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Observation 1

24/8/24

Scenario 1:-

You are tasked with creating a simple personal webpage that includes your name, a brief bio, and a link to your favourite website.

Question :- How would you structure this

HTML page? Include elements for a heading, a paragraph for bio and hyperlink.

```
<!DOCTYPE html>
```

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

```
<head>
```

```
<meta charset="UTF-8">
```

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
<title>Personal webpage</title>
```

```
<head>
```

```
<body>
```

```
<h1>John Doe</h1>
```

```
<p>Hello! I am John Doe, a web developer  
passionate about creating responsive  
and userfriendly websites.</p>
```

```
<p>Checkout my favourite websites: A brief =  
"https://www.example.com" target="blank">Example
```

```
<a></p>
```

```
</body>
```

```
</html>
```

Output :-

John Doe
I am John Doe , a web developer
passionate about creating
<https://www.example.com>

Scenario 2:-

You need to create a webpage with an image that acts as a clickable link to another website.

Question :- How would you code this in HTML?

```
<!DOCTYPE html>
<html lang = "en">
<head>
    <meta charset = "UTF-8">
    <meta name = "viewport" content = "width=device-width, initial-scale=1.0">
<title> Clickable Image Link </title>
</head>
<body>
    <a href = "https://www.example.com" target = "blank">
        <img src = "https://viva.placeholder.com/150" alt = "Example website" width = "150" height = "150">
    </a>
</body>
</html>
```

Output

Image

<https://www.example.com>

Scenario 3:-

You have been asked to create a navigation bar at top of webpage to home, About & contact page.

Question

* How would you structure this using unordered list in HTML.

* HTML tables.

```
<!DOCTYPE html>
```

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

```
<head>
```

```
    <meta charset = "UTF-8">
```

```
    <meta name = "viewport" content = "width =  
        device-width, initial-scale = 1.0">
```

```
<title> Navigation Bar Example </title>
```

```
<styles>
```

```
table {
```

```
    width : 100%;
```

```
    border-collapse : collapse;
```

```
    table, th, td {
```

```
        border : 1px solid black;
```

```
        th, td {
```

```
            padding : 10px;
```

```
            text-align : left;
```

```
        }
```

background-color: #FFFf2f2f2;

}

</style>

</head>

<body>

<table>

<tr>

<th> name </th>

<th> age </th>

<th> occupation </th>

</tr>

<tr>

<td> Meena </td>

<td> 20 </td>

<td> web developer </td>

</tr>

<tr>

<td> Bhavitha </td>

<td> 30 </td>

<td> graphic designer </td>

</tr>

</tr>

</tr>

</table>

</body>

</html>

Output

Name	Age	Occupation
Meena	20	web developer
Bhavitha	30	Graphic designer

Scenario-4 :- You are designing a webpage that displays Student grades in tabular format. Each row should represent student id, name, grade. The first row should be header.

Question :-

How would you create table in HTML?

```
<!DOCTYPE html>
<html lang = "en">
<head>
    <meta charset = "UTF-8">
    <meta name = "viewport" content = "width =
        device-width, initial-scale=1.0">
<title> Student grades </title>
<style>
    table {
        width : 100%,
        border-collapse: collapse;
    }
    th, td {
        border: 1px solid black;
        padding: 10px;
        text-align: center;
    }
    th {
        background-color: #f2f2f2;
    }
</style>
<head>
<body>
    <table>
        <tr>
            <th> Student Id </th>
```

<th> name </th>

<th> grade </th>

<tr>

<tr>

<td> 101 </td>

<td> Alice John Son </td>

<td> A </td>

<tr>

<tr>

<td> 102 </td>

<td> Smith </td>

<td> B </td>

<tr>

<table>

<body>

<table>

<body>

</html>

Output

Student ID	name	grade
101	Alice	A
102	Smith	B

Scenario 5 :-

You need to create a table that displays product information. the table includes merged cells for product name.

Question How would you use the colspan attribute.

```
!DOCTYPE html>
<html lang = "en">
<head>
    <meta charset = "UTF - 8">
    <meta name = "viewport" content = "width =
        device-width, initial-scale=1.0">
<title> Product information table </title>
<style>
    table {
        width: 100% ;
        border-collapse: collapse ;
    }
    th, td {
        border: 1px solid black ;
        padding: 10px ;
        text-align: center ;
    }
    th {
        background-color: #f2f2f2 ;
    }
    </style>
</head>
<body>
    <table>
        <tr>
            <th> Product Name </th>
            <th> Price </th>
            <th> Quantity </th>
        </tr>
        <tr>
            <td colspan = "2" > Laptop </td>
            <td> $ 12000 </td>
        </tr>
    </table>

```

<td> 5 </td>

<tr>

<tr>

<td colspan="2"> Smartphone </td>

<td> \$ 800 </td>

<td> 10 </td>

<tr>

<table>

<tbody>

</tbody>

Output

Product	Price	Quantity
Laptop	1200 \$	5
Smartphone	800 \$	10

Scenario 6 :-

You are required to create a table that lists employees by department. The department name should span across multiple rows.

Question How would you structure this table using rowspan attribute in HTML

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title> Employee list by department </title>

Sa.

</thead>

</tbody>

<table border = "1">

<tr>

<th> Department </th>

<th> Employee name </th>

<tr>

<tr>

<td rowspan = "3"> Human resources </td>

<td> John Doe </td>

<tr>

<tr>

<td> Jane Smith </td>

<tr>

<tr>

<td> Emily David </td>

<tr>

<tr>

<td rowspan = "2"> </td>

<td> Michael Brown </td>

<tr>

<tr>

<td> Sarah Wilson </td>

<tr>

<tr>

<td> Finance </td>

<td> David Johnson </td>

<tr>

<table>

</tbody>

</table>

Output

<u>Department</u>	<u>Employee</u>
Human Resources	John Doe Jane Smith Emily Davis
IT	Michael Brown Sarah Wilson
Finance	David Johnson

Scenario 4 :-

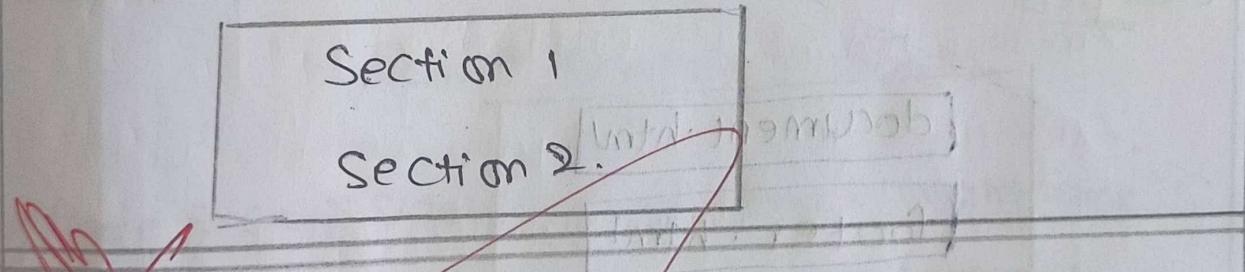
Your task is to create webpage with left navigation pane & main content area. Left pan contain links to different sections of site, clicking on these should update content.

Question:- How would you implement this using frames in HTML?

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Personal Webpage </title>
    Navigation
```

```
<!head>
<body>
  <h1>John Doe</h1>
  <p> 101>
<ul>
  <li><a href = "Section 1.html" target = "mainframe"> section 1 </a></li>
  <li><a href = "Section 2.html" target = "mainframe"> section 2 </a></li>
</ul>
</body>
</html>
```

Output



Scenarios :-

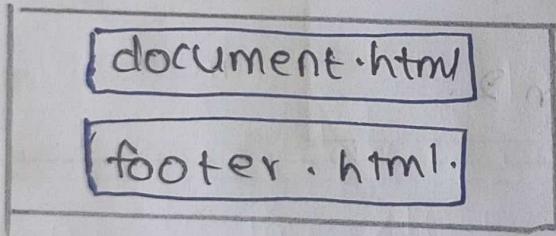
You are asked to design a webpage that displays a document in top half of window & footer with contact information in bottom half.

Question :- How would you divide window using frames to achieve this layout.

```
<!DOCTYPE html>
<html lang = "en">
  <head>
    <meta charset = "UTF - 8">
```

```
<meta name = "viewport" content = "width =  
device-width, initial-scale=1.0">  
<title> Document with footer </title>  
</head>  
<frameset rows = "50%", 50%">  
<frame src = "document.html" name = "topframe"  
scrolling = "auto">  
<frame src = "footer.html" name = "bottomframe"  
scrolling = "no" more sizes>  
</frameset>  
</html>
```

Output



Scenario -9 :-

You need to create a web page with three columns : left navigation menu, center area, right side bar for additional information. Center Content area should be resizable.

Question : How would you structure frame Set in HTML to create this layout ?

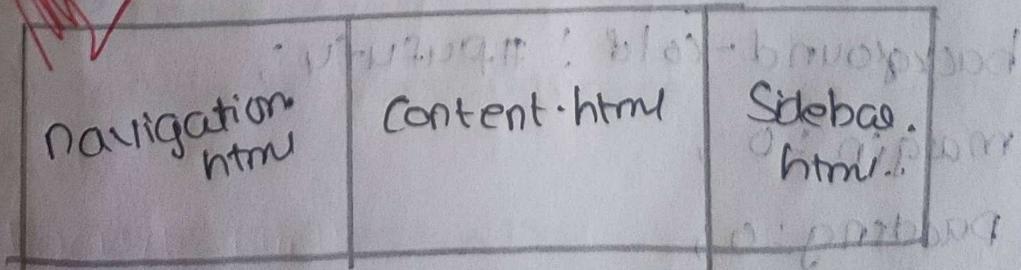
```
<!DOCTYPE html>  
<html lang = "en">  
<head>  
<meta charset = "UTF-8">  
<meta name = "viewport" content = "width = device  
- width, initial-scale = 1.0">
```

<titles> three column layout with frameset <titles>

```
<head>  
<frameset cols = "200px, *, 200px">  
<frame src = "nav.html" name = "left frame"  
scrolling = "no" noresize>  
<frame src = "content.html" name = "center frame"  
scrolling = "auto">  
<frame src = "sidebar.html" name = "right frame"  
scrolling = "no" noresize>
```

</frameset>
</html>

Output



Observation -2

26/8/24

Scenario -1

You're building a one-page online resume for yourself. This page is standalone, meaning it won't be linked to any other pages on the web. You want to style it with a specific color scheme, font family, and layout, but you want to keep everything within HTML.

Question :- How would you apply styles to this resume directly within the HTML file?

```
<!DOCTYPE html>
<html lang = "en">
    <head>
        <meta charset = "UTF-8">
        <meta name = "viewport" content = "width = device-width, initial-scale = 1.0">
    </head>
    <title> my Resume </title>
    <style>
        body {
            font-family: Arial, sans-serif;
            color: #333;
            background-color: #f0f0f0;
            margin: 0;
            padding: 0;
        }
        .container {
            width: 80%;
            margin: auto;
        }
    </style>

```

```
background : #fff ;  
padding : 20px ;  
border-radius : 8px ;  
box-shadow : 0 0 20px 10px black ;  
z-index : 999 ;  
color : #007BFF ;  
} p {  
line-height : 1.6 ;  
} header {  
text-align : center ;  
margin-bottom : 20px ;  
} section {  
margin-bottom : 20px ;  
}
```

</style>

<head>

<body>

<div class = "container">

<div class = "header">

<h1> Meena </h1>

<p> web developer / Designer </p>

</div>

<div class = "section">

<h2> about me </h2>

<p> passionate web developer with experience </p>

</div>

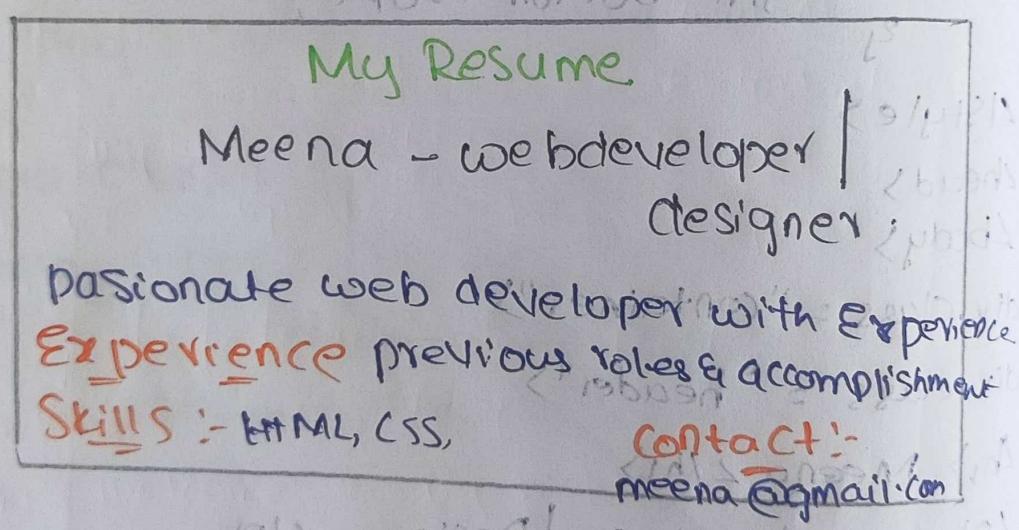
<div class = "Section">

<h2> skills </h2>

 HTML, CSS, Java Script

```
<html>
<div>
<div class = "Section">
<h2>Experience </h2>
<p> previous roles & accomplishments in web development & design </p>
<div>
<div class = "footer">
<p> contact : meena@gmail.com </p>
<div>
<div>
<body>
</html>
```

Output



Scenario - 2

You are tasked with making quick adjustments to a web page that already has a fully developed external style sheet. The marketing team requests that a single button on the home page be highlighted with a different background color.

Question :- How would you apply a specific background color to this button without altering the external style sheet?

```
<!DOCTYPE html>
```

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

```
<head>
```

```
  <meta charset : "UTF-8">
```

```
  <meta name : "viewport" content = "width =  
    device-width, initial-scale = 1.0">
```

```
<title> Promotional Button </title>
```

```
</head>
```

```
<body>
```

```
  <h1> welcome to our website! </h1>
```

```
  <p> checkout our latest promotional offer by:
```

```
    Clicking the button below: </p>
```

```
  <button style = "background-color: #ff5733;  
    color: white;
```

```
    padding: 10px 20px;  
    border: none;
```

```
    border-radius: 5px;  
    cursor: pointer;">
```

Promotional Button

```
</button>
```

```
</body>
```

```
</html>
```

Output :-

Promotional Button: <u>

welcome to our website.

checkout our latest promotional
offer by clicking the button below

Promotional Button

Scenario - 3

You are working on a large website with multiple pages, all of which need to have a consistent design. The site already uses an external CSS file for styling.

Question: How would you efficiently apply new styles across all pages of website?

HTML Code

```
<!DOCTYPE html>
<html lang = "en">
<head>
    <meta charset = "UTF-8">
    <meta name = "viewport" content = "width =
        device-width, initial-scale=1">
    <title> my website </title>
    <link rel = "stylesheet" href = "styles.css">
</head>
<body>
    <header>
        <h1> welcome to my website </h1>
    </header>
    <div class = "container">
        <p> this is a sample paragraph on homepage. </p>
        <button> click me </button>
    </div>
</body>
</html>
```

CSS Code

root {

-- primary-color: #3498db;

-- Secondary-color: #2ecc71;

-- text-color: #333;

-- background-color: #fufuf4;

-- font-primary: 'Roboto', sans-serif;

}

body {

font-family: var(--font-primary);

background-color: var(--background-color);

color: var(--text-color);

margin: 0;

padding: 20px;

header {

text-align: center;

padding: 20px;

background-color: var(--primary-color);

color: white;

header h1 {

font-family: var(--font-secondary);

font-size: 2.5em;

margin: 0;

header p {

font-size: 1.2em;

}

Section {

margin: 20px 0;

button {

border: none;

padding: 10px 20px;

border: none;

border-radius: 5px;

cursor: pointer;

}

• btn-primary {

background-color: var(--primary-color);

color: white;

• btn-secondary {

background-color: var(--secondary-color);

color: white;

}

Output:-

My Website
Welcome to my website.

OBSERVATION -3

- i) Create a university course registration system using XHTML and DHTML. The system should manage tasks such as listing available courses, registering students, displaying student registration and dynamically updating course availability. design an XHTML page that lists all available courses using a table. use DHTML to dynamically add rows to the table as new courses are added.

```
<!DOCTYPE HTML>
```

```
<html xmlns = "http://www.w3.org/1999/xhtml">
```

```
<head>
```

```
    <title> University Course Registration </title>
```

```
    <style type = "text/css">
```

```
        table {
```

```
            border-collapse: collapse;
```

```
            width: 100%;
```

```
        table, th, td {
```

```
            border: 1px solid black;
```

```
            th, td {
```

```
                padding: 8px;
```

```
                text-align: left;
```

```
            th {
```

```
                background-color: #f2f2f2;
```

```
            }
```

```
</style>
```

```
<script type = "text/javascript">
```

```
function AddCourse()
```

```
var CourseName = document.getElementById("CourseName").value;
```

```

var courseCode = document.getElementById("course code").value;
if(courseName == courseCode && seatsAvailable) {
    document.getElementById("courseName").value = "";
    document.getElementById("course code").value = "";
    document.getElementById("seats Available").value = "";
} else {
    alert("please fill in all fields.");
}

```

</script>
</head>
<body>
 <h1>Available courses</h1>
 <table id = "courseTable">
 <thead>
 <tr>
 <th>course name</th>
 <th>course code</th>
 <th>seats available</th>
 </tr>
 </thead>
 <tbody>

Output :-
Available Courses
 Course code :- CSA4399
 Course name :- Internet programming
 Credits :- 4.

Add new course

course code :-
 course name :-
 credits :-
 Add course

- 2) Design a responsive blog layout using CSS. The layout should handle tasks such as creating a header, sidebar, main content area, and footer. It should also adjust the layout for different screen sizes. Create an HTML page that includes a header with a navigation bar. Use CSS to style the header and navigation bar. The navigation bar should have horizontal links that change color when hovered over.

```
<!DOCTYPE html>
<html lang = "en">
<head>
    <meta charset = "UTF-8">
    <meta name = "viewport" content = "width=device-width,
        initial-scale=1.0">
    <title> Responsive blog layout </title>
<style>
    * {
        margin: 0;
        padding: 0;
    }
    body {
        font-family: Arial, sans-serif;
        line-height: 1.6;
        background-color: #f4f4f4;
    }
    header {
        background-color: #333;
        color: white;
        padding: 10px 20px;
    }
    header .logo {
        font-size: 24px;
        font-weight: bold;
    }
    nav ul {
        flex-direction: column;
    }
    nav ul li {
        margin-left: 0;
    }

```

```
<style>
<head>
<body>
  <header>
    <div class="logo">myBlog</div>
    <nav>
      <ul>
        <li><a href="#">Home</a></li>
        <li><a href="#">about</a></li>
        <li><a href="#">link1</a></li>
      </nav>
    <header>
    <div class="container">
      <aside class="sideBar">
        <h2>SideBar</h2>
        <ul>
          <li><a href="#">link1</a></li>
          <li><a href="#">link2</a></li>
        </ul>
      <aside>
    <footer>
      <p>© 2024 my Blog. All rights reserved.</p>
```

<footer>
<body>
<html>
Output :-

My Blog

- Home
- about
- Blog
- Contact

SideBar

- Link 1
- Link 2
- Link 3

Main Content area

2024 my Blog.
All rights reserved.

3) Implement a real-time Stock Price Viewer using AJAX. The system should fetch & display stock prices from a remote API. Tasks include fetching stock prices and displaying. Create a HTML page with a button to fetch the current stock price for different companies.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title> Real-time Stock Price Viewer </title>
<style>
    body {
        font-family: Arial, sans-serif;
        padding: 20px;
        background-color: #f0f0f0;
    }
    .container {
        max-width: 600px;
        margin: 0 auto;
        text-align: center;
    }
</style>
</head>
<body>
    <div class="container">
        <h1> Real-time Stock Price Viewer </h1>
        <input type="text" id="StockSymbol" placeholder="Enter Stock Symbol">
        <div class="result" id="result">
    </div>

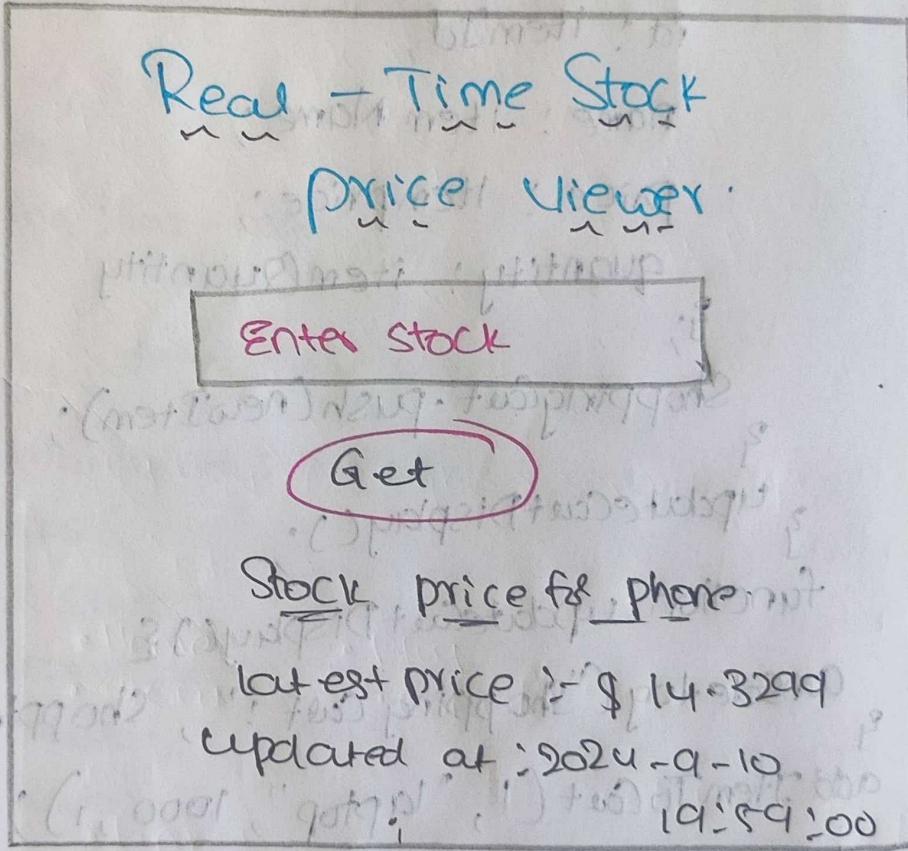
```

```

<Script>
function fetchStockPrice() {
    const stockSymbol = document.getElementById('stockSymbol')
    fetch(`api url`)
        .then(response => response.json())
        .then(data => {
            document.getElementById("result").innerHTML =
            `Price of stock symbol ${stockSymbol} is ${data.price}`
        })
        .catch(error => {
            document.getElementById("result").innerHTML =
            `Console.error("Error:", error);`
        })
    }
</Script>
</body>
</html>

```

Output :-



4) Develop an online shopping cart system using javascript.

The system should handle tasks such as adding items to cart, removing items, updating quantities, calculating total price, and applying discounts.

Implement a java script function to add items to shopping cart. Ensure that if the item already exists in the cart, its quantity is updated.

```

let ShoppingCart = [];
function addItemToCart(itemID, name, price, quantity) {
    const existingItemIndex = ShoppingCart.findIndex(item,
        item.id === itemID);
    if (existingItemIndex !== -1) {
        ShoppingCart[existingItemIndex].quantity += item.quantity;
    } else {
        const newItem = {
            id: itemID,
            name: itemName,
            price: itemprice,
            quantity: itemQuantity
        };
        ShoppingCart.push(newItem);
    }
    updateCartDisplay();
}

function updateCartDisplay() {
    console.log("Shopping Cart!", ShoppingCart);
    addItemToCart(1, "laptop", 1000, 1);
    addItemToCart(2, "mouse", 50, 2);
}

```

Output

Shopping Cart	
Book	- 10
Pen	- 5
Bottle	- 50
total price :- 65	

OBSERVATION -4

Q) You are developing a website for a local restaurant.

The website requires a responsive navigation bar.

Write HTML and CSS code to create a responsive

navigation bar.

```
<!DOCTYPE html>
```

```
html lang = "en">
```

```
<head>
```

```
    <meta charset = "UTF-8">
```

```
    <meta name = "viewport" content = "width = device-width,  
        initial-scale = 1.0">
```

```
<title> Responsive Navigation Bar </title>
```

```
* {
```

```
    margin : 0 ;
```

```
    padding : 0 ;
```

```
    box-sizing : border-box ;
```

```
}
```

```
body {
```

```
    font-family : Arial, sans-serif ;
```

```
@ media (max-width : 769px) {
```

```
    .nav-links {
```

```
        position : static ;
```

```
        flex-direction : row ;
```

```
        height : auto ;
```

```
        width : auto ;
```

```
</style>
```

```
</head>
```

```
<body>
```

```
    <nav class = "nav-bar">
```

```
        <div class = "log"> Restaurant </div>
```

```
        <ul class = "nav-links">
```

```
            <li><a href = "#home"> Home </a></li>
```

```
            <li><a href = "#menu"> Menu </a></li>
```

```
</ul>
```

```
        <div class = "hamburger" onclick = "toggleMenu()>
```

<script>

```
document.getElementById('menu-toggle').addEventListener('click', function() {
    var navlinks = document.getElementById('nav-links');
    if (navlinks.classList.contains('active')) {
        navlinks.classList.remove('active');
    } else {
        navlinks.classList.add('active');
    }
});
```

</script>

</body>

</html>

Output:-

Restaurant

- Home
- Menu
- About
- Contact

Q) Create a user registration form for a social networking website. The form should include fields for username, email, password. Write HTML code for registration form & a javascript code for validation that must provide input

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>User Registration</title>

<styles>

body {

font-family: Arial, sans-serif;
 color: #333;
 margin: 0;
 padding: 0;
}

display: flex;
 justify-content: center;
 align-items: center;
 height: 100vh;
}

<form container>

background-color: white;
 border: 1px solid #ccc;
 padding: 20px;
 width: 300px;
}

border-radius: 5px;
 margin-bottom: 10px;
}

```
• form-group {  
    margin-bottom: 15px;  
}  
• form-group label {  
    display: block;  
    margin-bottom: 5px;  
}  
<style>  
</head>  
<body>  
<div class="form-container">  
<h2> Register </h2>  
<form id="registration-form">  
<div class="form-group">  
    label for="username">username</label>  
    <input type="text" id="username" name="username">  
</div>  
<div class="form-group">  
    label for="password">password</label> id="password" name="password">  
</div>  
<div class="form-group">  
    label for="email">email</label> id="email" name="email">  
</div>  
    button type="submit" class="submit-btn">Register</button>  
</form>  
</div>  
<script>  
    document.getElementById('registration-form').addEventListener('submit', function(event){  
        event.preventDefault();  
        const errorElement = document.querySelector('error');  
        errorElement.style.display = 'none';  
    });  
    const confirmPassword = document.getElementById('confirm-password');  
    confirmPassword.classList.add('error');  
    let isValid = false;  
    if (isValid) {  
        confirmPassword.classList.add('valid');  
    } else {  
        confirmPassword.classList.add('invalid');  
    }  
}</script>
```

```

if(isValid) {
    alert('Registration successful');
}
else {
    scripts
    </body>
</html>

```

Output:-

Register

Username :-

Email :-

Password:-

Confirm :-

Register

- 3) A blog website wants to dynamically load additional posts without reloading the page when a user clicks "load more posts" button. Write Java Script using AJAX to fetch additional posts.

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width,

<title>Blog</title> Initial Scale - 100%

<styles>

body {

font-family: Arial, sans-serif;

margin: 0;

padding: 0;

<POSTS>

border-bottom: 1px solid black;

padding: 10px 0;

<

<load-more-btn>

display: block;

margin: 20px auto;

padding: 10px 20px;

```
<!Style>
<head>
<body>
  <div id="post-container">
    <div>
      <button id="load-more" class="load-more-btn">Load more posts</button>
    <div id="error-message" class="error-message"></div>
  </div>
  <script>
    document.addEventListener('DOMContentLoaded', () => {
      let page = 1;
      const postContainer = document.getElementById('post-container');
      function loadPosts() {
        then(response => {
          if (!response.ok) {
            throw new Error('Network response was not ok');
          }
          return response.json();
        })
        .then(data => {
          page += 1;
          error.message.textContent = `Page ${page} loaded`;
          console.error(`Error fetching`, error);
        })
        .catch(error => {
          error.message.textContent =
            `Error fetching posts: ${error.message}`;
          console.error(`Error fetching`, error);
        });
      }
      loadPosts();
    });
  </script>
</body>
</html>
```

Output :-

Blog

load more posts

http://api.example.com/posts?