

# PHP Lab Manual : Error and Exception Handling Lab Exercise

Duration: 45 minutes

## Objective:

Practice implementing error handling mechanisms and custom exceptions in PHP.

## Requirements:

- PHP environment (like XAMPP/WAMP or a similar setup).
- Text editor or IDE for writing PHP code.

## Exercise Description:

### 1. Error Handling Practice:

- Write a PHP script that intentionally contains a couple of common errors (e.g., an undefined variable, division by zero).
- Implement error handling using `error_reporting()`, `try-catch` blocks, and a custom error handler function.
- Ensure the script logs errors to a file instead of displaying them on the screen.

### 2. Custom Exception Creation:

- Define a custom exception class named `DataValidationException`.
- Add a custom method to this class that returns an error message with additional context (e.g., the name of the invalid field).

### 3. Exception Handling Scenario:

- Create a PHP function that simulates data validation and throws `DataValidationException` when invalid data is encountered.
- Call this function in a `try` block. Use multiple `catch` blocks to handle `DataValidationException` and other potential exceptions separately.
- The `catch` block for `DataValidationException` should call the custom method you added to display a detailed error message.

### 4. Testing and Debugging:

- Test your script with both valid and invalid data to ensure it behaves as expected.
  - Handle any uncaught exceptions with a final `catch` block that catches `Throwable`.
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