Experiment No: 15

Develop a simple application to

1. **Enter data into database**
2. **Retrieve and present data from database.**

Resources required:

Hardware	**Software**
Computer System	XAMPP

Practical Significance:

MySQL is used to manage stored data and is an open source Database Management Software (DBMS) or Relational Database Management System (RDBMS). PHP and MySQL are server side technologies, both are used on server side so the combination of these is preferred to developed cloud based application.

Theoretical Background:

PHP 5 and later can work with a MySQL database using:

MySQLi extension (the "i" stands for improved)
PDO (PHP Data Objects)

The CREATE DATABASE statement is used to create a database in MySQL.

```
<?php
$servername = "localhost";
$username = "username";
$password = "password";

// Create connection
$conn = new mysqli($servername, $username, $password);
// Check connection
if ($conn->connect_error) {
   die("Connection failed: " . $conn->connect_error);
}

// Create database
$sql = "CREATE DATABASE myDB";
if ($conn->query($sql) === TRUE) {
   echo "Database created successfully";
} else {
   echo "Error creating database: " . $conn->error;
}
```

```
$conn->close();
?>
```

Create Table SQL query Example
The CREATE TABLE statement is used to create a table in MySQL.

```
$sql = "CREATE TABLE MyGuests (
id INT(6) UNSIGNED AUTO_INCREMENT PRIMARY KEY,
firstname VARCHAR(30) NOT NULL,
lastname VARCHAR(30) NOT NULL,
email VARCHAR(50),
reg_date TIMESTAMP DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP
)";
```

Insert Data SQL query Example
The INSERT INTO statement is used to add new records to a MySQL table:

```
INSERT INTO table_name (column1, column2, column3,...)
VALUES (value1, value2, value3,...)
$sql = "INSERT INTO MyGuests (firstname, lastname, email)
VALUES ('John', 'Doe', 'john@example.com')";
```

Select Data from database
The SELECT statement is used to select data from one or more tables:

```
SELECT column_name(s) FROM table_name
```

or we can use the * character to select ALL columns from a table:

```
SELECT * FROM table_name
$sql = "SELECT id, firstname, lastname FROM MyGuests";
$result = $conn->query($sql);

if ($result->num_rows > 0) {
   // output data of each row
   while($row = $result->fetch_assoc()) {
      echo "id: " . $row["id"]. " - Name: " . $row["firstname"]. " " . $row["lastname"]. "<br>";
   }
} else {
   echo "0 results";
}
```

Program Code:

```
<?php
$hn = 'localhost';
$db = 'college';
$un = 'root';
$pw = ' ‘;
      $conn = new mysqli($hn, $un, $pw, $db);
      if ($conn->connect_error) die($conn->connect_error);
      $query = "SELECT * FROM student";
      $result = $conn->query($query);
      if (!$result) die($conn->error);
      $rows = $result->num_rows;
      for ($j = 0 ; $j < $rows ; ++$j)
      {
      $result->data_seek($j);
      echo 'Roll No.: ' . $result->fetch_assoc()['rollno'] . '<br/>';
      $result->data_seek($j);
      echo 'Name: ' . $result->fetch_assoc()['name'] . '<br/>';
      $result->data_seek($j);
      echo 'Percentage: ' . $result->fetch_assoc()['percent'] . '<br/><br/>';
      }
      $result->close();
      $conn->close();
?>
```

Practical related questions:

1. Which command would you use to view the available databases or tables?
   To show available database – show databases;
   To show available tables – show tables;

2. How can you view the structure of a table?
   By using command – DESCRIBE TABLE_NAME

3. How is it possible to know the number of rows returned in the result set?
   By using the method mysqli_num_rows()

4. Which function returns the number of affected entries by a query?
   By using the method mysqli_affected_rows()

Exercise:

1. Write a PHP script to enter data in database.

```
<?php

$servername = "localhost";
$username = "root";
$password = "123456";
```

```php
$dbname = "sakila";

// Create connection
$conn = mysqli_connect($servername,
    $username, $password, $dbname);

    if($conn === false){
        die("ERROR: Could not connect. "
            . mysqli_connect_error());
    }

    $sqlquery = "INSERT INTO `actor`(`first_name`, `last_name`) VALUES
('xyz','abc')";

    if(mysqli_query($conn,$sqlquery)) {
        echo "Data insertion successful";
    } else {
        echo "Error " . mysqli_error($conn) ;
    }

    mysqli_close($conn);

?>

<!-- Output -->
<!-- Data insertion successful -->
```

2. Write a PHP script to retrieve and present the data from database.

```php
<?php

$servername = "localhost";
$username = "root";
$password = "123456";
$dbname = "sakila";

$conn = mysqli_connect($servername,
    $username, $password, $dbname);

    if($conn === false){
        die("ERROR: Could not connect. "
            . mysqli_connect_error());
    }
```

```php
    $sql = "SELECT * FROM `actor` WHERE 1";

    $res = mysqli_query($conn,$sql);

    if(mysqli_num_rows($res) > 0) {
        while($row = mysqli_fetch_assoc($res)) {
            echo "Id: " . $row['actor_id'] . " - Name: "
                . $row['first_name'] . " " . $row['last_name']
                . " - Last Updated At: " . $row['last_update'] . "<br>"
;
        }
    } else {
        echo "0 results" ;
    }

    mysqli_close($conn);

?>


<!-- Output -->
<!-- Id: 1 - Name: PENELOPE GUINESS - Last Updated At: 2006-02-
15 04:34:33
Id: 2 - Name: NICK WAHLBERG - Last Updated At: 2006-02-15 04:34:33
Id: 3 - Name: ED CHASE - Last Updated At: 2006-02-15 04:34:33
Id: 4 - Name: JENNIFER DAVIS - Last Updated At: 2006-02-15 04:34:33
Id: 5 - Name: JOHNNY LOLLOBRIGIDA - Last Updated At: 2006-02-
15 04:34:33 -->
```