Hands-on Activity 3.4 | Creating a Responsive Multi-Column Layout	
Course Code: CPE025B	**Program: BSCPE**
Course Title: Software Design 2	**Date Performed: 01/26/2026**
Section: CPE32S4	**Date Submitted: 01/27/2026**
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1. Discussion

The discussion in module 4 is all about the styling of elements and different layout methods in a webpage through the use of different positioning techniques and floats. In this module it demonstrates the usage of side by side elements and placing them onto the web page accordingly. It uses different elements such as different div behaviors, column styling and creating grids with floats. This is where floats are utilized when you want the elements to push to the left or right of their container and even allow text to wrap around them. It teaches the different techniques needed for building a multi-column structure and enabling it to respond when there are changes in the viewing size. This promotes user-friendly interfaces and the adaptability of the website to the changes made by the user.

3. Procedure

4.8.1 Creating a Responsive Multi-Column Layout

Scenario

You are creating a responsive webpage for a tech blog. The page will feature a multi-column layout for desktop views, which will adapt to single-column layouts for mobile devices. You'll use CSS floats to achieve the layout and media queries for responsiveness.

We have provided a basic HTML skeleton for your tech blog page in the editor under the *index.html* file. Your task is to apply the necessary CSS styles to this HTML structure to bring your blog layout to life.

Instructions

Follow the instructions below to style the webpage step by step:

1. Apply Basic Layout Styles

- Set the width of the `<div>` elements with the class `container` to 90% and center it using `margin`.
- Apply padding of 20px to the `container` div.
- Add a border of 1px solid #ccc to the `container` div.

2. Implementing Floats

- Float the `<div>` elements with the class `column` to the left.
- Set the width of the `column` divs to 30%.
- Apply a margin of 1.66% to the `column` divs to create space between the columns.

3. Clearing Floats

- Add a div with the class `clearfix` after the columns and apply the clearfix technique to clear the floats.

4. Adding Backgrounds

- Set the background color of the `header` element to #f4f4f4 and the text color to #333.
- Add a background color of #e2e2e2 to the `column` divs.

5. Making the Layout Responsive

- Use media queries to change the layout for mobile devices (max-width: 768px) by setting the width of the `column` divs to 100% and removing the float.

6. Creating Grids Using Floats

- Define a grid structure by creating a series of `column` divs inside a `row` div and apply floats to create a grid layout.

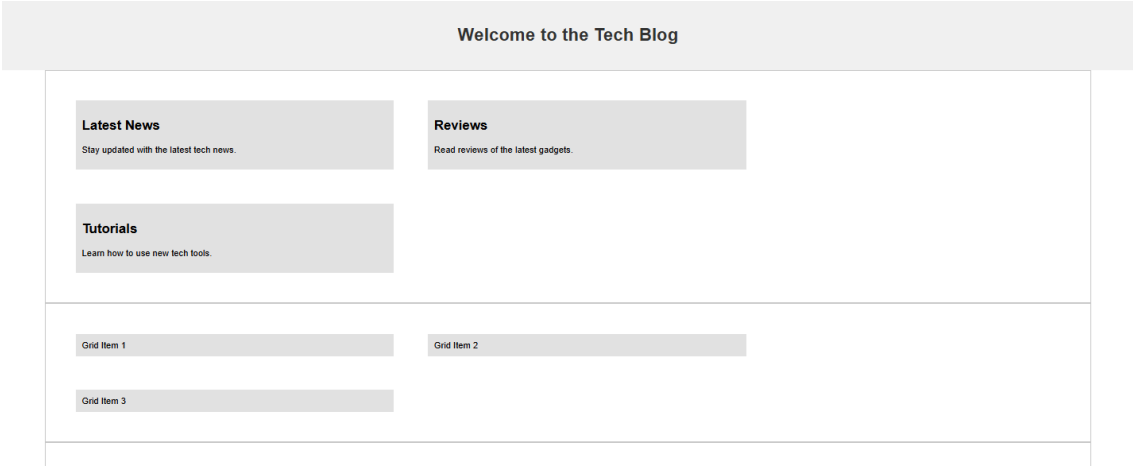
7. Practical Example: Text Wrapping Around Images

- Float an image to the left within a `post` div and ensure the text wraps around it.
- Set the width of the image to 50% of its container.

8. Review and Test

- Review your HTML and CSS to ensure all elements are styled correctly and the CSS rules are applied as expected.
- Experiment with different styles and properties to see how they affect your webpage.

4. Output



This is an example of text wrapping around an image.

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Welcome to the Tech Blog

Latest News

Stay updated with the latest tech news.

Reviews

Read reviews of the latest gadgets.

Tutorials

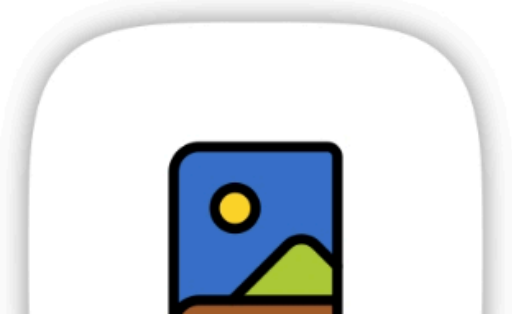
Learn how to use new tech tools.

Grid Item 1

Grid Item 2

Grid Item 3

This is an example of text wrapping around an image.



5. Supplementary Activity

HTML

HTML

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

    <link
href="https://fonts.googleapis.com/css2?family=Roboto:wght@300;400;700&d
isplay=swap" rel="stylesheet">
    <link rel="stylesheet" href="hoa3-4_supple_bautista.css">
</head>
<body>

<header class="site-header clearfix">
    <div class="logo">Tech<span>Blog</span></div>
    <nav>
        <a href="#">Home</a>
        <a href="#">Articles</a>
        <a href="#">Tutorials</a>
        <a href="#">Contact</a>
    </nav>
</header>

<section class="hero">
    <h1>Understanding RAM</h1>
    <p>Your guide to computer memory and performance</p>
</section>

<main class="container">
    <section class="post clearfix">
        <img src="ram.png" alt="RAM Image">

        <div class="post-text">
            <h2>What Is RAM and Why Is It Important?</h2>
            <p>
                Random Access Memory (RAM) is the short-term memory of a
computer.
                It temporarily stores data that the processor needs to
access quickly
                in order to run applications and perform tasks.
            </p>
            <p>
```

```
                Without enough RAM, your computer can become slow and
unresponsive.
                RAM plays a critical role in multitasking, gaming,
content creation,
                and overall system performance.
            </p>
        </div>
    </section>

    <section class="cards clearfix">
        <div class="card">
            <h2>What is RAM?</h2>
            <p>
                RAM is volatile memory that holds active programs and
data.
                Once the computer is turned off, the contents of RAM are
erased.
            </p>
        </div>

        <div class="card">
            <h2>Why RAM Matters</h2>
            <p>
                More RAM allows your computer to run multiple
applications smoothly
                and improves overall system responsiveness.
            </p>
        </div>

        <div class="card">
            <h2>Types of RAM</h2>
            <p>
                Common types include DDR3, DDR4, and DDR5.
                Newer generations provide faster speeds and better power
efficiency.
            </p>
        </div>
    </section>


    <section class="price-section">
        <h2>Why Are RAM Prices Rising?</h2>

        <p>
            RAM prices fluctuate based on global supply and demand. In
recent years,
            several factors have contributed to the increase in memory
costs.
        </p>
```

```
        <p>
            One major reason is the growing demand for high-performance
hardware.
            Gaming PCs, data centers, artificial intelligence systems,
and smartphones
            all require large amounts of memory.
        </p>

        <p>
            Another factor is limited production capacity. Manufacturing
advanced
            memory chips is expensive and complex. Any disruption in
supply chains
            or fabrication plants can reduce output and drive prices
higher.
        </p>

        <p>
            Additionally, newer technologies such as DDR5 are more
costly to produce
            than previous generations. As manufacturers shift toward
these newer standards,
            older and cheaper memory types become less available.
        </p>
    </section>

</main>


<footer>
    <p>© 2026 TechBlog | All Rights Reserved</p>
</footer>

</body>
</html>
```

CSS

```
* {
    box-sizing: border-box;
    margin: 0;
    padding: 0;
```

```
}

body {
    font-family: 'Roboto', sans-serif;
    background-color: #0d0d0d;
    color: #f5f5f5;
    line-height: 1.6;
}


.site-header {
    background-color: #000;
    color: white;
    padding: 20px 10%;
}

.logo {
    font-size: 26px;
    font-weight: 700;
    float: left;
}

.logo span {
    color: red;
}

nav {
    float: right;
}

nav a {
    color: white;
    text-decoration: none;
    margin-left: 20px;
    font-weight: 500;
}

nav a:hover {
    color: red;
}


.clearfix::after {
    content: "";
    display: block;
    clear: both;
}


.hero {
```

```
    background: linear-gradient(to right, #000, #8b0000);
    text-align: center;
    padding: 80px 20px;
}

.hero h1 {
    font-size: 48px;
    margin-bottom: 10px;
}

.hero p {
    font-size: 18px;
    color: #ddd;
}


.container {
    width: 90%;
    max-width: 1100px;
    margin: auto;
    padding: 60px 0;
}


.card {
    background-color: #1a1a1a;
    padding: 25px;
    border-radius: 10px;
    border-top: 4px solid red;
    float: left;
    width: 30%;
    margin: 1.66%;
}

.card h2 {
    margin-bottom: 10px;
    color: red;
}


.post img {
    float: left;
    width: 45%;
    margin-right: 30px;
    border-radius: 10px;
}

.post-text h2 {
    color: red;
    margin-bottom: 10px;
```

```
}


.price-section {
    background-color: #1a1a1a;
    padding: 40px;
    border-radius: 12px;
    border-left: 5px solid red;
    margin-top: 60px;
}


footer {
    background-color: #000;
    text-align: center;
    padding: 20px;
    color: #aaa;
}


@media (max-width: 768px) {

    .card {
        width: 100%;
        margin: 10px 0;
        float: none;
    }

    .post img {
        width: 100%;
        float: none;
        margin: 0 0 20px 0;
    }

    nav {
        display: none;
    }
}
```

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Understanding RAM

Your guide to computer memory and performance

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Without enough RAM, your computer can become slow and unresponsive. RAM plays a critical role in multitasking, gaming, content creation, and overall system performance.

What is RAM?

RAM is volatile memory that holds active programs and data. Once the computer is turned off, the contents of RAM are erased.

Why RAM Matters

More RAM allows your computer to run multiple applications smoothly and improves overall system responsiveness.

Types of RAM

Common types include DDR3, DDR4, and DDR5. Newer generations provide faster speeds and better power efficiency.

Why Are RAM Prices Rising?

RAM prices fluctuate based on global supply and demand. In recent years, several factors have contributed to the increase in memory costs.

One major reason is the growing demand for high-performance hardware. Gaming PCs, data centers, artificial intelligence systems, and smartphones all require large amounts of memory.

Another factor is limited production capacity. Manufacturing advanced memory chips is expensive and complex. Any disruption in supply chains or fabrication plants can reduce output and drive prices higher.

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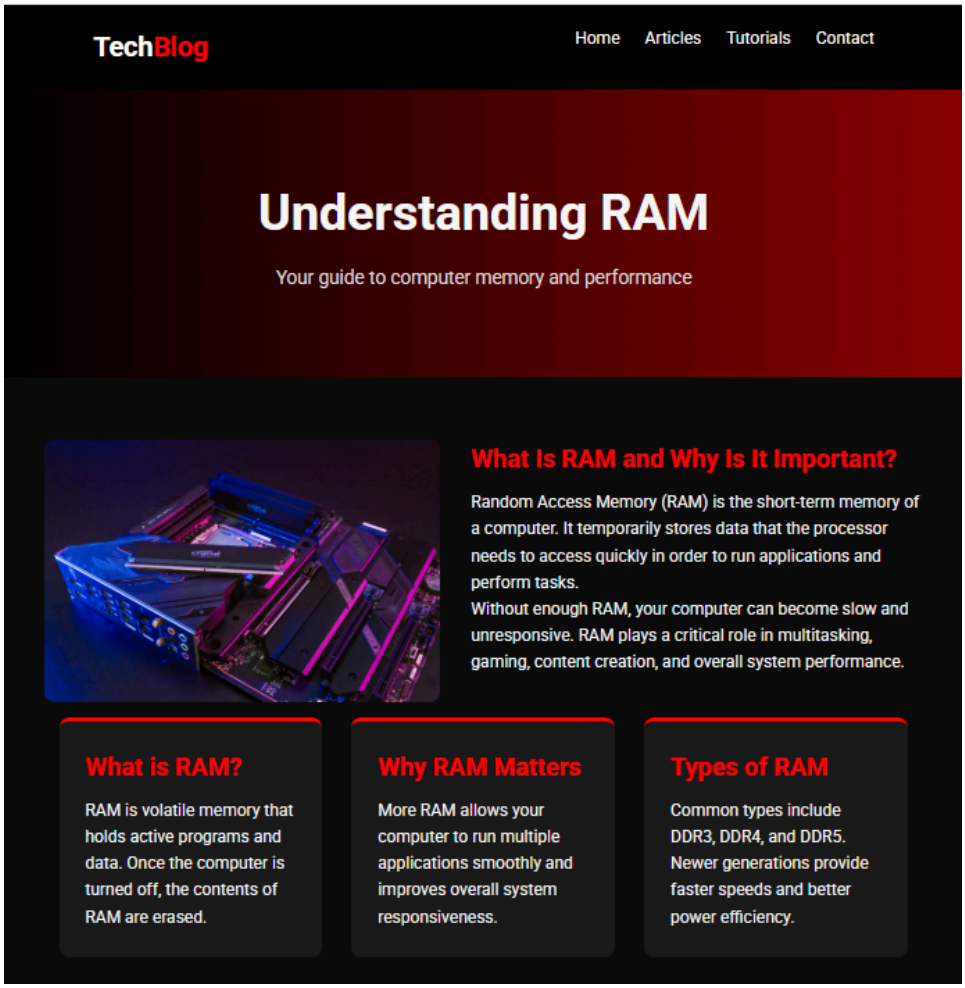

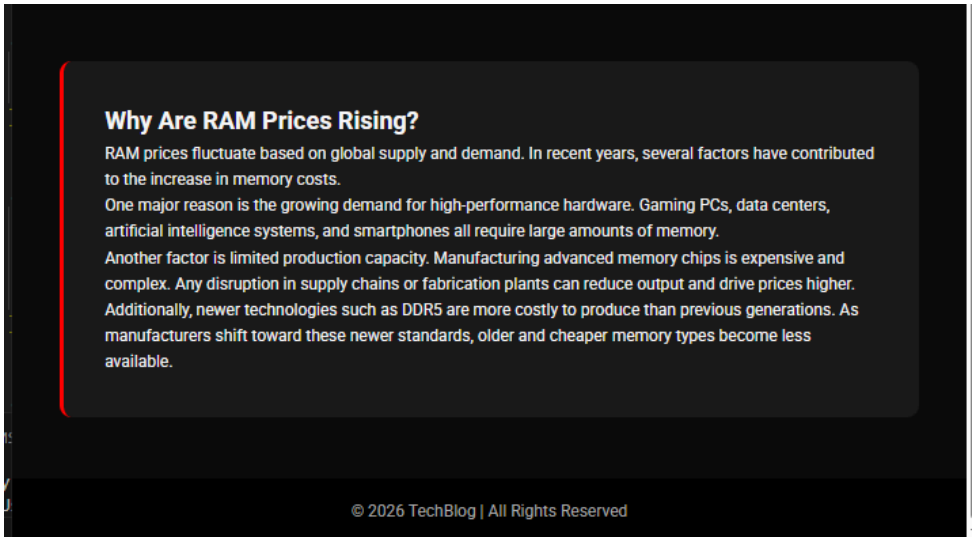

Conclusion

After performing this activity I was able to learn about utilizing the different layout techniques in CSS. This activity helped me learn about multi-column design and structure. This enabled me to utilize the space for many elements on the page and apply paddings and margins accordingly. Also I learned that through

floats and responsive layout elements we are able to create an optimized web page even if the viewing size is changed. I was able to implement my learnings in a simple tech blog which utilized different content cards and displayed them accordingly. I was able to utilize the layouting techniques in properly spacing them from one another and being able to enable the website to respond to changing viewing size wherein the spacing or the looks of the website did not get destroyed when viewing in a smaller window.