#### **Software Development Life Cycle (SDLC) for SkyCast - A Weather Forecast Website**

#### **Implementation (Coding the Project)**

The implementation phase involves building SkyCast incrementally with clean, maintainable code.

* **Development Steps**:
  + **Phase 1**: Create the static HTML structure and CSS styling for the layout (search bar, weather card).
  + **Phase 2**: Add JavaScript to handle user input and dynamically update the UI with weather data.
  + **Phase 3**: Integrate the OpenWeather API to fetch and display real-time weather information.
  + **Phase 4**: Refine the UI and ensure responsiveness across devices.
* **Best Practices**:
  + Use proper indentation and comments in the code for readability.
  + Break logic into functions (e.g., fetchWeather(), updateUI()).
  + Store the API key securely in a .env file or environment variables.
* **Version Control**:
  + Commit changes to Git after completing small tasks (e.g., "Added search bar styling").
  + Write meaningful commit messages (e.g., "Integrated OpenWeather API with error handling").
  + Conduct peer reviews before merging code into the main branch.

This phase transforms the design into a functional website through disciplined coding practices.