LECTURE 8 – ICT1233
PHP/ MYSQLI

Department of ICT
Faculty of Technology

Objectives

■ After the successful completion of this lecture, students should be able to,

  -*Use mysqli functions for web development*

Opening and Closing a MySQL Connection

- Open a connection to a MySQL database server with the mysqli_connect() function

- The mysqli_connect() function returns a positive integer if it connects to the database successfully or FALSE if it does not

- Assign the return value from the mysqli_connect() function to a variable that can use to access the database in the script

Opening and Closing a MySQL Connection (continued)

- The syntax for the mysqli_connect() function is:

  $connection = mysqli_connect("host" [,"user", "password"[,"database"]]);

- The host argument specifies the host name where the MySQL database server is installed

- The user and password arguments specify a MySQL account name and password

- You can optionally select the database after the connection

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Opening and Closing a MySQL Connection (continued)

- The database connection is assigned to the $DBConnect variable

  $DBConnect = mysqli_connect("localhost", "root", "");

- Close a database connection using the mysqli_close() function

  mysqli_close($DBConnect);

Example

```
$host='localhost';
$userName = root';
$password = 123';

$link = mysqli_connect ($host, $userName, $password) ;

if (!$link) {
    die('Could not connect: ' . mysqli_error($link));
}

echo 'Connected successfully';

mysqli_close($link);
```

Example

```php
<?php

    $link = mysqli_connect('localhost', 'mysql_user', 'mysql_password');
    if (!$link) {
        die('Not connected : ' . mysqli_error($link));
    }

    // make library the current db
    $db_selected = mysqli_select_db($link,'library');

    if (!$db_selected) {
        die ('Can't use library : ' . mysqli_error($link));
    }
?>
```

Example - Adding Records

```php
<?php
    $con = mysqli_connect("localhost","root","");
    if (!$con)
      {
        die('Could not connect: ' . mysqli_error($con));
      }
    mysqli_select_db($con, "library");

    mysqli_query($con, "INSERT INTO book(Title, Author,No_of_copies)
    VALUES ('PHP Basics', 'Longbottom', 35)");

    mysqli_close($con);
?>
```

Example - Updating Records

```php
<?php
    $con = mysqli_connect("localhost","root","");
    if (!$con)
      {
        die('Could not connect: ' . mysqli_error($con));
      }
    mysqli_select_db($con,"library");

    mysqli_query($con,"UPDATE book SET No_of_copies='20'
    WHERE Title= ' PHP Basics ' AND Author= 'Longbottom'");

    mysqli_close($con);
?>
```

Retrieving Records into an Indexed Array

- The mysqli_fetch_row() function returns the fields in the current row of a result set into an indexed array and moves the result pointer to the next row

```
while($row = mysqli_fetch_row($result1)){

        echo "<tr>";
        echo "<td>".$row[0]."</td>";
        echo "<td>".$row[1]."</td>";
        echo "<td>".$row[2]."</td>";
        echo "<td>".$row[3]."</td>";
        echo "</tr>";
}
```

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Example: mysqli_affected_rows()

```php
$QueryResult = mysqli_query($con,"UPDATE book SET
No_of_copies='20' WHERE Title= ' PHP Basics ' AND Author=
'Longbottom'");


if ($QueryResult == FALSE)

echo "<p>Unable to execute the query.</p>"

. "<p>Error code " . mysqli_errno($con). ": " . mysqli_error($con) "</p>";

else

echo "<p>Successfully updated ". mysqli_affected_rows($con) .
"record(s).</p>";

mysqli_close($con);
```

Example: mysqli_info() Function

```
$sql2= "INSERT INTO BOOK VALUES ('0077862589','Organizational
    behavior','Shane Steven',10),('0321573513','Algorithms','Kevin
    Wayne',15)";
$result2=mysqli_query($con,$sql2);

if(!$result2){
    echo "Error code".(mysqli_errno($con)).":".mysqli_error($con);
}
else {
    echo "<p>Successfully added the record.</p>";
    echo "<p>" . mysqli_info($con) ."</p>";
}
mysqli_close($con);
```
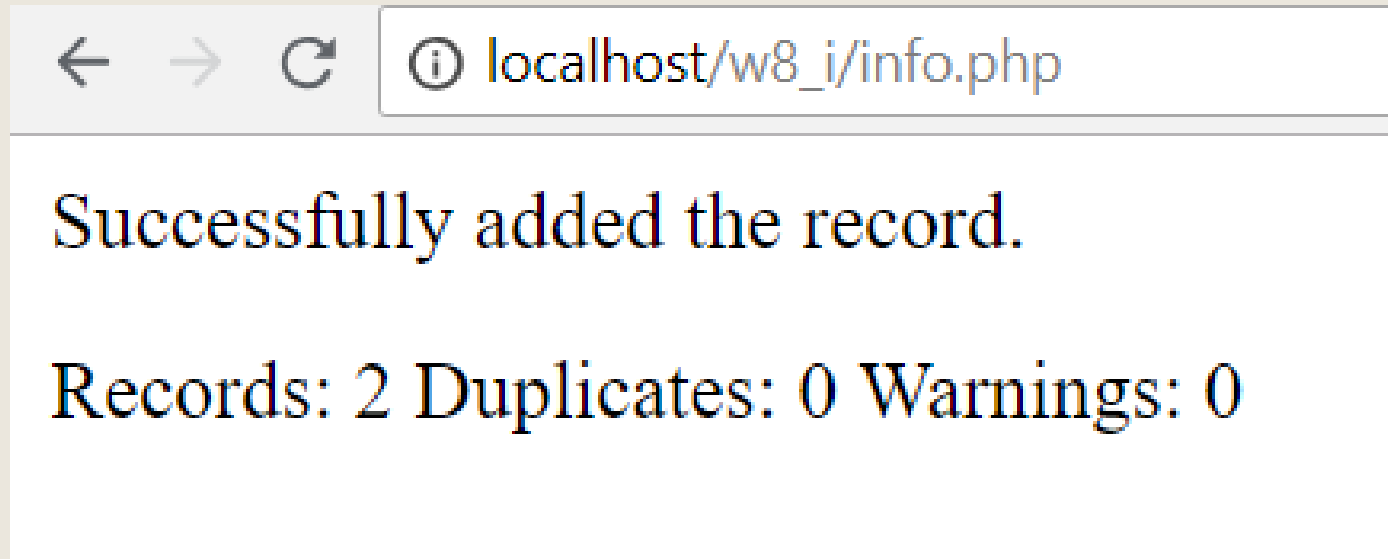
Output: mysqli_info() Function

Retrieving Records into an Associative Array

- The mysqli_fetch_assoc() function returns the fields in the current row of a resultset into an associative array and moves the result pointer to the next row

- mysqli_fetch_assoc() function returns the fields into an associate array and uses each field name as the array key

Sample Code

```php
<?php
    $con = mysqli_connect("localhost",""root","","library");
    if (!$con)
      {
        die('Could not connect: ' . mysqli_error($con));
      }
    $q = "SELECT *  FROM book";
    $result = mysqli_query($con,$q);
    while ($Row=mysqli_fetch_assoc($result)) {
      echo   $Row['Title'];
      echo   $Row['Author'];
      echo   $Row['No_of_copies'];
    }
    mysqli_close($con);
?>
```

Accessing Query Result Information

- The mysqli_num_rows() function returns the number of rows in a query result

- The mysqli_num_fields() function returns the number of fields in a query result

- Both functions accept the result variable as an argument

Example: Accessing Query Result Information

```
$con = "SELECT *  FROM cars";

$result = mysqli_query($cont, $SQLstring);

$NumRows = mysqli_num_rows($ result );

$NumFields = mysqli_num_fields($ result );

if ($NumRows != 0 && $NumFields != 0)

    echo "<p>Your query returned " . $NumRows. " rows and ".
     $NumFields . " fields.</p>";

else

    echo "<p>Your query returned no results.</p>";

mysqli_close($con);
```

Summary

- The mysqli_connect() function opens a connection to a MySQL database server

- The mysqli_close() function closes a database connection

- The mysqli_errno() function returns the error code from the last attempted MySQL function call or zero if no error occurred

- The mysqli_error() function returns the error message from the last attempted MySQL function call or an empty string if no error occurred

- The mysqli_select_db() function selects a database

- The mysqli_query() function sends SQL statements to MySQL

- A result pointer is a special type of variable that refers to the currently selected row in a resultset

Summary (continued)

- The PRIMARY KEY clause indicates a field or fields that will be used as a referential index for the table

- The AUTO_INCREMENT clause creates a field that is automatically updated with the next sequential value for that column

- The NOT NULL clause creates a field that must contain data

Summary (continued)

- The mysqli_info() function returns the number of operations for various types of actions, depending on the type of query

- The mysqli_fetch_row() function returns the fields in the current row of a resultset into an indexed array and moves the result pointer to the next row.

- The mysqli_fetch_assoc() function returns the fields in the current row of a resultset into an associative array and moves the result pointer to the next row

- The mysqli_free_result() function closes a resultset

Summary (continued)

- The mysqli_num_rows() function returns the number of rows in a query result

- mysqli_num_fields() function returns the number of fields in a query result

Questions…..