09/WinSem2021-22_IWPT_Course
_Assignments

QUESTION 1 -
Design Template using HTML and CSS

HTML Code -

```
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          <link rel="stylesheet" href="./styles/ques1_style.css" />
8          <title>Design Template</title>
9      </head>
```

```html
<body>
    <main class="template">
        <section class="template-header">
            <div class="header-main">
                <p class="header-side-text">Rainy<br />Cold</p>
                <p class="header-heading">The Daily Rag</p>
                <p class="header-side-text">6 A. M.<br />EXTRA</p>
            </div>
            <div class="header-secondary">
                <p class="header-secondary-text">Vol XXXVII</p>
                <p class="header-secondary-text">April 9th, 2012</p>
                <p class="header-secondary-text">$1.00</p>
            </div>
        </section>
```

```
<section class="template-main">
    <h1 class="main-heading">ALIENS INVADE EARTH! <br />TAKE COVER</h1>
    <div class="main-content">
        <div class="main-content-text">
            <hr>
            <p class="text-heading">PRESIDENT DECLARES <br />MARSHAL LAW</p>
            <hr>
            <p class="main-text">
                At midnight a flotilla of Martian space ships was
                sighted over the the English channel, headed in the
                direction of London. Shortly after, flotillas were
                sighted heading towards other major cities. Leaders
                from
            </p>
        </div>
        <div class="main-content-image">
            <hr>
            <p class="image-caption">SAUCERS OVER LONDON</p>
            <div class="main-image">
                <img src="./assets/template-image.jpg" alt="template image" />
            </div>
        </div>
    </div>
</section>
    </main>
  </body>
</html>
```

CSS Code -

```css
* {
    margin: 0;
    padding: 0;
    box-sizing: border-box;
}
@font-face {
    font-family: 'Anglican';
    src: local('AnglicanText');
}
body {
    height: 100vh;
    display: flex;
    justify-content: center;
    align-items: center;
}
```

```css
.template {
    display: flex;
    flex-direction: column;
    max-width: 600px;
    background-color: #f3f3f3;
    padding: 0 0.25rem;
}
.header-main,
.header-secondary {
    display: flex;
    justify-content: space-between;
    align-items: center;
    text-align: center;
}
```

```css
.main-heading {
    text-align: center;
    font-size: 2.75rem;
    font-style: italic;
    font-family: serif;
    font-weight: 300;
}

.main-content {
    display: flex;
    align-items: center;
    text-align: center;
}

.main-content-text {
    width: 50%;
    border-right: 1px solid black;
}
```

```css
1   .main-text {
2       font-size: 1.3rem;
3       text-align: justify;
4       padding: 0 0.5em;
5   }
6   .main-content-image {
7       width: 50%;
8       padding: 0 8px;
9   }
10  .main-image img {
11      width: 100%;
12  }
```

```css
1   .header-heading {
2       font-size: 4.25rem;
3       font-family: 'Anglican';
4       letter-spacing: 4px;
5       font-weight: 500;
6   }
7   .header-side-text {
8       font-size: 1.5rem;
9       padding: 0.25em;
10      border: 1px solid black;
11  }
12  .header-secondary {
13      border-top: 1px solid black;
14      border-bottom: 1px solid black;
15      margin: 4px 0;
16  }
```

```css
.header-secondary-text {
    font-size: 1.25rem;
}

.text-heading {
    font-size: 1.25rem;
    font-weight: bold;
    padding: 4px 0;
}

.image-caption {
    font-size: 1.25rem;
    font-style: italic;
    font-weight: bold;
    padding: 4px 0;
}

hr {
    width: 50%;
    margin: 0 auto;
}
```

OUTPUT SCREENSHOT -

ALIENS INVADE EARTH!
TAKE COVER

PRESIDENT DECLARES MARSHAL LAW

At midnight a flotilla of Martian space ships was sighted over the the English channel, headed in the direction of London. Shortly after, flotillas were sighted heading towards other major cities. Leaders from
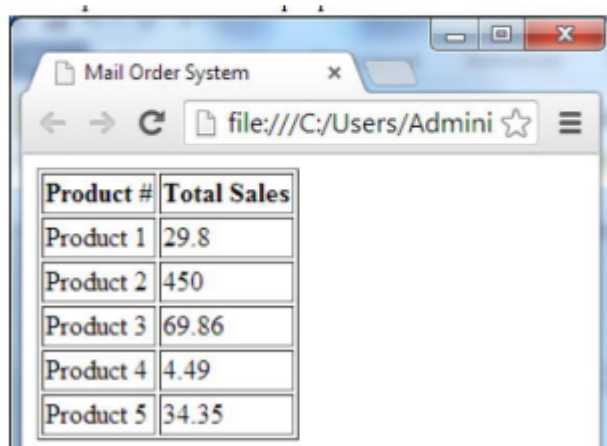
SAUCERS OVER LONDON

QUESTION 2 -

2. A mail-order house sells five different products whose retail prices are as follows: product 1, $2.98; product 2, $4.50; product 3, $9.98; product 4, $4.49; and product 5, $6.87. Write a script that reads a series of pairs of numbers as follows: 1. Product number 2. Quantity sold for one day Your program should use a switch statement to determine each product's retail price and should calculate and output HTML that displays the total retail value of all the products sold last week. Use a prompt dialog to obtain the product number and quantity

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from the user. Use a sentinel-controlled loop to determine when the program should stop looping and display the final results. If the user inputs an invalid product number a proper alert window shall be displayed.

Product #	Total Sales
Product 1	29.8
Product 2	450
Product 3	69.86
Product 4	4.49
Product 5	34.35

HTML CODE -

```html
<!DOCTYPE html>
<html lang="en">
    <head>
        <meta charset="UTF-8" />
        <meta http-equiv="X-UA-Compatible" content="IE=edge" />
        <meta name="viewport" content="width=device-width, initial-scale=1.0" />
        <link rel="stylesheet" href="../styles/ques2_style.css">
        <title>Ques 2 | Sales table</title>
    </head>
    <body>
        <table class="sales-table">
            <caption>Total Product Wise Sales</caption>
            <thead>
                <tr>
                    <th>Product #<br /></th>
                    <th>Total Sales<br /></th>
                </tr>
            </thead>
            <tbody>
                <tr>
                    <td> Product 1<br /></td>
                    <td id="p-1"> </td>
                </tr>
                <tr>
                    <td> Product 2<br /></td>
                    <td id="p-2"> </td>
                </tr>
                <tr>
                    <td> Product 3<br /></td>
                    <td id="p-3"> </td>
                </tr>
                <tr>
                    <td> Product 4<br /></td>
                    <td id="p-4"> </td>
                </tr>
                <tr>
                    <td> Product 5<br /></td>
                    <td id="p-5"> </td>
                </tr>
            </tbody>
            <tbody></tbody>
        </table>
        <script src="../js/ques2.js"></script>
    </body>
</html>
```
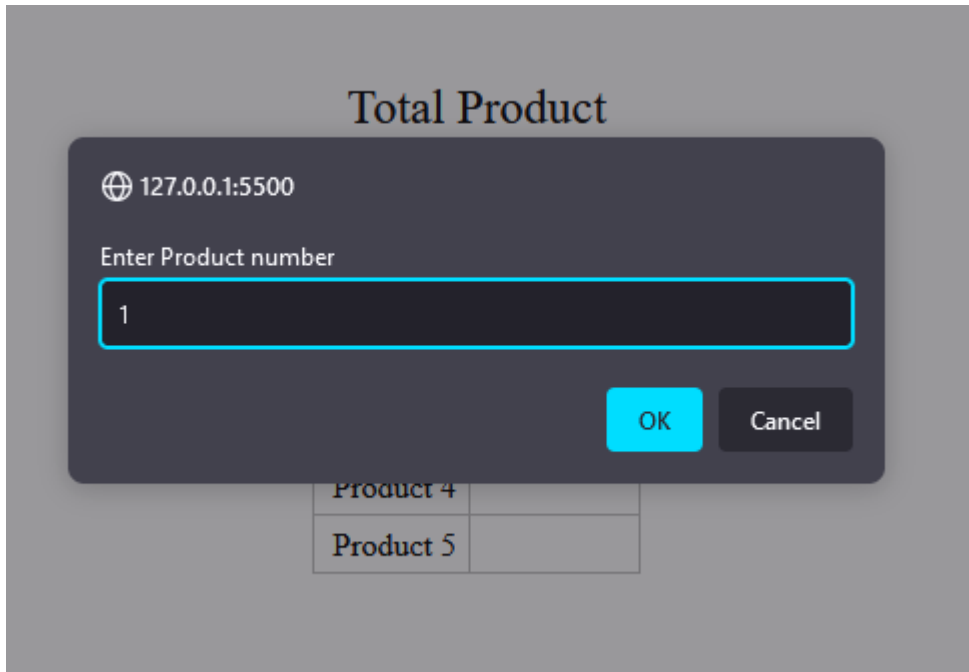
CSS CODE -

```css
1   * {
2       margin: 0;
3       padding: 0;
4       box-sizing: border-box;
5   }
6   body {
7       height: 100vh;
8       display: flex;
9       justify-content: center;
10      align-items: center;
11  }
12  caption {
13      margin: 1rem 0;
14      font-size: 1.5rem;
15  }
16  .sales-table {
17      border: 1px solid #c0c0c0;
18      border-collapse: collapse;
19      padding: 5px;
20  }
21  .sales-table th {
22      border: 1px solid #c0c0c0;
23      padding: 5px;
24      background: #f0f0f0;
25  }
26  .sales-table td {
27      border: 1px solid #c0c0c0;
28      padding: 5px;
29  }
```
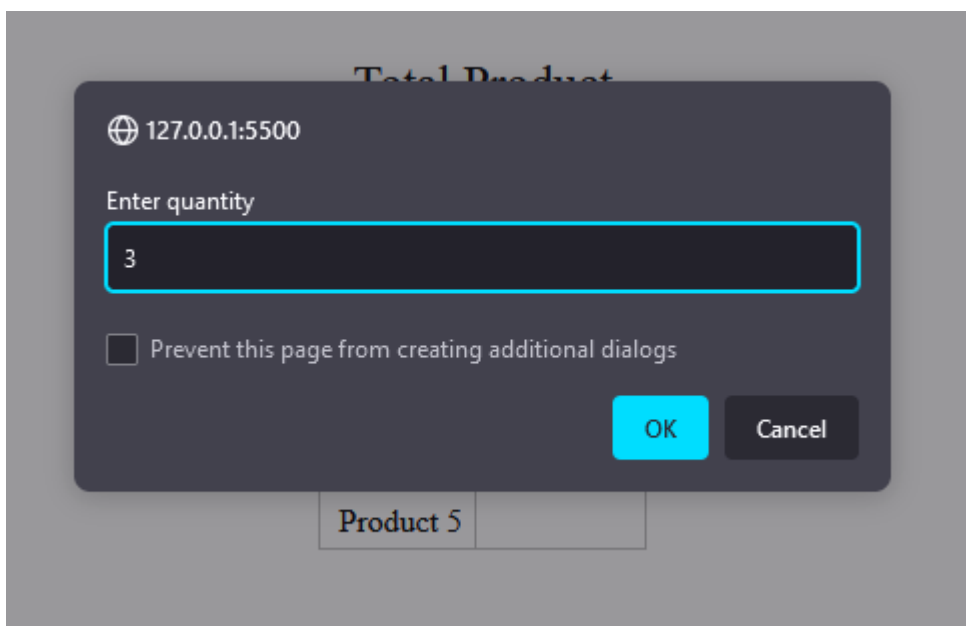
JAVASCRIPT CODE -

```javascript
1   // Question 2
2   // Selecting all the table fields that display total amount
3   const product1TotalInput = document.getElementById('p-1');
4   const product2TotalInput = document.getElementById('p-2');
5   const product3TotalInput = document.getElementById('p-3');
6   const product4TotalInput = document.getElementById('p-4');
7   const product5TotalInput = document.getElementById('p-5');
8   // Initialising all product total sales with 0
9   let product1TotalPrice = 0;
10  let product2TotalPrice = 0;
11  let product3TotalPrice = 0;
12  let product4TotalPrice = 0;
13  let product5TotalPrice = 0;
14  // Runing the loop
15  while (true) {
16      // Taking input of product number
17      const productNumber = Number(prompt('Enter Product number'));
18      // If product number is -1, then update details in table and exit the loop
19      if (productNumber === -1) {
20          // Setting the inner text of table fields
21          product1TotalInput.innerText = `$ ${product1TotalPrice}`;
22          product2TotalInput.innerText = `$ ${product2TotalPrice}`;
23          product3TotalInput.innerText = `$ ${product3TotalPrice}`;
24          product4TotalInput.innerText = `$ ${product4TotalPrice}`;
25          product5TotalInput.innerText = `$ ${product5TotalPrice}`;
26          break;
27      }
28      // Taking input of quantity of a particular input
29      const quantity = Number(prompt('Enter quantity'));
30      // Switch statement to calculate the total price of product
31      switch (productNumber) {
32          case 1:
33              product1TotalPrice += quantity * 2.98;
34              break;
35          case 2:
36              product2TotalPrice += quantity * 4.5;
37              break;
38          case 3:
39              product3TotalPrice += quantity * 9.98;
40              break;
41          case 4:
42              product4TotalPrice += quantity * 4.49;
43              break;
44          case 5:
45              product5TotalPrice += quantity * 6.87;
46              break;
47          default:
48              break;
49      }
50  }
```

OUTPUT SCREENSHOTS -

First prompt is to specify the product number

Second prompt is to specify the Quantity of the product number which was specified in prompt 1 (above)
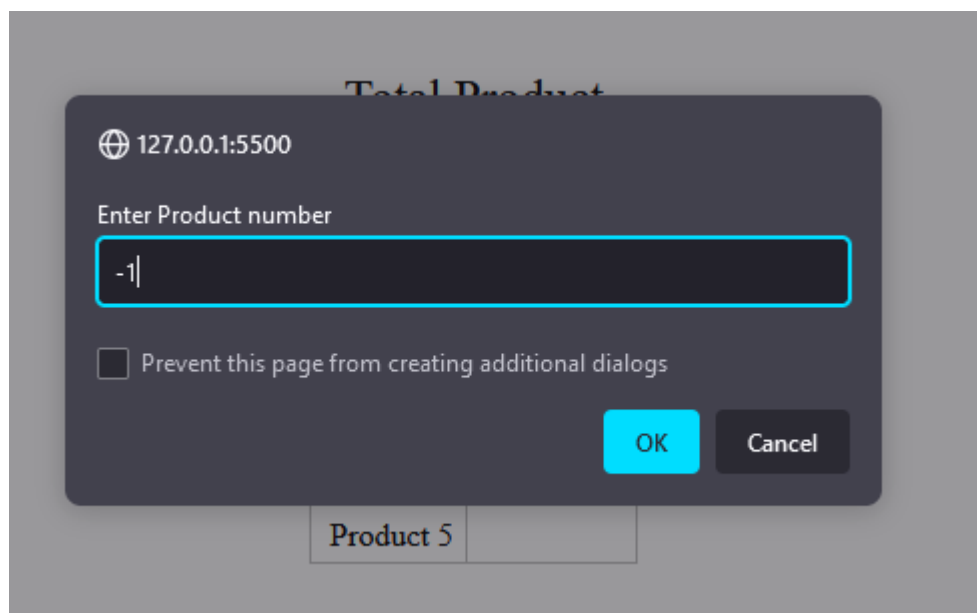
Similarly, I have given inputs for all the products, the output table looks like this

Total Product Wise Sales

Product #	Total Sales
Product 1	$ 8.94
Product 2	$ 9
Product 3	$ 29.94
Product 4	$ 17.96
Product 5	$ 34.35

On giving product number input as -1, the program is terminated by exiting the while loop

QUESTION 3 -

3. Create a web page with an image on it, a paragraph on it, and a button. Now create a script (in your head section) that contains an array of pictures. It should also contain button and function (Next). It displays the picture in the array at that variable number. So it will loop through the pictures in order, and when it gets to the end of the array, it should loop back to the beginning.

Now add another button and another function (Add). This function should allow you to add pictures to your array. The second button on your web page should call this second function.

Make sure that if you add pictures to your array, first function (Next) will work regardless of how many pictures you add.

HTML Code -

```
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       <link rel="stylesheet" href="../styles/ques3_style.css">
8       <title>Image Carousel</title>
9   </head>
10  <body>
11      <div class="carousel-wrapper">
12          <p id="image-count">Image 1</p>
13          <div class="carousel-image-container">
14              <img id="carousel-image" src="../assets/cat.jpg" alt="carousel image">
15          </div>
16          <div class="carousel-btn-container">
17              <button class="btn" id="next-btn">Next</button>
18              <button class="btn" id="add-btn">Add Image</button>
19          </div>
20      </div>
21      <script src="../js/ques3.js"></script>
22  </body>
23  </html>
```

CSS Code -

```css
1   * {
2       margin: 0;
3       padding: 0;
4       box-sizing: border-box;
5   }
6   body {
7       height: 100vh;
8       display: flex;
9       justify-content: center;
10      align-items: center;
11  }
12  button {
13      padding: 0.75em 1.5em;
14      font-size: 1rem;
15      background-color: #359;
16      color: #fff;
17      border: none;
18      outline: none;
19      border-radius: 8px;
20      cursor: pointer;
21  }
22  p {
23      text-align: center;
24      font-size: 2rem;
25      margin: 1.5rem 0;
26      font-family: sans-serif;
27  }
28  .carousel-btn-container {
29      display: flex;
30      justify-content: center;
31      gap: 2rem;
32      margin: 1.5rem 0;
33  }
34  .carousel-image-container {
35      width: 100%;
36      height: 400px;
37  }
38  .carousel-image-container img {
39      width: 100%;
40      height: 100%;
41  }
```

Javascript Code -

```javascript
1  // Question 3
2  // Selecting the image and buttons and text
3  const imageCounter = document.getElementById('image-count');
4  const carouselImage = document.getElementById('carousel-image');
5  const nextBtn = document.getElementById('next-btn');
6  const addBtn = document.getElementById('add-btn');
7  // Defining the images array and initializing index variable to 0
8  const imagesArray = ['cat.jpg', 'dog.jpg', 'deer.jpg', 'fox.jpg'];
9  let currentImageIndex = 0;
10 let imagesArrayLength = imagesArray.length;
11 // Function to go to next image
12 const next = (event) => {
13     // Increasing image index by 1
14     currentImageIndex++;
15     // Calculating the new image index
16     const newImageIndex = currentImageIndex % imagesArrayLength;
17     // Setting the new source of image using new index
18     carouselImage.src = `../assets/${imagesArray[newImageIndex]}`;
19     // Setting the image counter
20     imageCounter.innerText = `Image ${newImageIndex + 1}`;
21 };
22 // Function to add a new image to array
23 const add = (event) => {
24     // Getting the new image name using prompt
25     const newImageName = String(prompt('Enter image name'));
26     // Generating image by adding source
27     const newImage = `${newImageName}.jpg`;
28     // Pushing the new image in the array
29     imagesArray.push(newImage);
30     // Increasing the length of imagesArray
31     imagesArrayLength++;
32 };
33 // Event listeners to listen to click events on buttons
34 nextBtn.addEventListener('click', next);
35 addBtn.addEventListener('click', add);
```

OUPUT SCREENSHOTS -

The first image is of a cat, I have also maintained an image counter to keep track of number of images

Image 1

Next   Add Image

On clicking the next button, the next image is displayed from the images array

Image 2

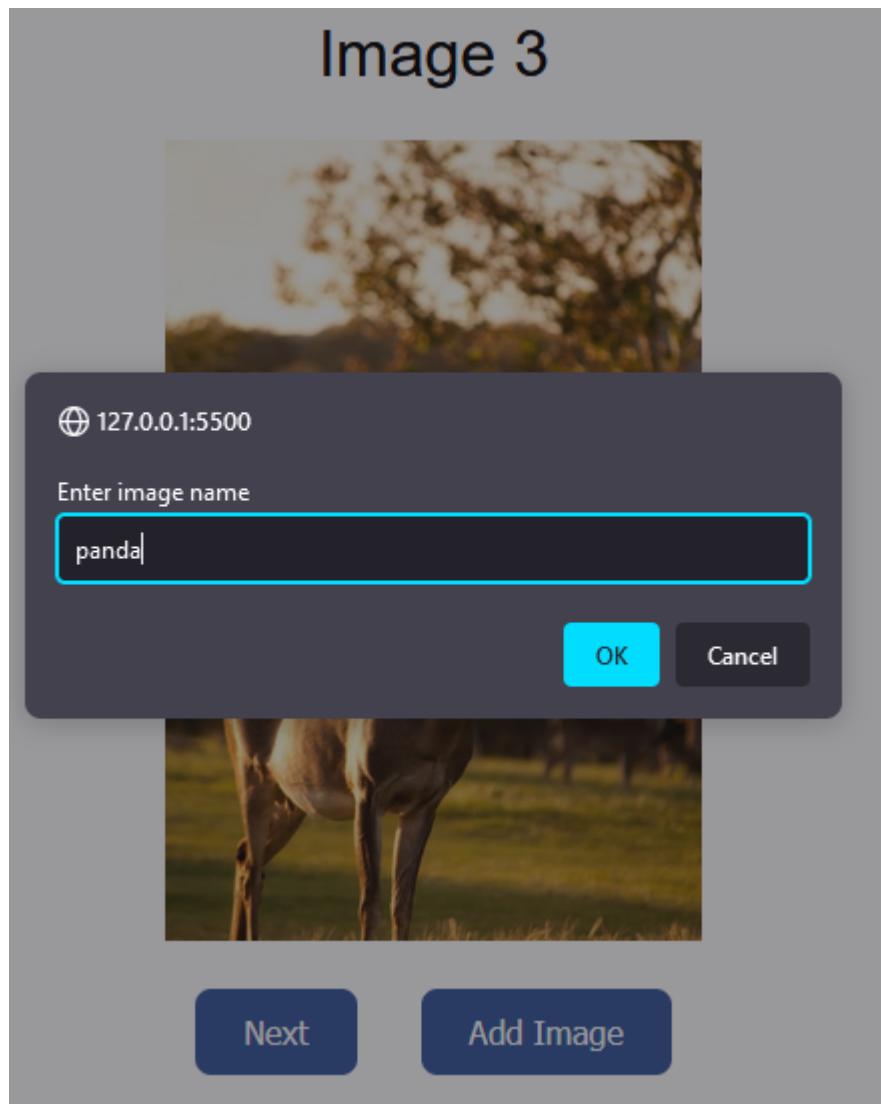Next   Add Image

Image 3

Next   Add Image

At this point, I have clicked on Add image button, which will take an image name, and it will add that image to the images array using the push method

We can see that the image of a panda is added to the array and is the last image in the array now

Image 5

Next **Add Image**

After the last image, when the next image button is clicked, the first image is again displayed, so that is how it runs in a loop. I have implemented this using mod, i find the remainder and according to that i am displaying the images, so it runs in a loop

Image 1

Next Add Image