The "Google Sheets" project can be broken down into 10 different modules, each with its own specific focus and challenges. Here's a breakdown of the project:

* Defining the UI Layout: In this module, you'll be designing the user interface (UI) for your spreadsheet application. This involves creating menus, formatting options, a formula bar, and a grid of cells with the ability to add multiple sheets. This step will help you enhance your CSS (Cascading Style Sheets) skills as you work on the visual aspects of your application.
* Binding Cell Properties: This module involves linking each cell in your spreadsheet with its properties. You'll need to handle formatting, formula assignments, and identification of cells, ensuring that the user's input is correctly associated with the respective cells.
* Parsing Formulas: To enable users to enter formulas, you'll need to implement a parser that can evaluate infix expressions. This involves using data structures like stacks to process and calculate the results of mathematical formulas entered by users.
* Deriving Dependency Relations: Understanding which cells depend on others is crucial for updating the spreadsheet dynamically. You'll use graph data structures to establish dependencies between cells based on the formulas entered in each cell.
* Detecting Cyclic Formulas: To prevent infinite loops and crashes, you'll implement an algorithm to detect cyclic dependencies within your cell formulas. This algorithm will work on directed graphs and ensure the integrity of your spreadsheet calculations.
* Integrating Detection Algorithm: This module involves integrating the cycle detection algorithm with every cell in your spreadsheet. It ensures that users are informed about cyclic dependencies and can correct them in their formulas.
* Visualizing Cyclic Paths: To enhance the user experience, you'll apply Depth-First Search (DFS) traversal to visually display the cyclic paths within your spreadsheet. This feature adds a significant layer of interactivity and requires a strong understanding of core JavaScript concepts.
* Managing Data Across Sheets: Your project should support multiple sheets, and this module focuses on managing data isolation between them. Users should be able to work on different sheets independently without data interference.
* Download and Upload Functionality: Enabling users to download and upload their sheets from anywhere is essential for real-world usability. Implementing synchronization ensures data consistency across devices and locations.
* Code Quality and Performance: Throughout the development process, it's crucial to maintain code consistency and reusability. Given that the dataset can potentially be large, optimizing code performance will be vital to ensure smooth user interactions.

Building this project will not only enhance your web development skills but also provide you with valuable experience in data structures, algorithms, and user interface design. It's a comprehensive project that covers a wide range of topics, making it a great learning opportunity for anyone looking to delve into web application development.