**1. Create a Database Table for Products**

* Write an SQL query to create a table named products that includes columns for id (primary key, auto-increment), name (string), description (text), price (decimal), stock (integer), and timestamps for created\_at and updated\_at.

**2. Create HomePage**

* In the home page there are 2 button : 1-Display All Products  
  2-Create new Product.

**3. Create a New Product**

* Write PHP code to handle product creation through a form, including fields for name, description, price, and stock.
* Implement validation to ensure:
  + Price must be a positive number.
  + Stock cannot be negative.
  + Name and Description cannot be empty.

**4. View All Products**

* Write PHP code to fetch and display all products in a table format, including product details such as name, price, stock, and actions to view, update, or delete each product.

**4. Update an Existing Product**

* Write PHP code to allow updating a product. The form should pre-fill with the product's current details (based on the product ID) and validate the input before updating it in the database.

**5. Delete a Product**

* Write PHP code to handle the deletion of a product based on its ID. After deletion, confirm that the product has been removed from the database.

**6. Create an API for Product CRUD Operations**

* Write a PHP-based API to manage products with the following methods:
  + **GET**: Fetch all products or details of a specific product.
  + **POST**: Add a new product.
  + **PUT**: Update an existing product.
  + **DELETE**: Remove a product.
* Ensure proper validation in the API (e.g., positive price, non-negative stock, non-empty name and description).