Data Protection

# **Prepared Statements**

* I used these in my project 2.

**Functionality:** Using prepared statements not only boosts performance but also significantly increases security by separating SQL code from data. This separation prevents attackers from injecting malicious SQL code through user inputs.

**Code Snippet:**

**A screen shot of a computer

Description automatically generated**

# **Input Validation**

* Usage Project 2

**Functionality:** Validates user input against a set of rules (e.g., type, format, length). Inputs that fail validation are rejected, which is crucial for preventing injection and other forms of data corruption.

**Code Snippet:**

**A screen shot of a computer code

Description automatically generated**

# **Role-based Access Control**

* Usage Project 2

**Functionality:** Implements policies for handling database access permissions based on user roles, ensuring that users can only access data necessary for their role.

**Code Snippet:**

**A screen shot of a computer program

Description automatically generated**

# **Regular Security Audits**

* Usage Peer to Peer Communication.

**Functionality:** Regularly checks and updates the security measures to adapt to new threats, ensuring continuous protection of data.

**Code Snippets:**

**A screen shot of a computer code

Description automatically generated**