

## Css

### Lab Assignment 1: Responsive Layout

#### Techniques Used:

- Flexbox / CSS Grid for layout
- Media Queries for responsiveness

#### Key Properties:

##### **css**

```
/* General Styles */
```

```
body {  
    font-family: Arial, sans-serif;  
    margin: 0;  
    padding: 0;  
    box-sizing: border-box;  
}
```

```
/* Header & Footer */
```

```
header, footer {  
    background-color: #4CAF50;  
    color: white;  
    text-align: center;
```

```
padding: 10px 0;  
}
```

```
/* Flexbox Layout */
```

```
.main-content {  
    display: flex;  
    flex-wrap: wrap; /* Allow columns to wrap on smaller screens */  
    gap: 10px;  
    padding: 10px;  
}
```

```
.left-column, .right-column {  
    flex: 1;  
    padding: 15px;  
    background-color: #f2f2f2;  
    border: 1px solid #ccc;  
}
```

```
/* Responsive Media Query */
```

```
@media (max-width: 768px) {  
    .main-content {  
        flex-direction: column; /* Stack columns vertically */  
    }  
}
```

```
}
```

---

## Lab Assignment 2: Hover Effects

### Techniques Used:

- **:hover pseudo-class**
- **Transition and Transform for animation effects**

### Key Properties:

```
.card {  
  background-color: #fff;  
  transition: background-color 0.3s ease, transform 0.3s ease,  
  box-shadow 0.3s ease;  
  padding: 15px;  
  border: 1px solid #ddd;  
}  
  
.card:hover {  
  background-color: #f0f0f0;  
  transform: scale(1.05);  
  box-shadow: 0 4px 8px rgba(0, 0, 0, 0.2);  
}
```

---

## Lab Assignment 3: Image Gallery

## Techniques Used:

- **CSS Grid for layout**
- **Hover effects with transform and opacity**
- **Pseudo-elements for captions (if needed)**

## Key Properties:

### **css**

```
.gallery{  
  display: grid;  
  grid-template-columns: repeat(3, 1fr);  
  gap: 10px;  
}  
  
.gallery img{  
  width: 100%;  
  transition: transform 0.3s ease;  
}  
  
.gallery img:hover {  
  transform: scale(1.1);  
  opacity: 0.8;  
}
```

---

## Lab Assignment 4: Styled Navigation Menu

### Techniques Used:

- **Horizontal Menu using inline-block or flex**
- **Dropdown menus on hover using position and visibility**

### Key Properties:

```
.nav{  
    background-color: #333;  
    overflow: hidden;  
}  
  
.nav ul{  
    list-style-type: none;  
    margin: 0;  
    padding: 0;  
    display: flex;  
}  
  
.nav li{  
    position: relative;  
}  
  
.nav li a{
```

```
display: block;

padding: 14px 20px;

color: white;

text-decoration: none;

}

.nav li:hover > ul {

display: block;

}

.nav li ul {

display: none;

position: absolute;

background-color: #444;

list-style-type: none;

padding: 0;

margin: 0;

}

.nav li ul li a {

padding: 10px;

}
```

---

## Lab Assignment 5: Custom Buttons

## Techniques Used:

- **Gradients, Borders, Box Shadows**

## Key Properties:

```
/* Gradient Background */
```

```
.button-gradient {  
  
  background: linear-gradient(45deg, #ff6b6b, #f06595);  
  
  border: none;  
  
  padding: 10px 20px;  
  
  color: white;  
  
  cursor: pointer;  
  
}
```

```
/* Border Change on Hover */
```

```
.button-border {  
  
  background: transparent;  
  
  border: 2px solid #4CAF50;  
  
  padding: 10px 20px;  
  
  cursor: pointer;  
  
}
```

```
.button-border:hover {  
  
  border-color: #2e7d32;
```

```
}

/* Glowing Effect */

.button-glow {
  background: #2196F3;
  border: none;
  padding: 10px 20px;
  color: white;
  box-shadow: 0 0 10px #2196F3;
  cursor: pointer;
}

.button-glow:hover {
  box-shadow: 0 0 20px #2196F3;
}
```

---

## Lab Assignment 6: CSS Animations

### Techniques Used:

- @keyframes for animations
- Transitions for smooth effects

### Key Properties:

CSS



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```
@keyframes headerAnimation {  
  0% { color: #333; transform: translateY(0); }  
  50% { color: #4CAF50; transform: translateY(-10px); }  
  100% { color: #333; transform: translateY(0); }  
}  
  
.header-animated {  
  animation: headerAnimation 3s infinite;  
  transition: all 0.3s ease;  
}
```

---

## Lab Assignment 7: Multi-Section Page

### Techniques Used:

- **Sticky Navigation using position: sticky**
- **Internal links for navigation**
- **Active link styling using pseudo-classes**

### Key Properties:

```
nav {  
  
  position: sticky;  
  
  top: 0;  
  
  background: #333;
```

```
padding: 10px;
}
nav a {
  color: white;
  padding: 8px;
  text-decoration: none;
}
nav a.active {
  background: #4CAF50;
  border-radius: 4px;
}
```

---

## Lab Assignment 8: Form Styling

### Techniques Used:

- **Form inputs styling**
- **Rounded corners, shadows**
- **Pseudo-classes for validation (:valid, :invalid)**

### Key Properties:

**css**

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```
form {
```

```
max-width: 300px;

margin: auto;

padding: 20px;

border: 1px solid #ccc;

border-radius: 8px;
}

input, textarea {

width: 100%;

padding: 8px;

margin-bottom: 10px;

border: 1px solid #aaa;

border-radius: 4px;
}

input:valid {

border-color: green;
}

input:invalid {

border-color: red;
}

button:hover {

background-color: #4CAF50;

color: white;
```

```
}
```

---

## Lab Assignment 9: Pricing Table

### Techniques Used:

- **Flexbox for layout**
- **Hover effects on buttons**

### Key Properties:

```
.pricing-table {  
  display: flex;  
  justify-content: space-around;  
  margin: 20px 0;  
}
```

```
.plan {  
  border: 1px solid #ccc;  
  padding: 15px;  
  flex: 1;  
  margin: 0 10px;  
  background-color: #f9f9f9;  
}
```

```
.plan.popular {  
  background-color: #e0f7fa;
```

```
}  
  
.plan button {  
    padding: 8px;  
    border: none;  
    cursor: pointer;  
}  
  
.plan button:hover {  
    background-color: #4CAF50;  
    color: white;  
}
```

---

## Lab Assignment 10: Animated Loading Screen

### Techniques Used:

- **CSS Animations for spinner or progress bar**
- **Keyframes**

### Key Properties:

```
@keyframes spin {  
    0% { transform: rotate(0deg); }  
    100% { transform: rotate(360deg); }  
}  
  
.spinner {
```

```
border: 4px solid #f3f3f3;
border-top: 4px solid #4CAF50;
border-radius: 50%;
width: 40px;
height: 40px;
animation: spin 2s linear infinite;
margin: auto;
}
```

---

## Lab Assignment 11: Box Model Challenge

### Techniques Used:

- Fixed dimensions
- Percentage-based padding/margin
- Hover effects on borders

### Key Properties:

```
.box {
width: 300px;
height: 200px;
margin: 5%;
padding: 5%;
border: 2px solid #ccc;
```

```
    transition: border 0.3s ease;
}

.box:hover {
    border: 4px solid #4CAF50;
}
```

---

## **Lab Assignment 12: Dark/Light Theme Toggle**

### **Techniques Used:**

- **JavaScript toggling classes**
- **CSS class definitions for themes**

### **Key Properties:**

```
body.light {
    background-color: #fff;
    color: #000;
}

body.dark {
    background-color: #121212;
    color: #fff;
}
```

---

## **Lab Assignment 13: CSS Transformations**

## Techniques Used:

- **3D transforms**
- **Hover to rotate**

## Key Properties:

```
.card {  
  width: 300px;  
  height: 200px;  
  perspective: 1000px;  
}  
  
.card-inner {  
  transition: transform 0.6s;  
  transform-style: preserve-3d;  
}  
  
.card:hover .card-inner {  
  transform: rotateY(180deg);  
}  
  
.front, .back {  
  backface-visibility: hidden;  
  position: absolute;  
  width: 100%;  
  height: 100%;
```



```
}  
  
.back{  
  transform: rotateY(180deg);  
}
```

---

## Lab Assignment 14: Timeline Design

### Techniques Used:

- Pseudo-elements (::before, ::after)
- Vertical layout styling

### Key Properties:

```
.timeline {  
  position: relative;  
  padding-left: 40px;  
}  
  
.timeline::before {  
  content: "";  
  position: absolute;  
  left: 20px;  
  top: 0;  
  bottom: 0;  
  width: 4px;
```

```
background: #ccc;
}
.event {
  margin: 20px 0;
  position: relative;
}
.event::before {
  content: "";
  position: absolute;
  left: -12px;
  top: 0;
  width: 20px;
  height: 20px;
  background: #4CAF50;
  border-radius: 50%;
}
```

---

## Lab Assignment 15: CSS Gradient Effects

### Techniques Used:

- **Linear gradients**
- **Overlay gradients**

## Key Properties:

```
.header {  
    background: linear-gradient(45deg, #ff6b6b, #f06595);  
    color: white;  
    padding: 20px;  
}  
  
.header::after {  
    content: "";  
    position: absolute;  
    top: 0;  
    left: 0;  
    right: 0;  
    bottom: 0;  
    background: linear-gradient(rgba(0, 0, 0, 0.3), rgba(0, 0, 0, 0.3));  
    pointer-events: none;  
}
```