

CSS3 & Responsive Design

Web App Dev Guide · Module 3 of 8 · CHERIEDU Dev Series

1. CSS — The Style Engine

CSS (Cascading Style Sheets) controls how HTML elements look. Without CSS, every webpage would be plain black text on a white background. CSS makes the web beautiful.

2. CSS Flexbox — The Layout Standard

```
.container {
  display: flex;
  justify-content: space-between; /* left/center/right */
  align-items: center;           /* vertical alignment */
  gap: 20px;                     /* space between items */
  flex-wrap: wrap;              /* wrap on small screens */
}
.card {
  flex: 1;                       /* take equal width */
  min-width: 280px;             /* minimum card width */
}
```

3. Responsive Design — Mobile First

```
/* Mobile (default – smallest screen first) */
.hero { font-size: 1.5rem; padding: 20px; }

/* Tablet – screens 768px and above */
@media (min-width: 768px) {
  .hero { font-size: 2rem; padding: 40px; }
}

/* Desktop – screens 1024px and above */
@media (min-width: 1024px) {
  .hero { font-size: 3rem; padding: 80px; }
}
```

4. CSS Custom Properties (Variables)

```
:root {
  --primary: #6366f1;
  --text: #1e293b;
  --gap: 24px;
}
.button { background: var(--primary); gap: var(--gap); }
```

5. CSS Grid for Complex Layouts

```
.features-grid {  
  display: grid;  
  grid-template-columns: repeat(auto-fit, minmax(280px, 1fr));  
  gap: 24px;  
}
```

6. The Box Model (Critical Concept)

- Content: The actual text or image inside the element.
- Padding: Space between content and the border (inside).
- Border: The visible edge of the element.
- Margin: Space outside the border (between elements).

PROJECT

Style your **CHERIEDU** contact form (from W02). Add a colour scheme, responsive layout, hover effects on buttons, and make it look good on mobile. Use only CSS — no frameworks.

