PHP and MySQL for Dynamic Web Sites **4th Edition**

Ch 9
Using PHP with MySQL

LEARN THE QUICK AND EASY WAY!

Goals

At the end of this unit, you will be able to:

- Connect to a MySQL database

- Execute simple queries

- Access MySQL errors
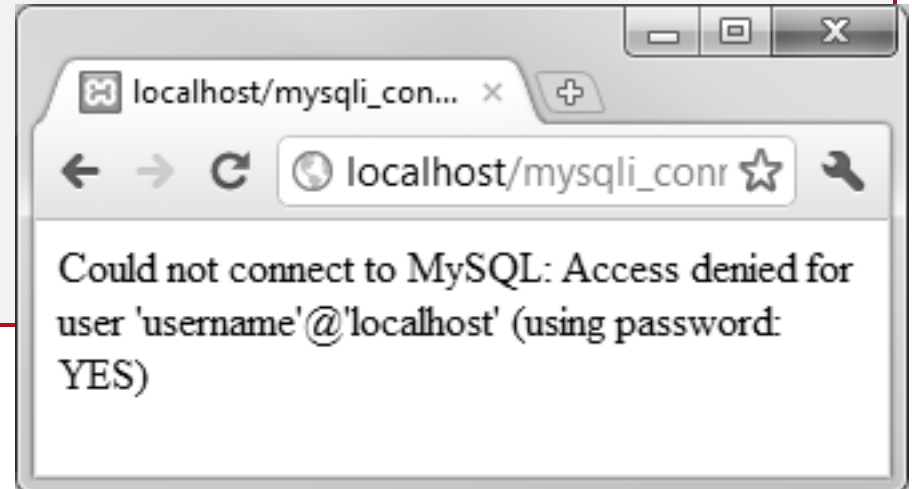
- Retrieve query results
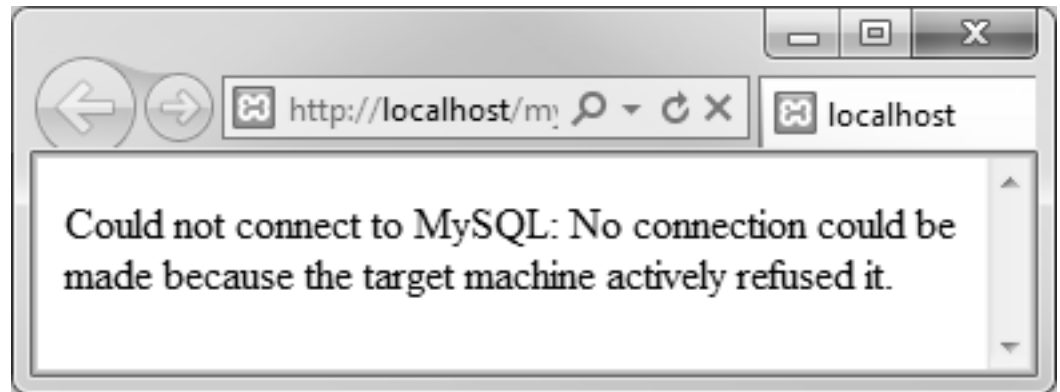
Goals

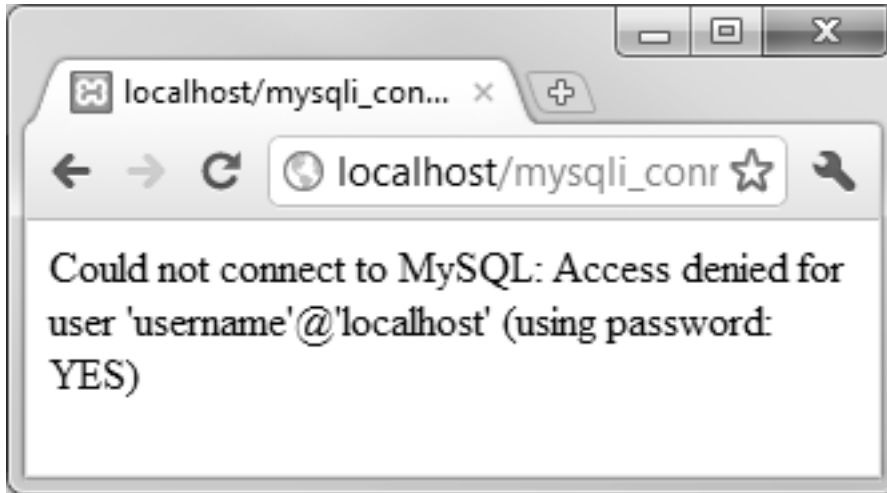At the end of this unit, you will be able to

- Use MySQL securely

- Count rows returned by a SELECT query

- Count rows affected by an INSERT, UPDATE, or DELETE query

Connecting to MySQL

```
$dbc = mysqli_connect (hostname, username, password, db_name);

mysqli_set_charset($dbc, 'utf8');

$dbc = @mysqli_connect (DB_HOST, DB_USER, DB_PASSWORD, DB_NAME)
OR die ('Could not connect to MySQL: ' . mysqli_connect_error() );
```


Could not connect to MySQL: Access denied for user 'username'@'localhost' (using password: YES)

Connection Errors

Protecting Access

some folder

mysqli_connect.php

htdocs

index.php

http://www.example.com
points here

register.php

includes

header.html

footer.html
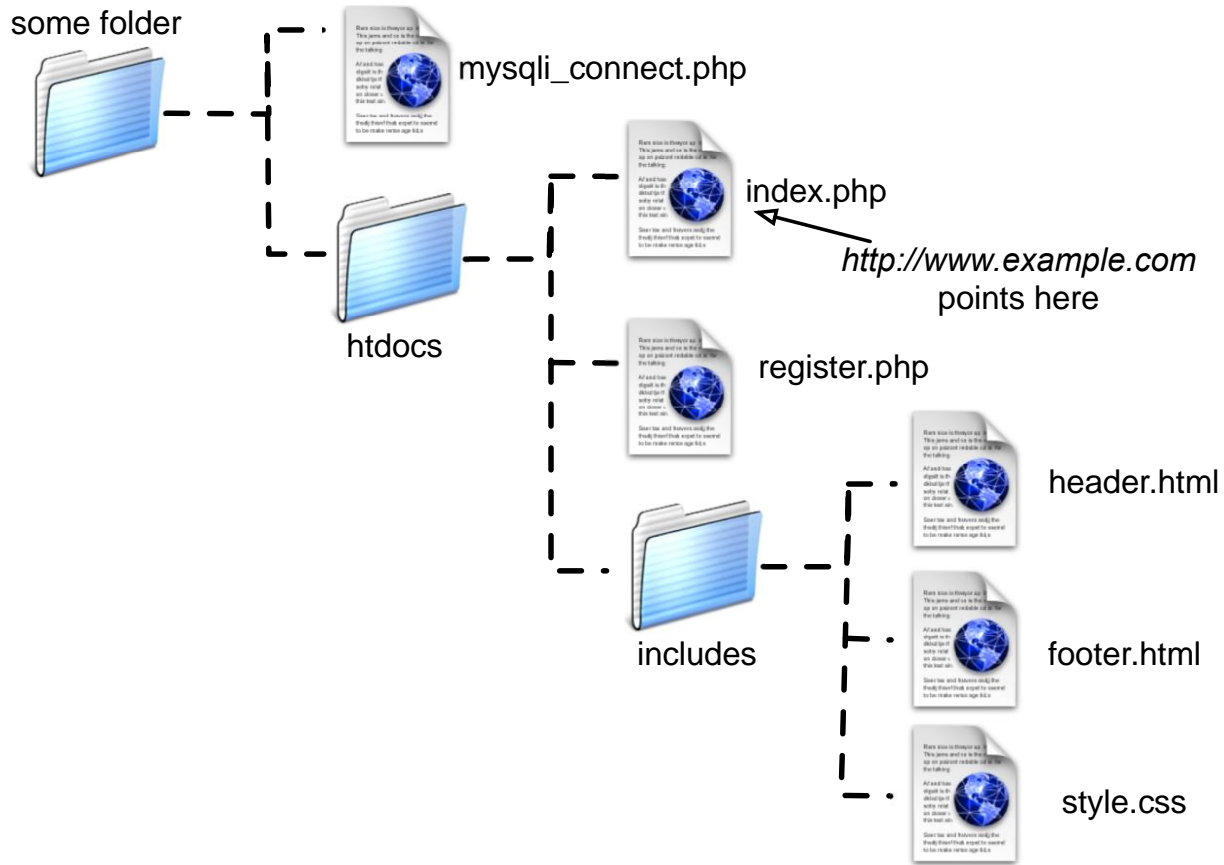
style.css

Executing Simple Queries

```
result = mysqli_query(dbc, query);

$r = mysqli_query($dbc, $q);

if ($r) { // Worked!
        // Do whatever.
} else {
        echo mysqli_error($dbc);
}

mysqli_close($dbc);
```

System Error

You could not be registered due to a system error. We apologize for any inconvenience.

Unknown column 'password' in 'field list'

Query: INSERT INTO users (first_name, last_name, email, password, registration_date) VALUES ('John', 'Doe', 'jd@example.net', SHA1('pass'), NOW())

Retrieving Query Results

```
while ($row = mysqli_fetch_array($r)) {
        // Do something with $row.
}


mysqli_free_result ($r);
```

Retrieving Query Results

Constant	Example
MYSQLI_ASSOC	$row['*column*']
MYSQLI_NUM	$row[0]
MYSQLI_BOTH	$row['*column*'] or $row[0]

```
while ($row = mysqli_fetch_array($r, MYSQLI_NUM)) {
        // Do something with $row[0], $row[1], etc.
}
```

Ensuring Secure SQL

- Protect MySQL access information
- Don't reveal too much about the database
- Watch user-submitted data in queries

Sanctifying Data

```
$safe = mysqli_real_escape_string($dbc, data);
```

System Error

You could not be registered due to a system error. We apologize for any inconvenience.

You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'Toole', 'pete@example.net', SHA1('pass'), NOW())' at line 1

Query: INSERT INTO users (first_name, last_name, email, pass, registration_date) VALUES ('Peter', 'O'Toole', 'pete@example.net', SHA1('pass'), NOW())

Counting Returned Records

```
$num = mysqli_num_rows($r);
```

Registered Users

There are currently 26 registered users.

Name	Date Registered
Ullman, Larry	March 31, 2011
Isabella, Zoe	March 31, 2011
Starr, Ringo	March 31, 2011
Harrison, George	March 31, 2011

Counting Affected Records

```
$num = mysqli_affected_rows($dbc);


$q = "UPDATE users SET pass=SHA1('$np') WHERE user_id=$row[0]";
$r = @mysqli_query($dbc, $q);
if (mysqli_affected_rows($dbc) == 1) {
        echo '<h1>Thank you!</h1>
        <p>Your password has been updated. In Chapter 12 you will actually
be able to log in!</p><p><br /></p>';
```

Questions???