



EAST WEST UNIVERSITY

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Assignment: CSS Units (Absolute & Relative)

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CSS Units

When we build a website, we need to control how big or small things look — like text, boxes, images, etc. For that, we use **CSS units**.

There are two types of units:

1. Absolute Units (Fixed Size)

These units stay the same size no matter where you use them or what screen size you have. They don't change based on the parent element or screen.

Examples:

- **px** — Means "pixels", small dots on the screen. Most common for fixed sizes.
- **pt** — Means "points", used for printed documents. Not often used on websites.
- **cm, mm, in** — These are centimeters, millimeters, and inches. Used when you need exact physical sizes, mostly for print, not for web.

2. Relative Units (Flexible Size)

These units adjust based on the size of other things, like the parent element, the screen, or the browser window. They are great for making websites responsive and look good on all devices.

Examples:

- **em** — Size based on the parent element. If the parent's text is 16px, 2em means 32px.
- **rem** — Size based on the root element (the `<html>` tag). Makes size more consistent.
- **%** — Percentage of the parent element. For example, 50% width means half the width of the parent.
- **vw** and **vh** — Based on the size of the screen. 1vw is 1% of the screen width, 1vh is 1% of the screen height.

Quick Example with Code (With Comments)

```
<!DOCTYPE html>
<html>
<head>
<style>
html {
    font-size: 16px; /* Base size for rem */
}

.px-box {
    width: 200px;
    height: 100px;
    background: lightblue;
}

.pt-box {
    width: 150pt;
    height: 75pt;
    background: lightcoral;
}

.cm-box {
    width: 5cm;
    height: 3cm;
    background: lightgreen;
}

.em-box {
    font-size: 2em; /* 2 times parent text size */
    background: lightsalmon;
}

.rem-box {
    font-size: 1.5rem; /* 1.5 times root (html) size */
    background: lightseagreen;
}

.percent-box {
    width: 50%; /* Half the width of the parent */
    background: plum;
}

.viewport-box {
    width: 50vw; /* 50% of screen width */
    height: 20vh; /* 20% of screen height */
    background: gold;
}
```

```
</style>
</head>
<body>

<h2>CSS Units Example</h2>

<div class="px-box">Fixed size with px</div>
<div class="pt-box">Size in points (pt)</div>
<div class="cm-box">Size in centimeters (cm)</div>
<div class="em-box">Text with 2em size</div>
<div class="rem-box">Text with 1.5rem size</div>
<div class="percent-box">Width is 50% of parent</div>
<div class="viewport-box">Size based on screen (vw/vh)</div>

</body>
</html>
```

Final Thoughts

- Use **px** when you want exact sizes.
- Use **em**, **rem**, **%**, **vw**, **vh** to make your website flexible and responsive.
- Use **pt**, **cm**, **in** only if you are working on print design.