

Week 1.4

Lab Activity: JavaScript Hero: Object Mastery

Learning Objectives:

- Master the creation, manipulation, and advanced techniques of JavaScript objects to model real-world entities and data structures in your front-end applications.

Introduction:

In this lab, you'll build the JavaScript Hero, harnessing the power of objects to level up your front-end development skills. Objects are the building blocks of complex applications, allowing you to represent everything from characters in a game to user profiles in a web app. You'll tackle a series of challenges that progressively increase in difficulty, solidifying your understanding of key concepts.

Challenges:

1. Object Creation Basics:

- **Task:** Create an object representing a superhero with properties like `name`, `secretIdentity`, `powers` (an array), and `weakness`.

2. Methods and Functionality:

- **Task:** Add methods to the superhero object:
 - `usePower(powerName)` : Logs a message about the hero using a specific power.
 - `revealIdentity()` : Logs the hero's secret identity

3. Object Constructors:

- **Task:** Create a `Superhero` constructor function to streamline the creation of multiple superheroes.

4. Prototypal Inheritance:

- **Task:** Extend the functionality of your superheroes using prototypal inheritance.

5. Object Iteration and Transformation:

- **Task:** Use `forEach`, `map`, or `filter` to manipulate an array of superheroes and supervillains.

6. Advanced Challenge (Optional):

- **Task:** Design an interactive superhero battle simulator.

Evaluation:

- **Functionality:**
 - All functions should work
 - The advanced challenge should display a little UI to implement functionality
- **Code Quality:**
 - Clean, organized, and well-structured JavaScript code.
 - Effective use of functions for object operations.