Exercise1:-Javascript Debuggging correct code With Explanation  
code:- toggleelement.html

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Toggle Element</title>

</head>

<body>

<button onclick="toggleElement()">Toggle Element</button>

<div id="target" style="display: none;">This is the target element.</div>

<script>

function toggleElement() {

var element = document.getElementById("target");

if (element.style.display === "none" || element.style.display === "") {

element.style.display = "block";

} else {

element.style.display = "none";

}

}

</script>

</body>

</html>

<!--  
**Explanation of the Erros**:- I removed the initial inline style from the div element. In the toggleElement() function,

I first check if the element.style.display is "none" or an empty string (which indicates

it is hidden), and if so, I set it to "block" to show it. Otherwise, if it is not "none"

or empty, I set it to "none" to hide it.This ensures that the JavaScript code and the initial

state are in sync, and clicking the button will toggle the visibility of the element correctly.

**Exercise 2:-CSS Troubling Shooting  
code:-** <!DOCTYPE html>

**<**html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Centered Container</title>

<style>

body {

display: flex;

justify-content: center;

align-items: center;

height: 100vh;

margin: 0;

}

.container {

width: 50%;

background-color: #f0f0f0;

padding: 20px;

text-align: center;

}

</style>

</head>

<body>

<div class="container">

<h1>Centered Container</h1>

<p>This container should be centered on the page.</p>

</div>

</body>

</html>  
**Explanation of Errors:-**  
o center the container, I added the following CSS to the body:

->display: flex; :This sets the display mode to flexbox.

->justify-content: center; :This centers the container horizontally within the page.

->align-items: center; :This centers the container vertically within the page.

->height: 100vh; :This ensures that the body takes up the full viewport height.

And I also removed the margin: auto; from the .container class because it's not necessary

when using the flexbox for centering.   
**Exercise 3:-Debugging JavaScript Functions  
code:-** function calculateSum(arr) {

if (!Array.isArray(arr)) {

return 0; // Handle non-array input gracefully

}

return arr.reduce((acc, current) => acc + current, 0);

}

const numbers = [1, 2, 3, 4, 5];

const result = calculateSum(numbers);

console.log(result); // Outputs 15  
**Explanation of Errors:-**

**inputvaladation:-**i added a check to ensure that the input is an array.if not array,the function return to 0   
**Array reduction method:-** i replaced the ‘for’loop with the ‘reduce ‘method which simplify the code and is more efficient .the’reduce’ method Accumulates the sum of Array With out the need for An Explit loop   
**Default Values:-**the ‘reduce’method accepts an intial Values as the Second argument.in that case, it set to 0,Ensuring that the sum stars from the 0  
**Exercise 4: debugging css styling issues**Code:- <!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Styling Debugging Exercise</title> <!-- Closed the title tag -->

<style>

.container {

width: 400px; /\* Changed width to a fixed value (you can adjust as needed) \*/

margin: 0 auto;

background-color: #f0f0f0;

padding: 20px;

}

.box {

width: 100px;

height: 100px;

background-color: #007bff;

color: #ffffff;

text-align: center;

line-height: 100px;

display: flex; /\* Added to vertically center the content \*/

align-items: center; /\* Added to vertically center the content \*/

border: 1px solid #000; /\* Added border for separation \*/

}

</style>

</head>

<body>

<div class="container">

<div class="box">Box 1</div>

<div class="box">Box 2</div>

<div class="box">Box 3</div>

</div>

</body>

</html>  
**Explanation of Errors:-**The <title> tag:Issue: There's an error in the <title> tag. It should be closed properly.

Solution: Close the <title> tag by adding </title> before the content.

CSS Selector for .container:

Issue: The width of the .container is set to 50%, which is relative to the viewport's width. This can lead to issues on smaller screens.

Solution: You can set a fixed width (in pixels) or use a percentage if it's intended for responsive design. I'll set it to 400px for this example.

CSS Selector for .box:

Issue: The text inside the boxes is not vertically centered.

Solution: To vertically center the text, you can add display: flex; and align-items: center; to the .box class. Also, you should add a border property to separate the boxes.  
  
  
**Task 1: Component Creation**

**Description: Build a basic component (e.g., a card, modal, or slider) in your portfolio page using the chosen front-end framework  
code:-**<!DOCTYPE html>

<html>

<head>

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

<link rel="stylesheet" href="style.css">

<title>Personal portfolio</title>

<style>

/\* Reset default browser styles \*/

\* {

margin: 0;

padding: 0;

font-family:sans-serif;

}

/\* Styles for header section \*/

.header {

width: 100%;

height: 100vh;

background-color: lightblue;

}

/\* Styles for navigation bar \*/

nav {

display: flex;

margin: auto;

width: 90%;

padding: 20px;

align-items: center;

justify-content: space-between;

}

nav ul li {

display: inline-block;

list-style: none;

margin: 190px;

}

nav ul li a {

text-decoration: none;

color: black;

font-weight: bolder;

margin-left:30px;

padding-left: 30px;

margin: 30px;

}

nav ul li a:hover {

background-color: seagreen;

border-radius: 2px;

color: white;

}

.button-cv, .button-gfc{

display: inline-block;

margin-left: 0%;

border-radius: 5px;

transition: background-color 0.5s;

background: black;

padding: 10px;

text-decoration: none;

font-weight: bold;

color: white;

border: none;

cursor: pointer;

}

.button-cv:hover {

background-color: white;

color: black;

}

.button-gfc{

background: lightsalmon;

}

.button-gfc:hover {

background-color: white;

color: black;

}

/\* Styles for body section \*/

.body {

margin-left: 100px;

margin-top: 100px;

}

.body h1 {

font-size: 30px;

color: black;

margin-bottom: 20px;

}

.demo1 {

color: orange;

margin-bottom: 30px;

}

.demo2 {

color: black;

line-height: 20px;

}

.button-lrn, .button-hire{

background: lightsalmon;

padding: 10px 12px;

text-decoration: none;

font-weight: bold;

color: whitesmoke;

display: inline-block;

margin: 30px 8px;

border-radius: 5px;

transition: background-color 0.3s;

border: none;

letter-spacing: 1px;

cursor: pointer;

}

.button-lrn:hover {

background-color: whitesmoke;

color: black;

}

.button-hire {

background: black;

}

.button-hire:hover {

background-color: seagreen;

}

span {

color: seagreen;

}

/\* Styles for image section \*/

.image {

width: 45%;

height: 100%;

position: absolute;

bottom: 0;

right: 100px;

}

.image img {

height: 70%;

position:absolute;

left: 50%;

bottom: 10%;

transform: translate(-60%);

}

</style>

</head>

<body>

<!-- Header section -->

<div class="header">

<nav>

<ul>

<li><a href="#">HOME</a></li>

<li><a href="#">ABOUT</a></li>

<li><a href="#">PROJECTS</a></li>

<li><a href="#">SERVICES</a></li>

<li><a href="#">CONTACT ME</a></li>

<li><button type="button"class="button-gfc">Get Free Consultant</button></li>

<li><button type="button" class="button-cv">DOWNLOAD CV</button></li>

</ul>

</nav>

<!-- Body section -->

<div class="body">

<p class="demo1">GET EVERY SINGLE SOLUTIONS.</p>

<h1>Hello <br> I'm Rupesh <span>Kumar.</span></h1>

<p class="demo2">From concept to deployment, I bring ideas<br> to life as a versatile full stack developer...</p>

<button type="button" class="button-lrn">LEARN MORE</button>

<button type="button" class="button-hire">HIRE ME</button>

</div>

<!-- Image section -->

<div class="image">

<img src="rk.jpg">

</div>

</div>

</body>

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<button type="button" class="button-hire">HIRE ME</button>

</div>

<!-- Image section -->

</body>

</html>