**Task:** Implementing a Mobile Phone Inventory System using OOP

The task requires you to implement a mobile phone inventory system using Object-Oriented Programming (OOP) in PHP 8. The system should allow administrators to add, view, edit, and delete mobile phone information, such as brand, model, price, and availability.

Task is optimized to be completed in up to 4 hours (one evening) for internship candidates with proficiency in any programming language.

Bonus tasks are optional if you want additional challenge for yourself.

**Requirements**:

* Knowledge of OOP concepts and PHP programming language, specifically PHP 8 features
* Understanding of MySQL or another database management system
* Familiarity with web development concepts such as HTML, CSS, and JavaScript
* Basics of Git version control system

**Instructions:**

1. Design a database schema that can store information about mobile phones. The schema should include tables for mobile phone information, such as brand, model, price, and availability.
2. Create a PHP class called "MobilePhone" that represents a mobile phone and includes methods for adding, viewing, editing, and deleting mobile phone information. The class should use the PDO extension to interact with the database.
3. Create an HTML form that allows administrators to add new mobile phones to the inventory. The form should include fields for the phone's brand, model, price, and availability.
4. Create a PHP script that processes the input from the add mobile phone form and adds a new mobile phone to the database.
5. Create a PHP script that displays a list of all mobile phones in the inventory. The list should include each phone's brand, model, price, and availability, as well as links to edit or delete each phone.
6. Create HTML forms and PHP scripts that allow administrators to edit or delete mobile phones in the inventory. The edit form should allow administrators to modify a phone's information, while the delete script should remove a phone from the database.
7. Ensure that the system is secure and prevents unauthorized access to sensitive data. This may include validating user input, sanitizing output, and using prepared statements to prevent SQL injection attacks.
8. (BONUS) Create a CRUD REST API for mobile phone inventory.
9. (BONUS) Implement audit log. Record of every action (add, edit, delete) must be stored in database. Create a page listing all records.
10. (BONUS) Implement authorization mechanism (login system).

**Deliverables:**

* A functioning mobile phone inventory system using OOP in PHP 8
* A database schema that can store information about mobile phones
* A document detailing the design decisions made during the development process, as well as any security measures implemented.
* All code must be committed to git repository.

**Good luck!**