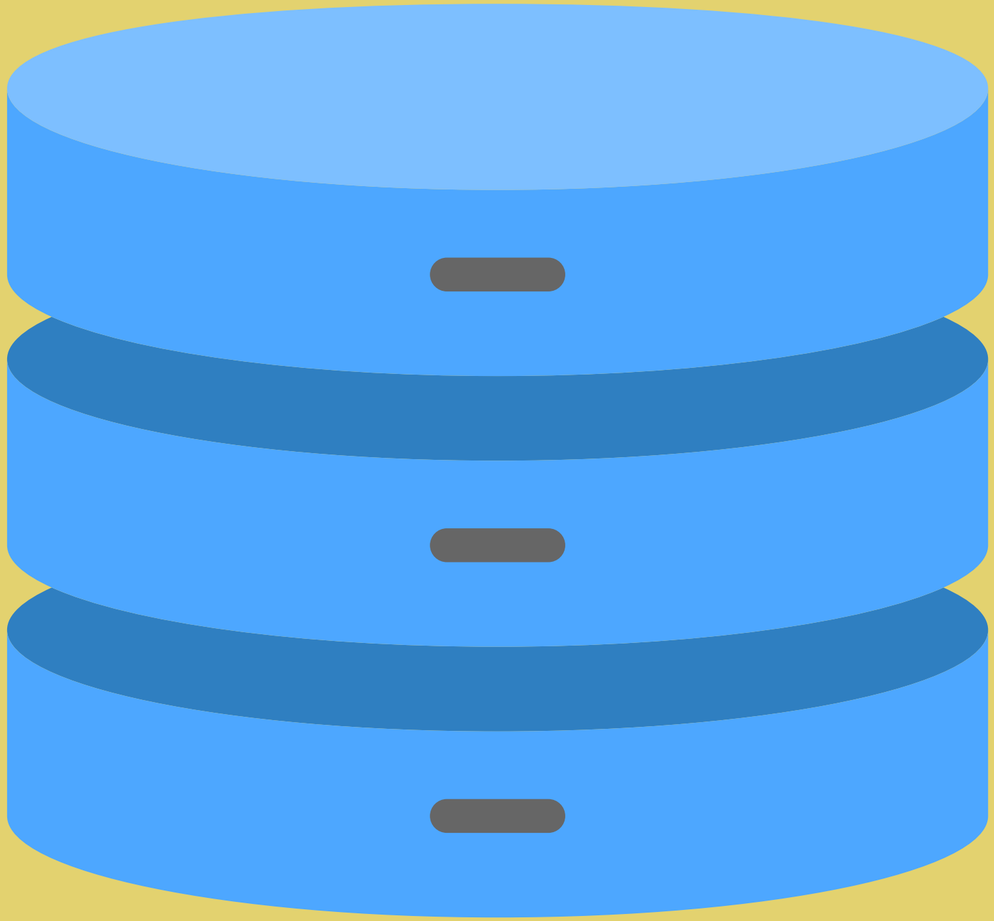
Laboratorul 6

Tehnologii Web

Baze de date in PHP



Obiectivele laboratorului

XAMPP and phpMyAdmin

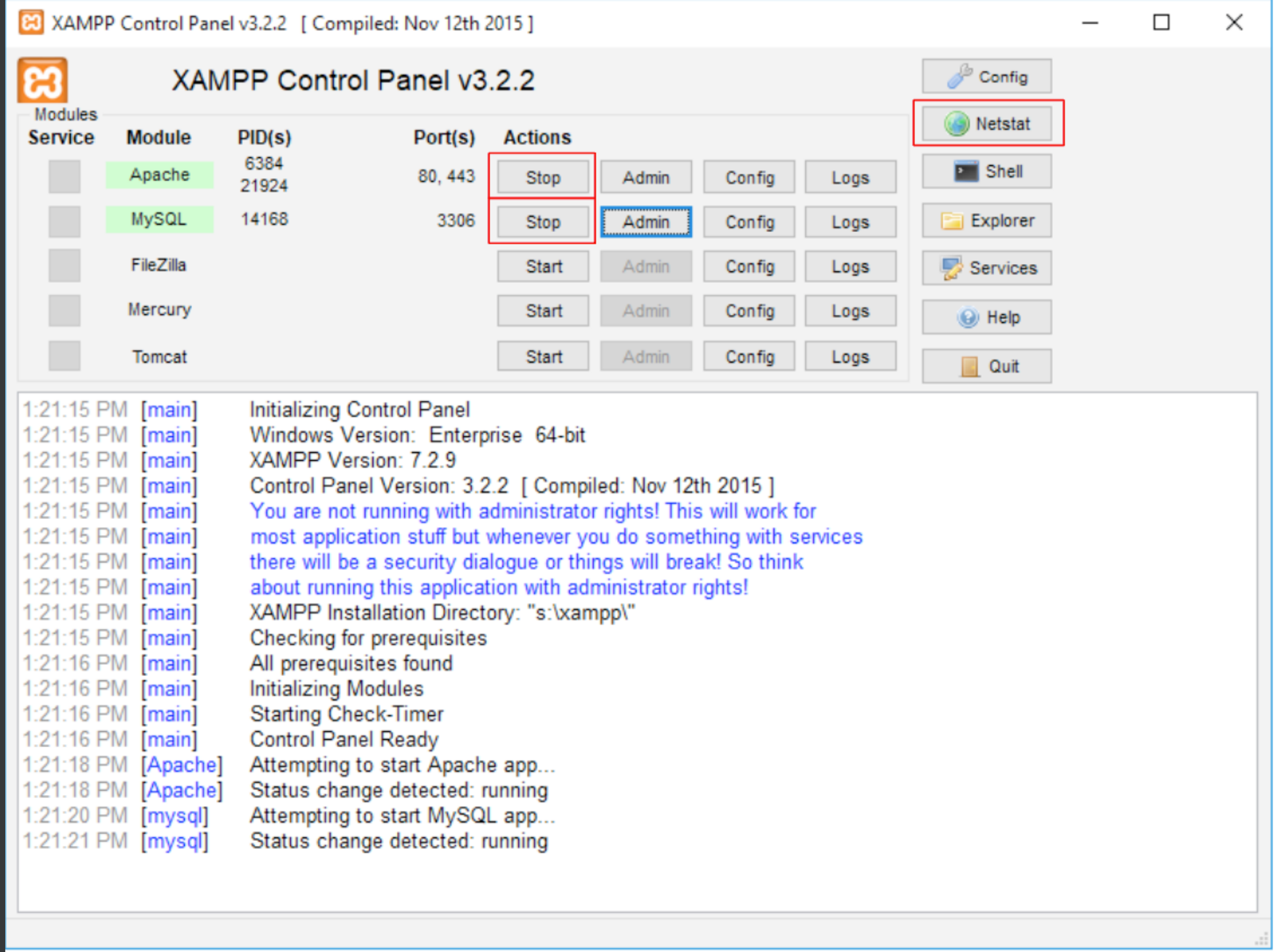
MySQLi

PDO

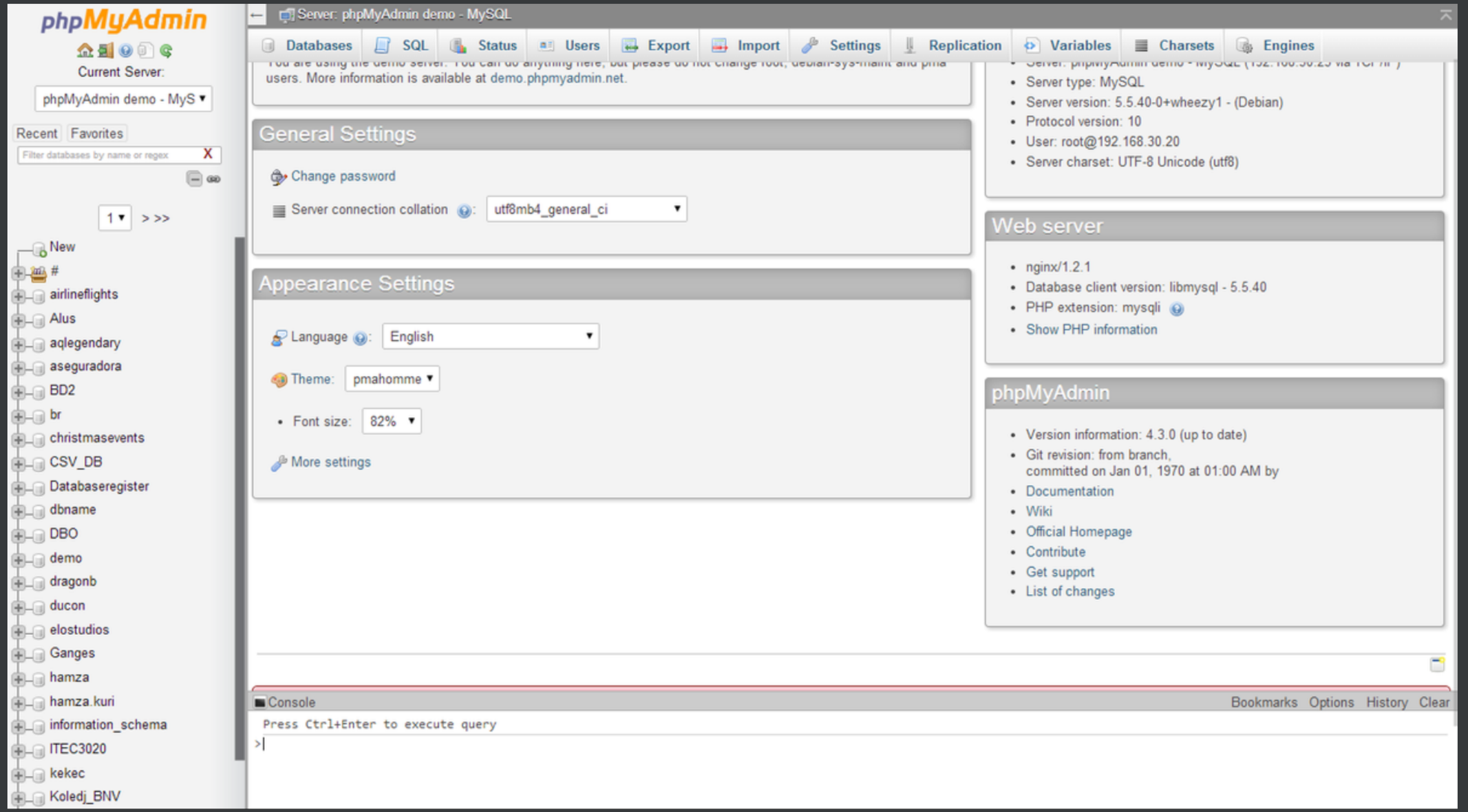
CRUD in DB

XAMPP and phpMyAdmin

Control Panel



phpMyAdmin


phpMyAdmin
Current Server:
phpMyAdmin demo - MyS
Recent
Favorites
Filter databases by name or regex
1
> >>
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
Koledj_BNV
Server: phpMyAdmin demo - MySQL
Databases
SQL
Status
Users
Export
Import
Settings
Replication
Variables
Charsets
Engines
users. More information is available at demo.phpmyadmin.net.
General Settings
Change password
Server connection collation:
utf8mb4_general_ci
Appearance Settings
Language:
English
Theme:
pmahomme
Font size:
82%
More settings
Server type: MySQL
Server version: 5.5.40-0+wheezy1 - (Debian)
Protocol version: 10
User: root@192.168.30.20
Server charset: UTF-8 Unicode (utf8)
Web server
nginx/1.2.1
Database client version: libmysql - 5.5.40
PHP extension: mysqli
Show PHP information
phpMyAdmin
Version information: 4.3.0 (up to date)
Git revision: from branch,
committed on Jan 01, 1970 at 01:00 AM by
Documentation
Wiki
Official Homepage
Contribute
Get support
List of changes
Console
Bookmarks
Options
History
Clear
Press Ctrl+Enter to execute query
>

SQL scripts

```sql
-- 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

```php
// 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);
}
```

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}

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

SQL Injection

```php
// 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

```php
// 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

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

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

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

PDO

```php
// 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
<?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';
```

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define('DB_USERNAME', 'lab7');
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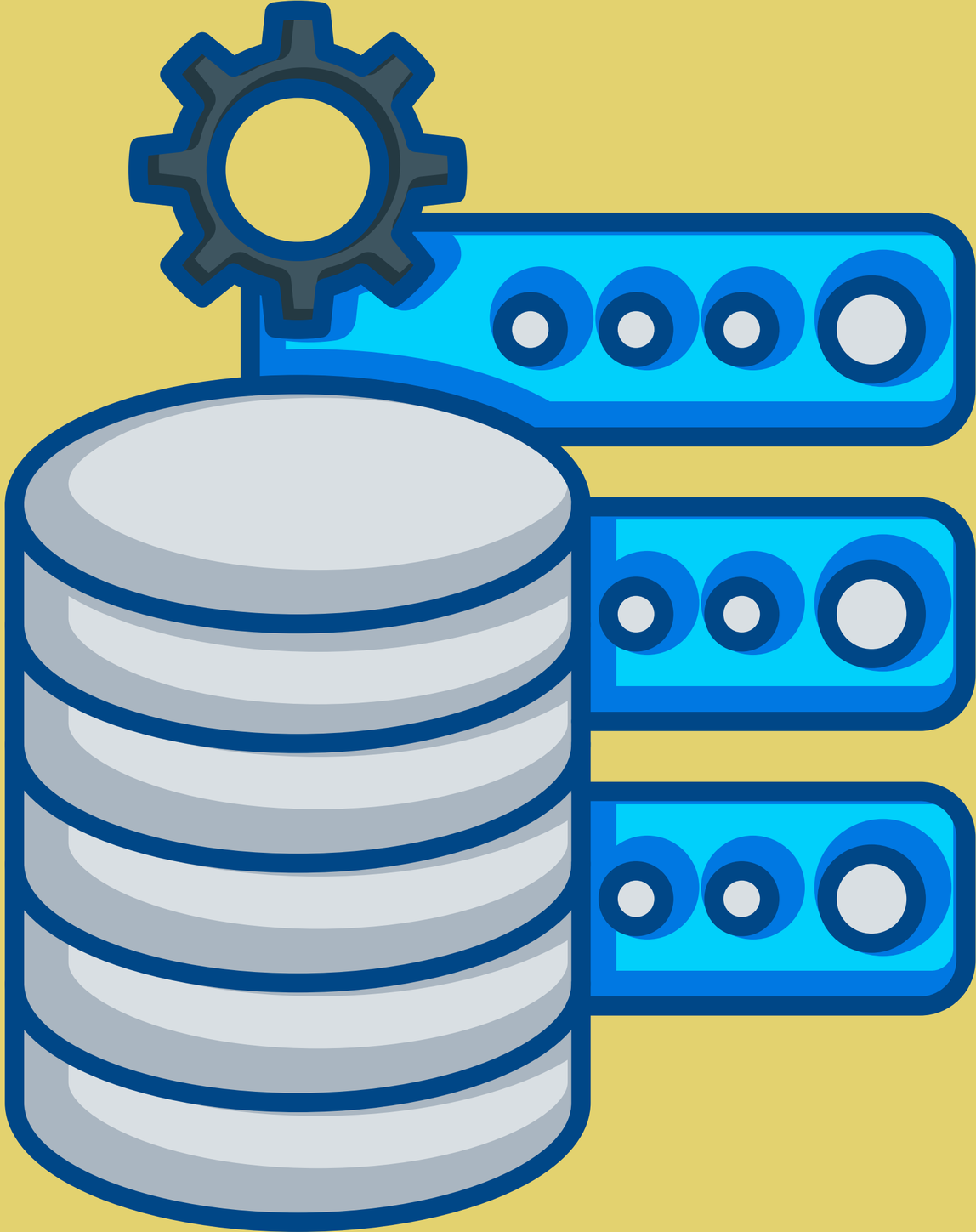
CRUD operations



CRUD

```php
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