Animated Underwater Scene

Objective

In this exercise, you will harness HTML and CSS to construct and animate a captivating underwater scene featuring a variety of sea life and elements. You'll work with animations, gradients, and positioning to bring your scene to life.

Task Overview

- Create an underwater environment with a gradient background.
- Animate fish, bubbles, seaweed, and a jellyfish to simulate underwater movement.

Instructions

1. **Setup Your HTML File**
    - Begin by creating a basic HTML structure. Include the `DOCTYPE` declaration and specify the language attribute in your `html` tag.
    - Define the `head` section with a `meta` tag for character encoding and a `title` for your page.
    - Within the `body` of your document, create a div with a class of `ocean`. This will serve as the container for all your underwater scene elements.
2. **Styling the Scene**
    - Inside the `head` section, include a `style` tag where you'll write CSS to style your scene.
    - Set the body's background to a linear gradient to mimic the transition from the water surface to the depths of the ocean. Ensure the `body` and `html` tags are styled to cover the full viewport height and overflow is hidden.
    - Define the `.ocean` class to fill the width and height of the viewport, positioning it relatively to serve as the base for all your positioned elements.
3. **Creating and Animating Sea Life**
    - **Fish**: Define the `.fish` class with properties for size, background, border radius for shape, and position. Utilize CSS animations to make the fish "swim" across the screen.
    - **Bubbles**: Use the `.bubble` class to create circular shapes with a semi-transparent background. Animate these to "float" upwards.
    - **Seaweed**: Style the `.seaweed` class with a gradient to look like plants and apply a gentle swaying animation.
    - **Jellyfish**: For the jellyfish, use a combination of the `.jellyfish` class and pseudo-elements (`:before`, `:after`) to create the body and tentacles, respectively. Apply an animation to simulate floating.
4. **Animations**
    - Define keyframe animations (`@keyframes`) for each moving element:
        - **Swim**: Create a looping animation that moves the fish from one side of the screen to the other, flipping its direction at the midpoint.

        - **Float**: For bubbles and the jellyfish, define animations that move them vertically, with the bubbles also gradually fading out.
        - **Sway**: Simulate the movement of seaweed in water with a gentle rotation back and forth.

5. **Customizing Individual Elements**

    - Apply inline styles to each fish, bubble, seaweed, and jellyfish to vary their positions, sizes, and the duration or delay of their animations. This creates a more dynamic and varied scene.

6. **Expansion**

    - Encourage creativity by suggesting the addition of more underwater elements like more fish species, coral, or sunken treasures. Each new element should be styled and potentially animated to enrich the scene.

Deliverable

Your final product will be a lively, animated underwater scene viewed in a web browser. This scene should showcase a variety of sea life and elements, each with its own animation to simulate the serene and mystical nature of underwater life. Watch The video

Tips

- Experiment with different `animation-duration` and `animation-delay` values for each element to create a more realistic and less synchronized scene.
- Use the CSS `linear-gradient` function to create smooth transitions for backgrounds and the shapes of creatures.
- Remember to test your scene in various browsers to ensure compatibility and performance.