

Technical Evaluation Exercise

Here is a small code sample for a CRUD user service:

```
<?php
header('Content-Type: text/plain');

$mysqli = new mysqli("example.com", "user", "password", "database");

if (isset($_GET['userId']) && isset($_POST['name'])) {
    $updated = date('Y-m-d');
    $mysqli->query("UPDATE users SET name = '{$_POST['name']}', year_of_birth = {$_POST['yearOfBirth']}, updated = '{$_POST['yearOfBirth']}' WHERE id = {$_POST['userId']}");

    echo 'User has been updated!';
} else if (isset($_POST['name'])) {
    $created = date('Y-m-d');
    $mysqli->query("INSERT INTO users (name, year_of_birth, created) VALUES ({$_POST['name']}, {$_POST['yearOfBirth']}, '{$_POST['yearOfBirth']}')");
    $id = $mysqli->insert_id;
    echo "New user with id '$id' has been created.";
} else if (isset($_GET['userId'])) {
    $res = $mysqli->query("SELECT * FROM users WHERE id = {$_GET['userId']}");
    $row = $res->fetch_assoc();
    echo "This is {$row['name']}, born in {$row['year_of_birth']}.";
}
```

Goals

The above code is very concise, but it comes with a fair share of issues.

Set up a sample PHP project and rewrite the above service with the following goals:

- Make it testable.

- Fix any security issues.
- Make it as type-safe as possible.
- Make it extensible.
- Allow to run it without an actual database connection.
- Use correct HTTP response status codes (200, 201, 400, 404, 500).
- Add unified error handling so a user never gets to see a system error message.

Non-Goals

These things are NOT goals of this exercise:

- URI parsing to find controller methods. A basic proof-of-concept is enough.
- Writing any HTML or structured output. Your implementation should return the same output as the sample code.

Constraints

Solve this exercise assuming this environment:

- PHP 8.0 or above.
- Composer for dependency management.
- PHPUnit or any other testing framework of your choice.
- No third-party web framework (using third-party libraries for individual tasks is fine, please elaborate on why you decided to use them if you do).