

CSS Boxes Notes

1. Box Model Overview

- CSS treats HTML elements as boxes with **content**, **padding**, **border**, **margin**.
- **Content**: Text, images, etc.
- **Padding**: Space between content and border.
- **Border**: Surrounds padding, styled by width, style, color.
- **Margin**: External space, creates gaps between boxes.
- Box dimensions: content + padding + border; margins are external.

2. Box Dimensions

- **width**,
- **height**: Set size (e.g., 300px, 75%, 1.4em).
 - Pixels: Precise.
 - Percentages: Relative to parent/window.
 - Ems: Relative to text size.
- **min-width**,
- **max-width**: Limit width (e.g., `min-width: 450px`).
- **min-height**,
- **max-height**: Limit height.
- **overflow**: Manages excess content.
 - `hidden`: Hides overflow.
 - `scroll`: Adds scrollbars.

3. Borders

- **border-width**: Thickness (e.g., 2px, thin, medium, thick).
 - Individual: `border-top-width`, etc.
 - Shorthand: `border-width: 2px 1px 1px 2px` (top, right, bottom, left).
- **border-style**: Style (e.g., solid, dotted, dashed, double, groove, ridge, inset, outset).
 - Individual: `border-top-style`, etc.
- **border-color**: Color (e.g., #0088dd, darkcyan).
 - Individual: `border-top-color`, etc.
 - Shorthand: `border-color: darkcyan deeppink darkcyan deeppink`.
- **border**: Shorthand (e.g., `3px dotted #0088dd`).
- **CSS3**:

- `border-image`: Image border, sliced into nine pieces (e.g., `border-image: url("dots.gif") 11 stretch`).
- `border-radius`: Rounded corners (e.g., `border-radius: 10px`).
- Elliptical shapes: Different radii (e.g., `border-top-left-radius: 80px 50px`).

4. Padding and Margin

- **padding**: Space between content and border (e.g., `10px`).
 - Individual: `padding-top`, etc.
 - Shorthand: `padding: 10px 5px 3px 1px`.
- **margin**: Space outside border (e.g., `20px`).
 - Individual: `margin-top`, etc.
 - Shorthand: `margin: 1px 2px 3px 4px`.
 - Collapsing: Larger vertical margin applies.
- **Centering**: `margin-left: auto; margin-right: auto` with width.

5. Visibility and Display

- **display**:
 - `inline`: Block to inline.
 - `block`: Inline to block.
 - `inline-block`: Inline flow, block features.
 - `none`: Hides, removes from layout.
- **visibility**:
 - `hidden`: Hides, leaves space.
 - `visible`: Shows.
- Hidden elements remain in source code.

6. CSS3 Enhancements

- **box-shadow**: Shadows (e.g., `box-shadow: 5px 5px 5px #777777`).
- Vendor prefixes (`-moz-`, `-webkit-`) for older browsers.

7. IE6 Box Model Issue

- IE6 includes padding/margins in width without DOCTYPE.
- Fix: Use DOCTYPE (e.g., HTML5, HTML 4 Strict).

8. Design Tips

- Use `min-width/max-width` for responsive layouts.
- Enhance readability with padding.
- Test CSS3 features across browsers.
- Include DOCTYPE for consistent rendering.

9. Example Application

- Music shop homepage:
 - Centered `<div>` with `margin: auto`.
 - `min-width/max-width` for responsive width.
 - Inline navigation with `display: inline`.
 - Double borders, padding for spacing, consistent typography.

10. Summary

- Control dimensions with `width`, `height`, `min/max` properties.
- Style borders with `width`, `style`, `color`, or images.
- Adjust spacing with `padding`, `margin`.
- Manage visibility with `display`, `visibility`.
- CSS3: Rounded corners, shadows, image borders.