1. **DOM Manipulation: Create a page with a square box of size 300x300 on the page which will be red initially, upon clicking the red box it should change the color to yellow and the size should be doubled.**

**<!DOCTYPE html>**

**<html>**

**<head>**

**<style>**

**.box {**

**width: 300px;**

**height: 300px;**

**background-color: red;**

**}**

**</style>**

**</head>**

**<body>**

**<div id="box" class="box"></div>**

**<script>**

**// Get the box element**

**var box = document.getElementById("box");**

**// Add click event listener to the box**

**box.addEventListener("click", function() {**

**// Change the background color to yellow**

**box.style.backgroundColor = "yellow";**

**// Double the size**

**box.style.width = "600px";**

**box.style.height = "600px";**

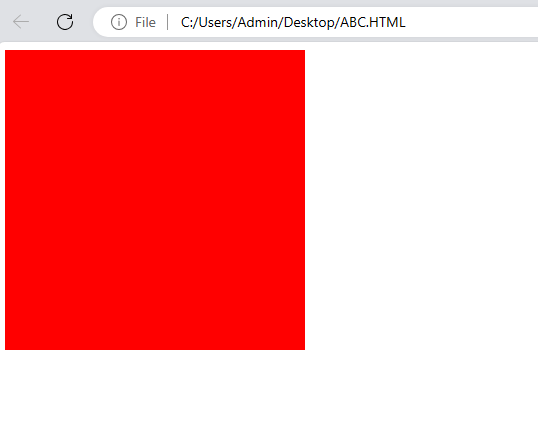
**});**

**</script>**

**</body>**

**</html>**

**Output:**



1. **Create a app where you have an input box and whenever a user types something in the input box and hits submit it should be added on the webpage below the input box**

**<!DOCTYPE html>**

**<html>**

**<head>**

**<script>**

**function addText() {**

**// Get the input value**

**var input = document.getElementById("textInput");**

**var text = input.value;**

**// Create a new paragraph element**

**var paragraph = document.createElement("p");**

**paragraph.textContent = text;**

**// Append the paragraph to the document body**

**document.body.appendChild(paragraph);**

**// Clear the input box**

**input.value = "";**

**}**

**</script>**

**</head>**

**<body>**

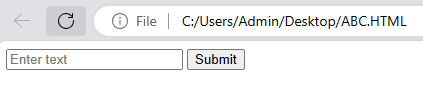
**<input type="text" id="textInput" placeholder="Enter text">**

**<button onclick="addText()">Submit</button>**

**</body>**

**</html>**

**Output:**



1. **Fetch data from the JSON placeholder API and display it in the browser. Also, implement the skeleton loader which will be displayed when the data is getting fetched. (No library should be used for implementing the skeleton loader)**

**<!DOCTYPE html>**

**<html>**

**<head>**

**<style>**

**.skeleton-loader {**

**background-color: #f5f5f5;**

**width: 300px;**

**height: 20px;**

**margin-bottom: 10px;**

**}**

**</style>**

**</head>**

**<body>**

**<div id="dataContainer"></div>**

**<script>**

**// Get the data container element**

**var dataContainer = document.getElementById("dataContainer");**

**// Display the skeleton loader**

**showSkeletonLoader();**

**// Fetch data from JSON Placeholder API**

**fetch('https://jsonplaceholder.typicode.com/posts')**

**.then(response => response.json())**

**.then(data => {**

**// Hide the skeleton loader**

**hideSkeletonLoader();**

**// Display the fetched data**

**data.forEach(item => {**

**var p = document.createElement("p");**

**p.textContent = item.title;**

**dataContainer.appendChild(p);**

**});**

**})**

**.catch(error => console.error(error));**

**// Function to display the skeleton loader**

**function showSkeletonLoader() {**

**for (var i = 0; i < 5; i++) {**

**var div = document.createElement("div");**

**div.classList.add("skeleton-loader");**

**dataContainer.appendChild(div);**

**}**

**}**

**// Function to hide the skeleton loader**

**function hideSkeletonLoader() {**

**var skeletonLoaders = document.querySelectorAll(".skeleton-loader");**

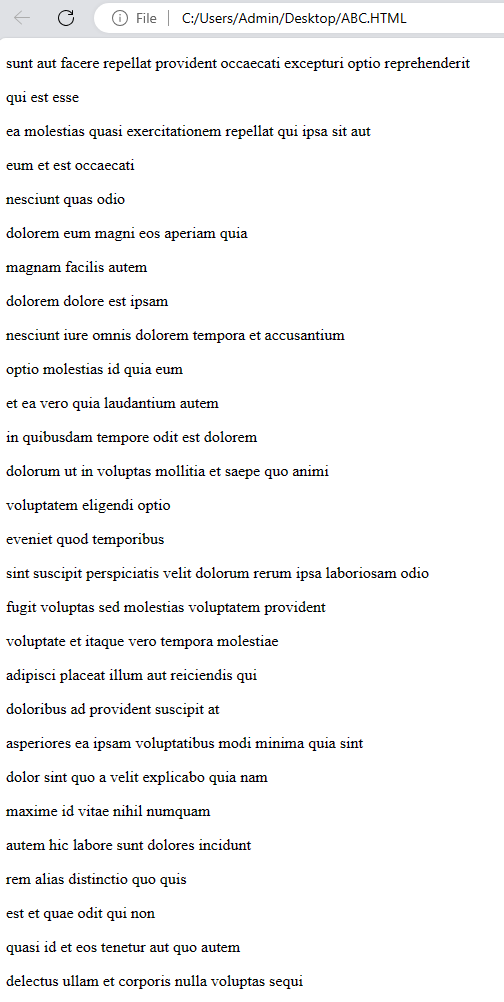
**skeletonLoaders.forEach(loader => loader.remove());**

**}**

**</script>**

**</body>**

**</html>**



1. **Build a responsive Navbar, on smaller screens it should be a hamburger menu which on click should reveal the menu items nicely, and on larger screens they should be displayed directly on the screen.**

**<!DOCTYPE html>**

**<html>**

**<head>**

**<style>**

**/\* Navbar styling \*/**

**.navbar {**

**background-color: #333;**

**color: #fff;**

**display: flex;**

**justify-content: space-between;**

**padding: 10px;**

**}**

**.navbar-brand {**

**font-size: 18px;**

**font-weight: bold;**

**}**

**.navbar-toggle {**

**display: none;**

**cursor: pointer;**

**}**

**.navbar-menu {**

**display: flex;**

**justify-content: flex-end;**

**align-items: center;**

**}**

**.navbar-menu ul {**

**list-style-type: none;**

**margin: 0;**

**padding: 0;**

**}**

**.navbar-menu ul li {**

**display: inline-block;**

**margin-left: 15px;**

**}**

**.navbar-menu ul li a {**

**color: #fff;**

**text-decoration: none;**

**}**

**/\* Hamburger menu styling \*/**

**.hamburger-menu {**

**display: none;**

**flex-direction: column;**

**align-items: flex-end;**

**cursor: pointer;**

**}**

**.hamburger-menu span {**

**width: 30px;**

**height: 4px;**

**background-color: #fff;**

**margin-bottom: 4px;**

**}**

**/\* Media queries for responsiveness \*/**

**@media screen and (max-width: 600px) {**

**.navbar-menu {**

**display: none;**

**}**

**.navbar-toggle {**

**display: block;**

**}**

**.navbar.open .navbar-menu {**

**display: flex;**

**}**

**.hamburger-menu {**

**display: flex;**

**}**

**}**

**</style>**

**</head>**

**<body>**

**<nav class="navbar">**

**<div class="navbar-brand">Logo</div>**

**<div class="navbar-toggle" onclick="toggleNavbar()">**

**<div class="hamburger-menu">**

**<span></span>**

**<span></span>**

**<span></span>**

**</div>**

**</div>**

**<div class="navbar-menu" id="navbarMenu">**

**<ul>**

**<li><a href="#">Home</a></li>**

**<li><a href="#">About</a></li>**

**<li><a href="#">Services</a></li>**

**<li><a href="#">Contact</a></li>**

**</ul>**

**</div>**

**</nav>**

**<script>**

**// Toggle the navbar menu visibility**

**function toggleNavbar() {**

**var navbarMenu = document.getElementById("navbarMenu");**

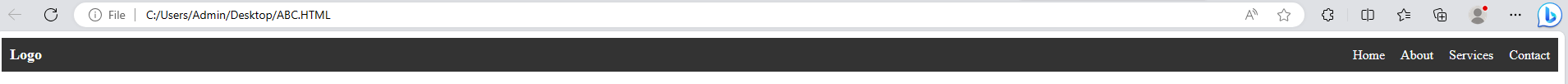
**navbarMenu.classList.toggle("open");**

**}**

**</script>**

**</body>**

**</html>**



1. **Create a form with proper form validation using JavaScript (name, email, phone number, password, age, gender, date, color picker)**

**<!DOCTYPE html>**

**<html>**

**<head>**

**<title>Form Validation</title>**

**<style>**

**.error {**

**color: red;**

**}**

**</style>**

**</head>**

**<body>**

**<h1>Form Validation</h1>**

**<form id="myForm" onsubmit="validateForm(event)">**

**<div>**

**<label for="name">Name:</label>**

**<input type="text" id="name" name="name" required>**

**</div>**

**<div>**

**<label for="email">Email:</label>**

**<input type="email" id="email" name="email" required>**

**</div>**

**<div>**

**<label for="phone">Phone Number:</label>**

**<input type="tel" id="phone" name="phone" pattern="[0-9]{10}" required>**

**<small>Format: 10 digits without spaces or dashes</small>**

**</div>**

**<div>**

**<label for="password">Password:</label>**

**<input type="password" id="password" name="password" minlength="6" required>**

**<small>Minimum length: 6 characters</small>**

**</div>**

**<div>**

**<label for="age">Age:</label>**

**<input type="number" id="age" name="age" min="1" max="100" required>**

**</div>**

**<div>**

**<label for="gender">Gender:</label>**

**<select id="gender" name="gender" required>**

**<option value="">Select</option>**

**<option value="male">Male</option>**

**<option value="female">Female</option>**

**</select>**

**</div>**

**<div>**

**<label for="date">Date:</label>**

**<input type="date" id="date" name="date" required>**

**</div>**

**<div>**

**<label for="color">Favorite Color:</label>**

**<input type="color" id="color" name="color" required>**

**</div>**

**<button type="submit">Submit</button>**

**</form>**

**<script>**

**function validateForm(event) {**

**event.preventDefault();**

**// Get form values**

**var name = document.getElementById('name').value;**

**var email = document.getElementById('email').value;**

**var phone = document.getElementById('phone').value;**

**var password = document.getElementById('password').value;**

**var age = document.getElementById('age').value;**

**var gender = document.getElementById('gender').value;**

**var date = document.getElementById('date').value;**

**var color = document.getElementById('color').value;**

**// Regular expressions for validation**

**var emailRegex = /^[^\s@]+@[^\s@]+\.[^\s@]+$/;**

**var phoneRegex = /^\d{10}$/;**

**var passwordRegex = /^.{6,}$/;**

**// Validate name (required)**

**if (!name) {**

**document.getElementById('name').classList.add('error');**

**return;**

**}**

**// Validate email (required and valid format)**

**if (!email || !emailRegex.test(email)) {**

**document.getElementById('email').classList.add('error');**

**return;**

**}**

**// Validate phone number (required and valid format)**

**if (!phone || !phoneRegex.test(phone)) {**

**document.getElementById('phone').classList.add('error');**

**return;**

**}**

**// Validate password (required and minimum length)**

**if (!password || !passwordRegex.test(password)) {**

**document.getElementById('password').classList.add('error');**

**return;**

**}**

**// Validate age (required and within range)**

**if (!age || age < 1 || age > 100) {**

**document.getElementById('age').classList.add('error');**

**return;**

**}**

**// Validate gender (required)**

**if (!gender) {**

**document.getElementById('gender').classList.add('error');**

**return;**

**}**

**// Validate date (required)**

**if (!date) {**

**document.getElementById('date').classList.add('error');**

**return;**

**}**

**// Validate color (required)**

**if (!color) {**

**document.getElementById('color').classList.add('error');**

**return;**

**}**

**// If all validations pass, submit the form**

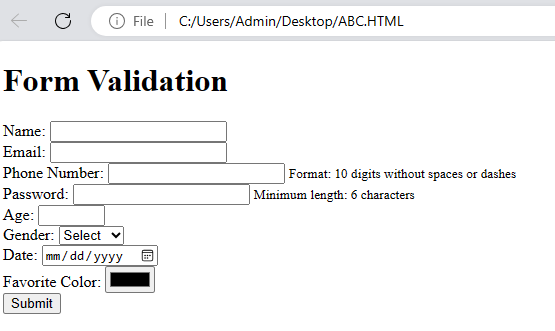
**document.getElementById('myForm').submit();**

**}**

**</script>**

**</body>**

**</html>**



1. **Create a custom modal window using HTML, CSS, and JavaScript. On clicking a button, the modal window should appear and the user can click outside the modal window to close the modal along with a close button which is inside the modal. Also, when the modal is open the window should not be scrollable.**

**<HTML>**

**<SCRIPT>**

**.modal {**

**display: none;**

**position: fixed;**

**z-index: 999;**

**left: 0;**

**top: 0;**

**width: 100%;**

**height: 100%;**

**overflow: auto;**

**background-color: rgba(0, 0, 0, 0.6);**

**}**

**.modal-content {**

**background-color: #fff;**

**margin: 10% auto;**

**padding: 20px;**

**border: 1px solid #888;**

**width: 60%;**

**max-width: 400px;**

**text-align: center;**

**}**

**.close {**

**color: #aaa;**

**float: right;**

**font-size: 28px;**

**font-weight: bold;**

**cursor: pointer;**

**}**

**.close:hover,**

**.close:focus {**

**color: #000;**

**text-decoration: none;**

**cursor: pointer;**

**}**

**</SCRIPT>**

**<SCRIPT>**

**var openModalBtn = document.getElementById('openModalBtn');**

**var modal = document.getElementById('myModal');**

**var closeBtn = document.getElementsByClassName('close')[0];**

**// Open modal**

**openModalBtn.addEventListener('click', function() {**

**modal.style.display = 'block';**

**document.body.style.overflow = 'hidden';**

**});**

**// Close modal by clicking outside the modal**

**window.addEventListener('click', function(event) {**

**if (event.target == modal) {**

**modal.style.display = 'none';**

**document.body.style.overflow = 'auto';**

**}**

**});**

**// Close modal by clicking the close button**

**closeBtn.addEventListener('click', function() {**

**modal.style.display = 'none';**

**document.body.style.overflow = 'auto';**

**});**

**</SCRIPT>**

**<button id="openModalBtn">Open Modal</button>**

**<div id="myModal" class="modal">**

**<div class="modal-content">**

**<span class="close">&times;</span>**

**<h2>Modal Window</h2>**

**<p>This is a custom modal window.</p>**

**</div>**

**</div>**

**</HTML>**

