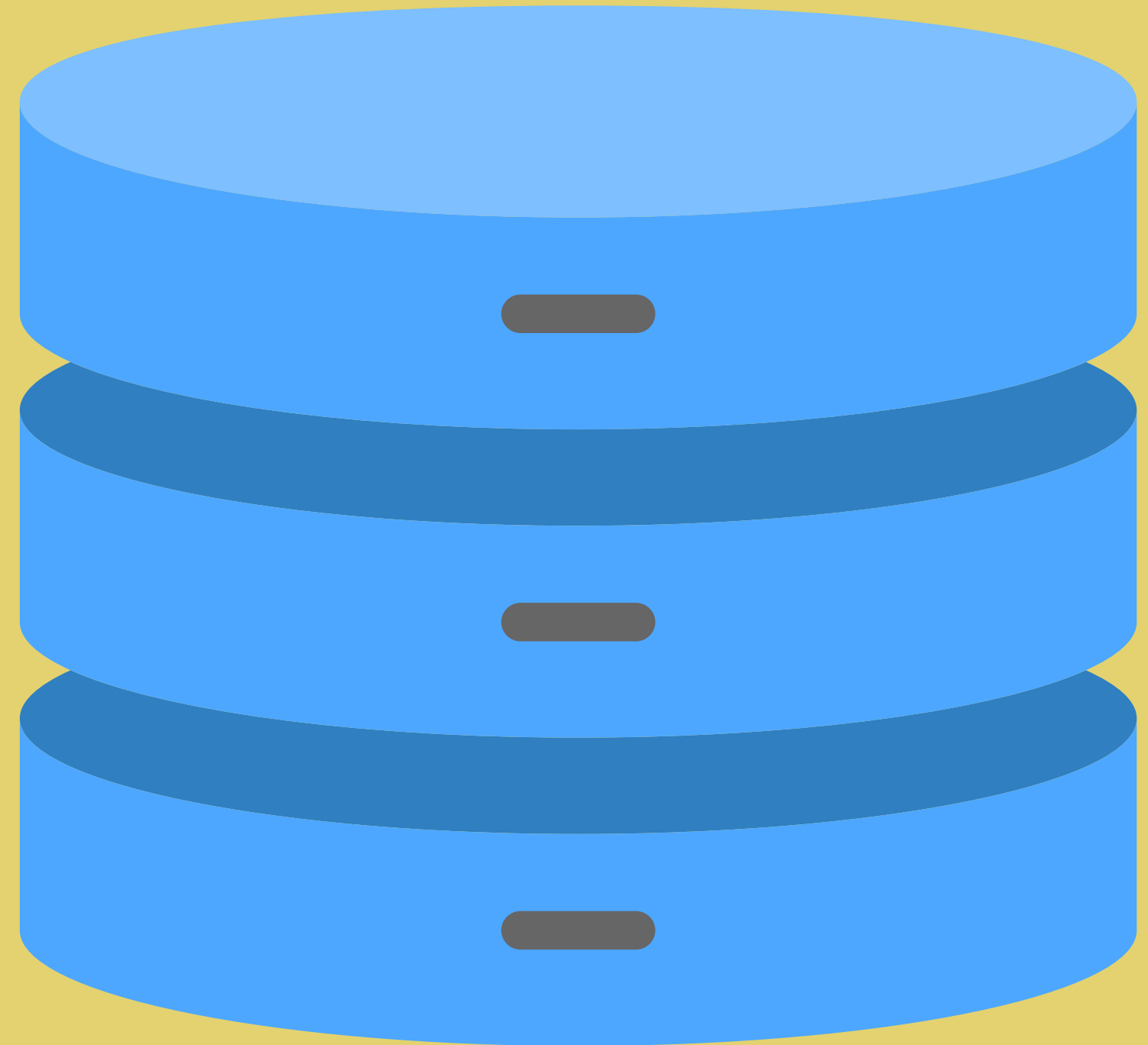


Laboratorul 6

Tehnologii Web



Baze de date in PHP



Obiectivele laboratorului



**XAMPP and
phpMyAdmin**



MySQLi



PDO



CRUD in DB

XAMPP and phpMyAdmin





XAMPP Control Panel v3.2.2

Config

Netstat

Shell

Explorer

Services

Help

Quit

Service	Module	PID(s)	Port(s)	Actions
<input type="checkbox"/>	Apache	6384 21924	80, 443	<input type="button" value="Stop"/> <input type="button" value="Admin"/> <input type="button" value="Config"/> <input type="button" value="Logs"/>
<input type="checkbox"/>	MySQL	14168	3306	<input type="button" value="Stop"/> <input type="button" value="Admin"/> <input type="button" value="Config"/> <input type="button" value="Logs"/>
<input type="checkbox"/>	FileZilla			<input type="button" value="Start"/> <input type="button" value="Admin"/> <input type="button" value="Config"/> <input type="button" value="Logs"/>
<input type="checkbox"/>	Mercury			<input type="button" value="Start"/> <input type="button" value="Admin"/> <input type="button" value="Config"/> <input type="button" value="Logs"/>
<input type="checkbox"/>	Tomcat			<input type="button" value="Start"/> <input type="button" value="Admin"/> <input type="button" value="Config"/> <input type="button" value="Logs"/>

```

1:21:15 PM [main] Initializing Control Panel
1:21:15 PM [main] Windows Version: Enterprise 64-bit
1:21:15 PM [main] XAMPP Version: 7.2.9
1:21:15 PM [main] Control Panel Version: 3.2.2 [ Compiled: Nov 12th 2015 ]
1:21:15 PM [main] You are not running with administrator rights! This will work for
1:21:15 PM [main] most application stuff but whenever you do something with services
1:21:15 PM [main] there will be a security dialogue or things will break! So think
1:21:15 PM [main] about running this application with administrator rights!
1:21:15 PM [main] XAMPP Installation Directory: "s:\xampp\"
1:21:15 PM [main] Checking for prerequisites
1:21:16 PM [main] All prerequisites found
1:21:16 PM [main] Initializing Modules
1:21:16 PM [main] Starting Check-Timer
1:21:16 PM [main] Control Panel Ready
1:21:18 PM [Apache] Attempting to start Apache app...
1:21:18 PM [Apache] Status change detected: running
1:21:20 PM [mysql] Attempting to start MySQL app...
1:21:21 PM [mysql] Status change detected: running
    
```

Control Panel

phpMyAdmin

The screenshot displays the phpMyAdmin interface for a MySQL server. The top navigation bar includes tabs for Databases, SQL, Status, Users, Export, Import, Settings, Replication, Variables,Charsets, and Engines. The main content area is divided into several sections:

- General Settings:** Includes a "Change password" link and a dropdown for "Server connection collation" set to "utf8mb4_general_ci".
- Appearance Settings:** Includes a "Language" dropdown set to "English", a "Theme" dropdown set to "pmahomme", and a "Font size" dropdown set to "82%". A "More settings" link is also present.
- Web server:** Lists details such as "nginx/1.2.1", "Database client version: libmysql - 5.5.40", and "PHP extension: mysqli".
- phpMyAdmin:** Lists version information (4.3.0), Git revision, and links to documentation, Wiki, Official Homepage, and other resources.

On the left side, there is a sidebar with a "Recent" and "Favorites" section, a search box for databases, and a tree view of databases including "New", "#", "airlineflights", "Alus", "aqlegendary", "aseguradora", "BD2", "br", "christmasevents", "CSV_DB", "Databaseregister", "dbname", "DBO", "demo", "dragonb", "ducon", "elostudios", "Ganges", "hamza", "hamza.kuri", "information_schema", "ITEC3020", "kekec", and "Koledj_BNV".

At the bottom, there is a "Console" area with the text "Press Ctrl+Enter to execute query" and a prompt ">|".

SQL scripts

```
-- Create database
CREATE DATABASE IF NOT EXISTS lab7;

-- Create user with privileges for lab7 database
CREATE USER 'php'@'localhost' IDENTIFIED BY 'php';
GRANT ALL PRIVILEGES ON lab7.* TO 'php'@'localhost';
FLUSH PRIVILEGES;

-- Switch to lab7 database
USE lab7;

-- Create users table
CREATE TABLE IF NOT EXISTS users (
    id INT AUTO_INCREMENT PRIMARY KEY,
    name VARCHAR(255) NOT NULL,
    email VARCHAR(255) NOT NULL
);
```


MySQLi

```
// Database connection parameters
$servername = "localhost";
$username = "lab7";
$password = "php";
$database = "lab7";

// Create connection
$conn = new mysqli($servername, $username, $password, $database);

// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}
```


MySQLi

```
// Database connection parameters
$servername = "localhost";
$username = "lab7";
$password = "php";
$database = "lab7";

// Create connection
$conn = new mysqli($servername, $username, $password, $database);

// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

// Close connection
$conn->close();
```

SQL Injection

```
// Sanitize and retrieve username from GET parameter
$username = $_GET['name'];

//SQL Injection
//name=' OR '1'='1
// Construct SQL query
$sql = "SELECT * FROM users WHERE name = '$username'";

// Execute the query
$result = $conn->query($sql);
```

PDO

```
// Establish database connection using PDO
$dsn = "mysql:host=".DB_SERVER.";dbname=".DB_NAME;
$pdo = new PDO($dsn, DB_USERNAME, DB_PASSWORD);

// Set PDO error mode to exception
$pdo->setAttribute(PDO::ATTR_ERRMODE, PDO::ERRMODE_EXCEPTION);

// Construct SQL query
$sql = "SELECT * FROM users WHERE name = :username";
```

PDO

```
// Prepare the SQL statement
$stmt = $pdo->prepare($sql);

// Bind parameter
$stmt->bindParam(':username', $username, PDO::PARAM_STR);

// Execute the prepared statement
$stmt->execute();
```

PDO

```
// Fetch all rows from the result set
$rows = $stmt->fetchAll(PDO::FETCH_ASSOC);

// Check if user exists
if ($rows) {
    // Loop through the rows
    foreach ($rows as $row) {
        // Output user details
        echo "User ID: " . $row['id'] . "<br>";
        echo "Name: " . $row['name'] . "<br>";
        echo "Email: " . $row['email'] . "<br>";
        echo "<br>";
    }
}
```

DB config file

```
<?php
// Database configuration constants
define('DB_SERVER', 'localhost');
define('DB_USERNAME', 'lab7');
define('DB_PASSWORD', 'php');
define('DB_NAME', 'lab7');
?>

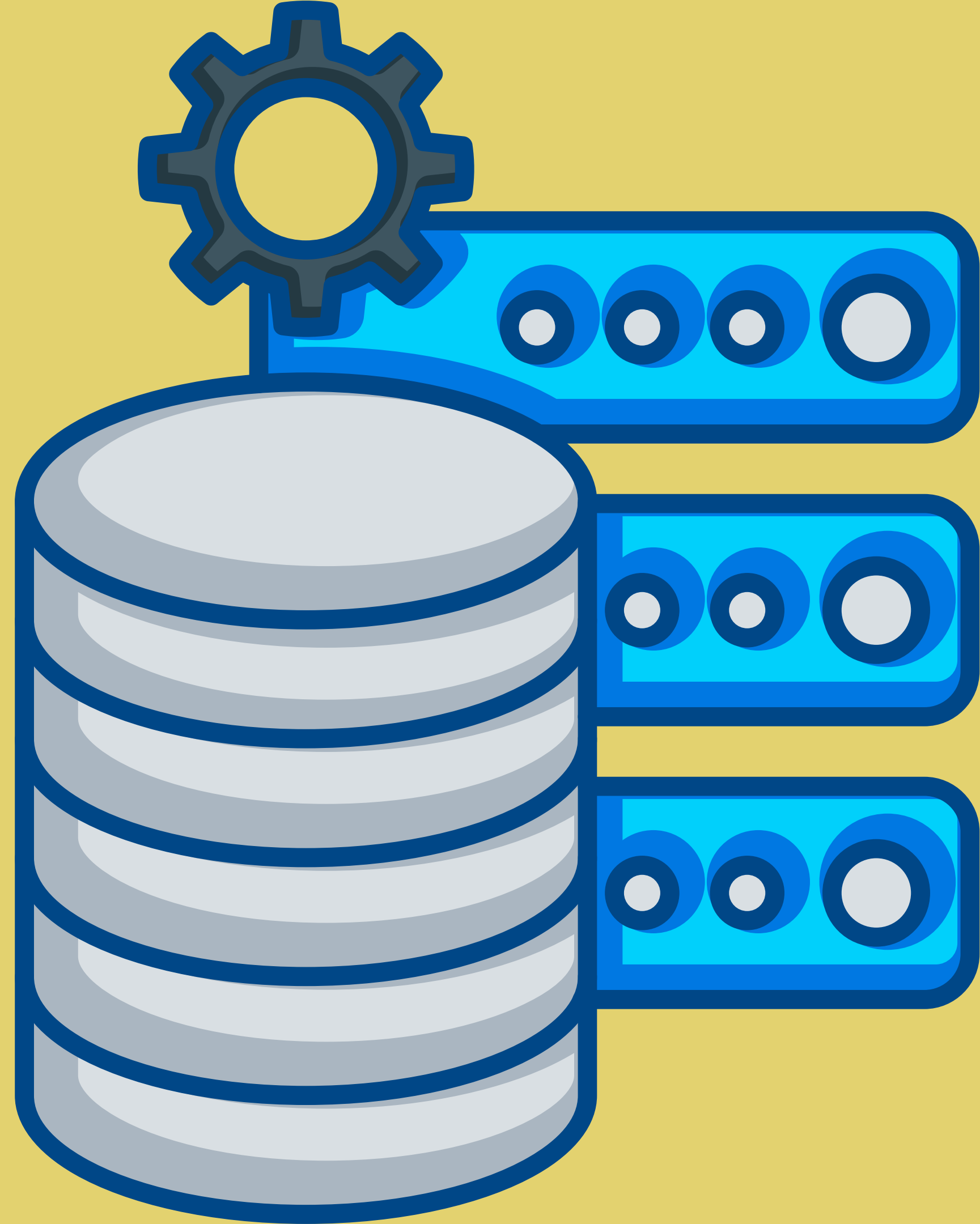
// Include database configuration
require_once 'config.php';
```

DB config file

```
<?php
// Database configuration constants
define('DB_SERVER', 'localhost');
define('DB_USERNAME', 'lab7');
define('DB_PASSWORD', 'php');
define('DB_NAME', 'lab7');
?>

// Include database configuration
require_once 'config.php';
```


**CRUD
operations**



CRUD

```
public function getUserById($id) {
    try {
        $sql = "SELECT * FROM users WHERE id = :id";
        $stmt = $this->pdo->prepare($sql);
        $stmt->bindParam(':id', $id, PDO::PARAM_INT);
        $stmt->execute();
        $user = $stmt->fetch(PDO::FETCH_ASSOC);
        return $user;
    } catch (PDOException $e) {
        echo "Error fetching user: " . $e->getMessage();
        return null;
    }
}

public function addUser($name, $email) {
    try {
        $sql = "INSERT INTO users (name, email) VALUES (:name, :email)";
        $stmt = $this->pdo->prepare($sql);
        $stmt->bindParam(':name', $name, PDO::PARAM_STR);
        $stmt->bindParam(':email', $email, PDO::PARAM_STR);
        $stmt->execute();
        return true;
    } catch (PDOException $e) {
        echo "Error adding user: " . $e->getMessage();
        return false;
    }
}
```

CRUD

```
<h2>User Details</h2>
<?php
// Check if user ID is provided in the URL
if (isset($_GET['id'])) {
    // Get user ID from URL
    $userId = $_GET['id'];

    // Instantiate User class
    $user = new User();

    // Get user details by ID
    $userDetails = $user->getUserById($userId);

    if ($userDetails) {
        echo "<p><strong>ID:</strong> {$userDetails['id']}</p>";
        echo "<p><strong>Name:</strong> {$userDetails['name']}</p>";
        echo "<p><strong>Email:</strong> {$userDetails['email']}</p>";
        echo "<br><a href='users.php'>&laquo; Back to Users</a>";
    } else {
        echo "User not found.";
    }
} else {
    echo "User ID not provided.";
}
```


Exerciții

**“LEARNING NEVER
EXHAUSTS THE MIND.”**

— Leonardo da Vinci