Problem Statement: Developing a Google Chrome Extension for HTTP Status Code and Redirect Detection

Objective:
To develop a Google Chrome extension that can detect and display the HTTP status code of a webpage. Additionally, the extension should be capable of tracking and displaying all redirects that occur until the final destination page is reached.

Requirements:

1. **HTTP Status Code Detection**:
   - The extension should be able to detect and display the HTTP status code (e.g., 200, 404, 301, etc.) of the currently visited webpage.

2. **Redirect Tracking**:
   - The extension should track all redirects that occur when navigating to a webpage, including intermediate redirects.
   - Each redirect should be logged with its respective HTTP status code and the URL it redirects to.

3. **User Interface**:
   - The extension should have a user-friendly interface that displays the current page's status code and a list of all redirects with their respective status codes and URLs.
   - The interface should be accessible via the Chrome extension toolbar.

4. **Performance**:
   - The extension should operate efficiently without significantly impacting the browser's performance.
   - It should handle multiple tabs and pages concurrently.

5. **Compatibility**:
   - The extension should be compatible with the latest version of Google Chrome.
   - It should adhere to Chrome's extension development guidelines and best practices.

Features:

- **Real-time Status Code Display**:
  - Display the HTTP status code of the active webpage in real-time.

- **Redirect Chain Visualization**:
  - Provide a visual representation of the redirect chain, showing each step from the initial request to the final destination.

- **Detailed Redirect Information**:
  - Show detailed information for each redirect, including the HTTP status code, source URL, and destination URL.

- **Error Handling**:

- Gracefully handle errors and display appropriate messages to the user.

Success Criteria:

- The extension accurately detects and displays HTTP status codes and redirect chains.
- The user interface is intuitive and responsive.
- The extension performs efficiently without significant performance degradation.
- Comprehensive documentation and user guide are provided.

This project aims to provide users with a powerful tool to understand the behavior of web pages and the nature of HTTP responses and redirects, enhancing their browsing experience and debugging capabilities.

Please try to share the assignment by this weekend !