

## Explanation of Changes

### 1. Encapsulation and Class Design

The code is refactored into a UserManager class, encapsulating all user management operations. This adheres to the **Single Responsibility Principle (SRP)**, as each method within the class has one responsibility.

### 2. SQL Injection Prevention

Prepared statements (\$stmt->bind\_param) are used to prevent SQL injection attacks, replacing the vulnerable string concatenation in SQL queries.

### 3. Method Separation

The operations (addUser, deleteUser, updateUser, listUsers) are separated into different methods, making the code more modular and easier to maintain. This change adheres to the **Open/Closed Principle (OCP)**, as the class is open for extension but closed for modification.

### 4. Error Handling

Added basic error messages for operation failures, making the code more user-friendly and informative.

### 5. Naming Conventions

Variables and methods are renamed to be more descriptive (\$u to \$user, op to operation). This makes the code more readable and easier to understand.

### 6. SQL Queries

Moved away from concatenated SQL queries to prepared statements, which is a best practice for both security and readability.