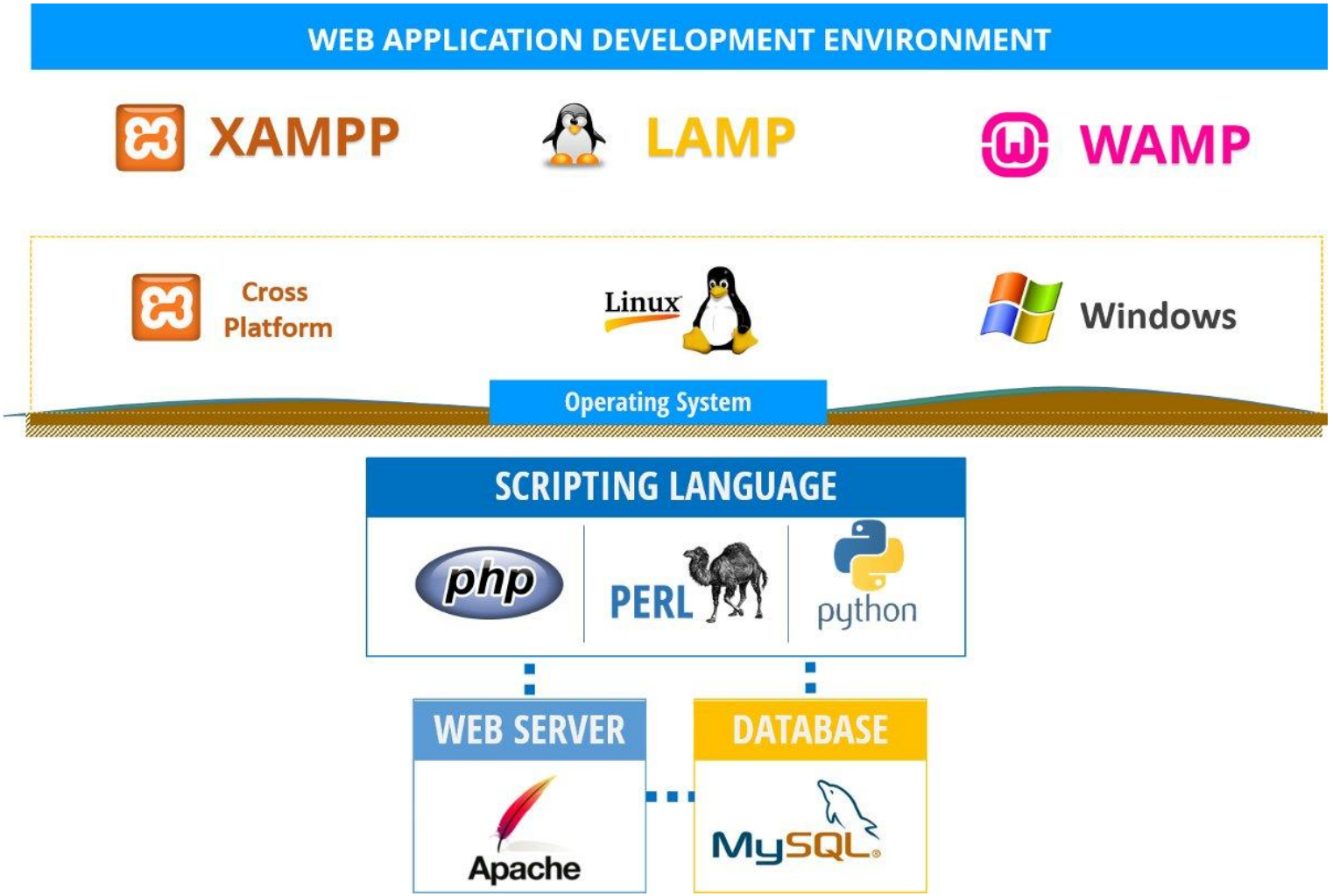
PHP & MySQL

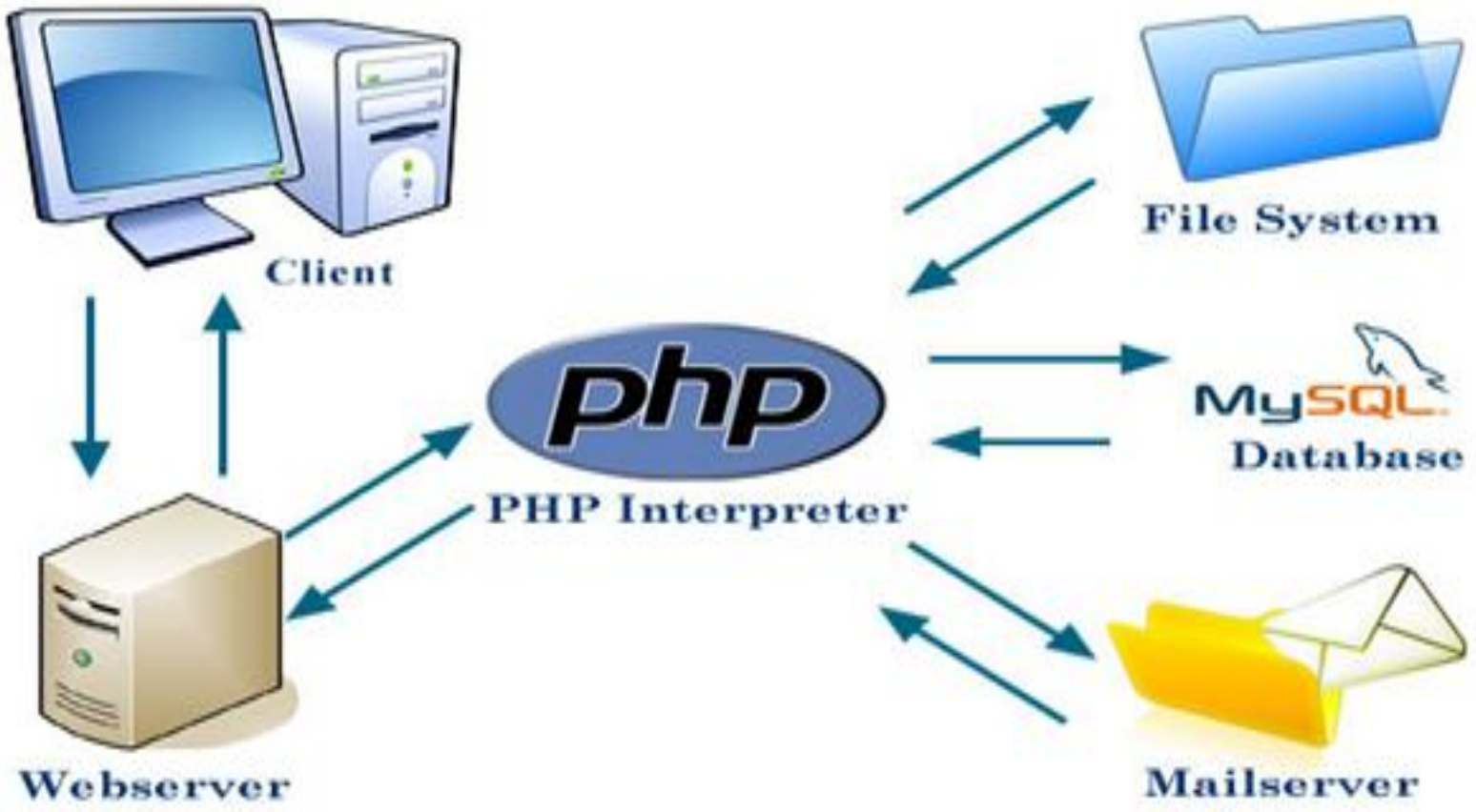
Introduction



MySQL

- MySQL is a very popular, open source database.
- Released 23 may 1995
- 11+ million webs ervers using MySQL
- Coded in C/C++,Yacc parser, and custom lexical analyser.
- Officially pronounced “my Ess Que Ell” (not my sequel).
- Handles very large databases; very fast performance.
- Why are we using MySQL?
  - Free (much cheaper than Oracle!)
  - Each student can install MySQL locally.
  - Easy to use Shell for creating tables, querying tables, etc.
  - Easy to use with Java JDBC

PHP to Backend



- The *mysql_connect()* function opens a non-persistent MySQL connection.
- This function returns the connection on success, or FALSE and an error on failure.

Syntax

mysql_connect(server, user, pwd, newlink, clientflag)

Parameter	**Description**
Server	Optional. Specifies the server to connect to (can also include a port number, e.g. "hostname:port" or a path to a local socket for the localhost). Default value is "localhost:3306"
user	Optional. Specifies the username to log in with. Default value is the name of the user “root”
pwd	Optional. Specifies the password to log in with. Default is ""

- The *mysql_select_db()* function sets the active MySQL database.
- This function returns TRUE on success, or FALSE on failure.

Syntax

mysql_select_db(database, connection)

Parameter	**Description**
database	Required. Specifies the database to select.
connection	Optional. Specifies the MySQL connection. If not specified, the last connection opened by mysql_connect() or mysql_pconnect() is used.

- The *mysql_query()* function executes a query on a MySQL database.
- This function returns the query handle for SELECT queries,
- TRUE/FALSE for other queries, or FALSE on failure.

Syntax

mysql_query(query, connection)

Parameter	**Description**
query	Required. Specifies the SQL query to send (should not end with a semicolon).
connection	Optional. Specifies the MySQL connection. If not specified, the last connection opened by mysql_connect() or mysql_pconnect() is used.

- The *mysql_fetch_array()* function returns a row from a recordset as an associative array and/or a numeric array. This function gets a row from the mysql_query() function and returns an array on success, or FALSE on failure or when there are no more rows.

  Syntax

  mysql_fetch_array(data, array, type)

Parameter	**Description**
data	Required. Specifies which data pointer to use. The data pointer is the result from the mysql_query() function
array_type	Optional. Specifies what kind of array to return. Possible values: MYSQL_ASSOC - Associative array MYSQL_NUM - Numeric array MYSQL_BOTH - Default. Both associative and numeric array

- The *mysql_fetch_object()* function returns a row from a recordset as an object. This function gets a row from the mysql_query() function and returns an object on success, or FALSE on failure or when there are no more rows.

  Syntax

  mysql_fetch_object(data)

Parameter	**Description**
data	Required. Specifies which data pointer to use. The data pointer is the result from the mysql_query() function

  Tips and Notes

  Note: Each subsequent call to mysql_fetch_object() returns the next row in the recordset.

- The *mysql_num_rows()* function returns the number of rows in a recordset. This function returns FALSE on failure.

  Syntax

  mysql_num_rows(data)

Parameter	**Description**
data	Required. Specifies which data pointer to use. The data pointer is the result from the mysql_query() function

- The *mysql_result()* function returns the value of a field in a recordset.
- This function returns the field value on success, or FALSE on failure.

Syntax

mysql_result(data, row, field)

Parameter	Description
data	Required. Specifies which result handle to use. The data pointer is the return from the mysql_query() function
row	Required. Specifies which row number to get. Row numbers start at 0
field	Optional. Specifies which field to get. Can be field offset, field name or table. fieldname. If this parameter is not defined mysql_result() gets the first field from the specified row.

Tips and Notes

- This function is slower than mysql_fetch_row(),
- mysql_fetch_array(), mysql_fetch_assoc() and
- mysql_fetch_object().

- The *mysql_error()* function returns the error description of the last
- This function returns an empty string ("") if no error occurs.

Syntax

mysql_error(connection)

Parameter	**Description**
connection	Optional. Specifies the MySQL connection. If not specified, the last connection opened by mysql_connect() or mysql_pconnect() is used.

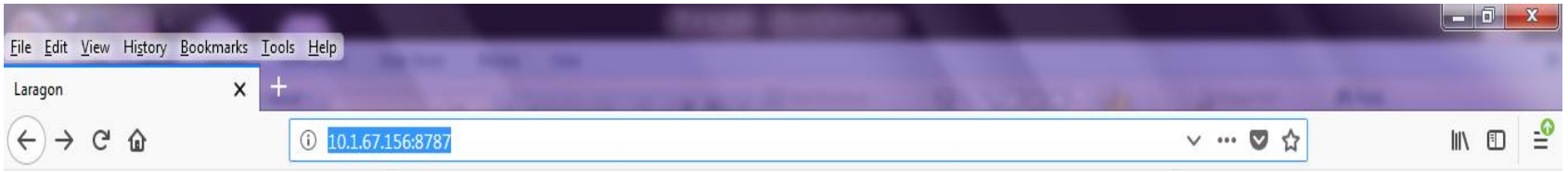
- The *mysql_close()* function closes a non-persistent MySQL connection.
- This function returns TRUE on success, or FALSE on failure.

Syntax

mysql_close(connection)

Parameter	**Description**
connection	Optional. Specifies the MySQL connection to close. If not specified, the last connection opened by mysql_connect() is used.

Type *http://10.1.67.156:8787/* in the URL bar

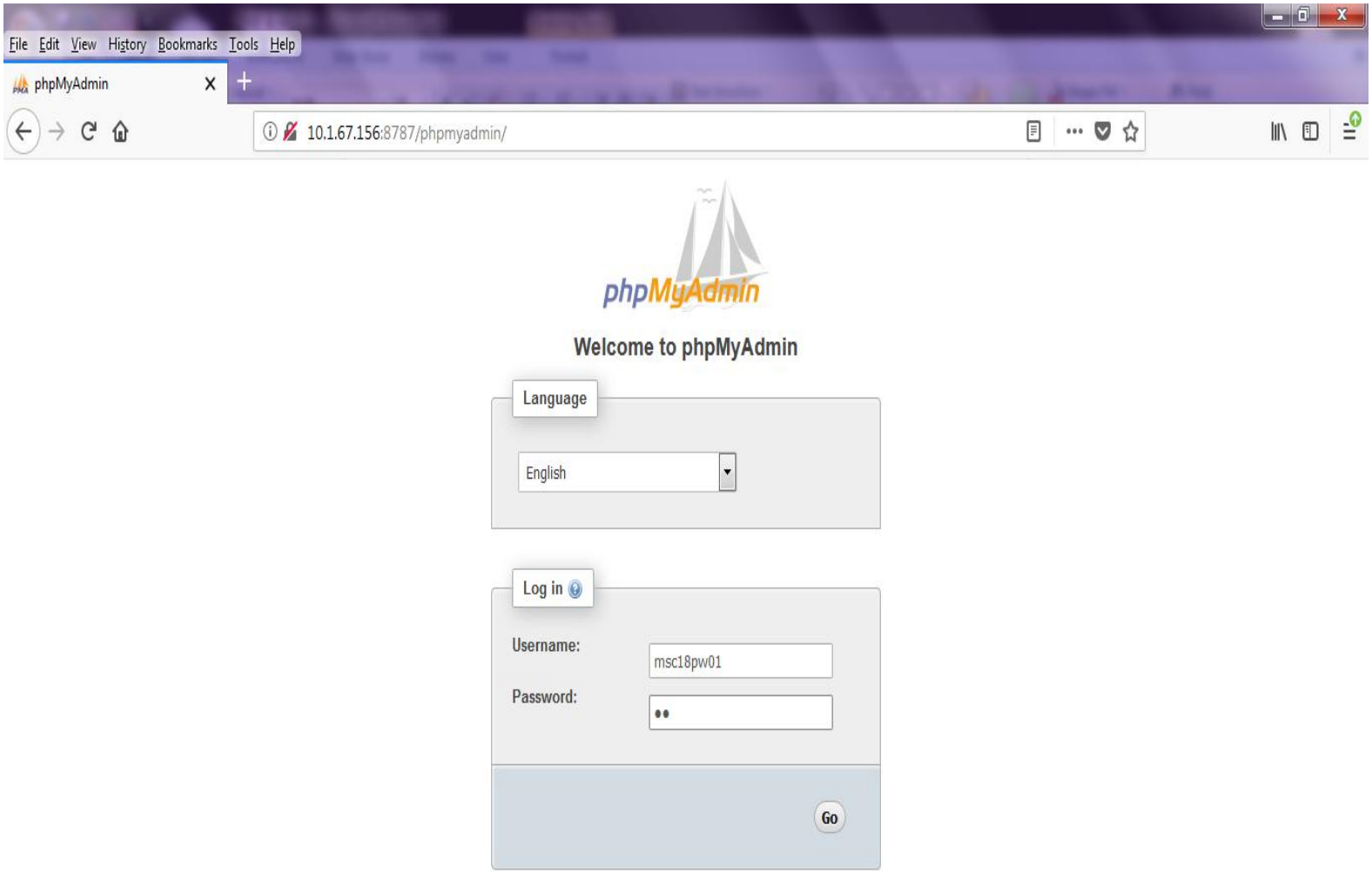


Laragon

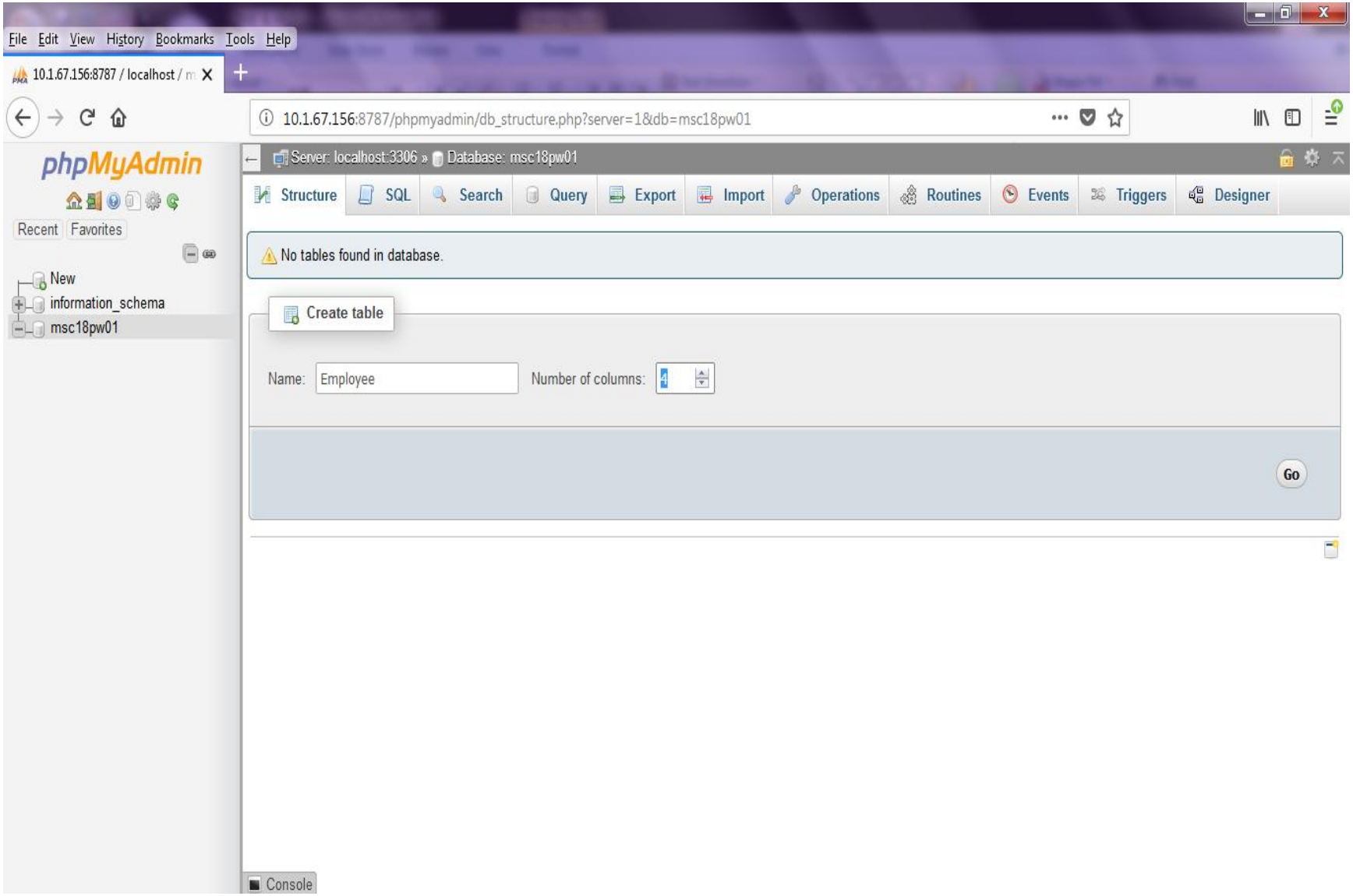
Apache/2.4.27 (Win64) OpenSSL/1.0.2l PHP/7.1.7
PHP version: 7.1.7 info
Document Root: D:/laragon/www

Getting Started

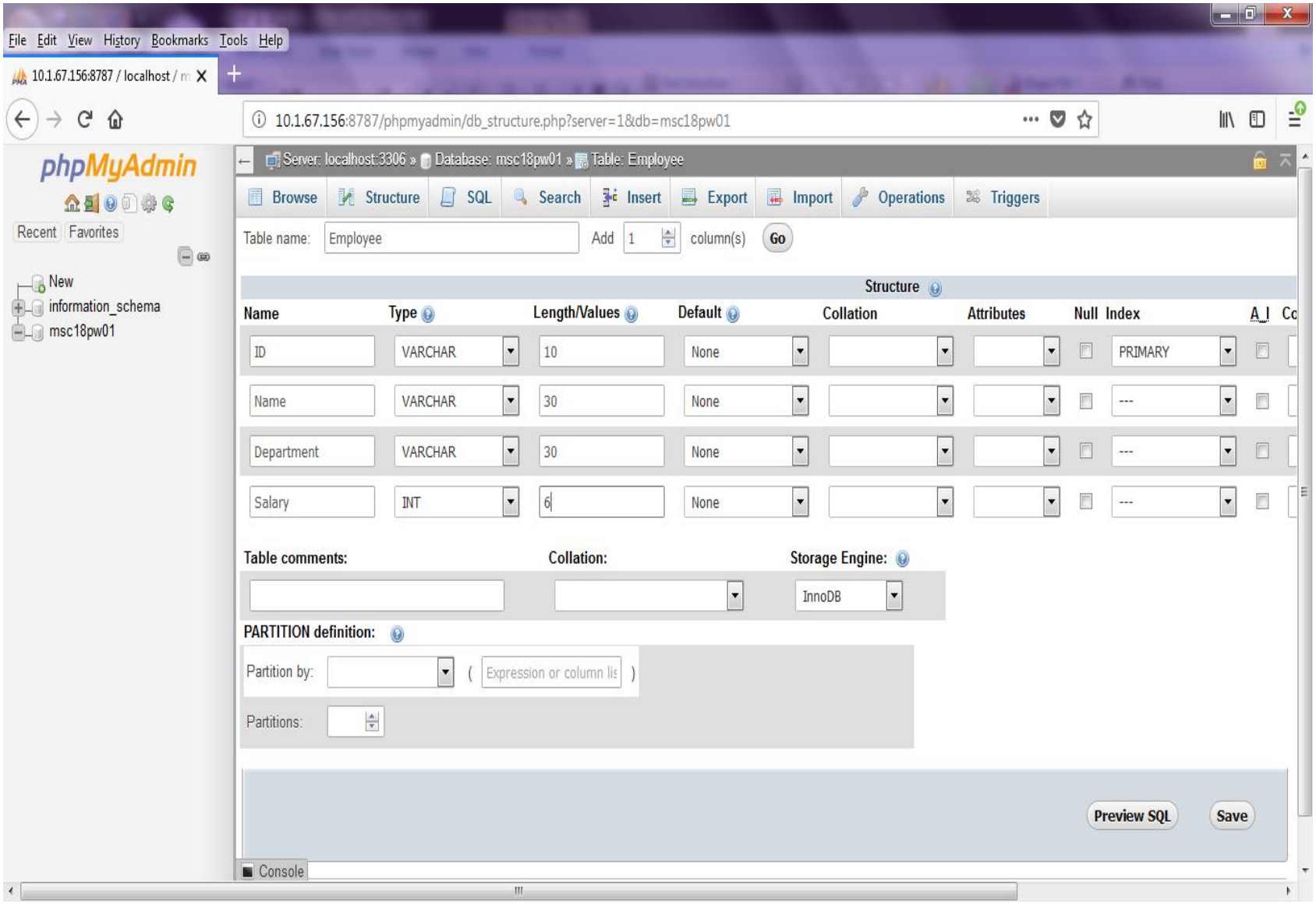
Type *http://10.1.67.156:8787/phpmyadmin/* in the URL bar, type Username and Password



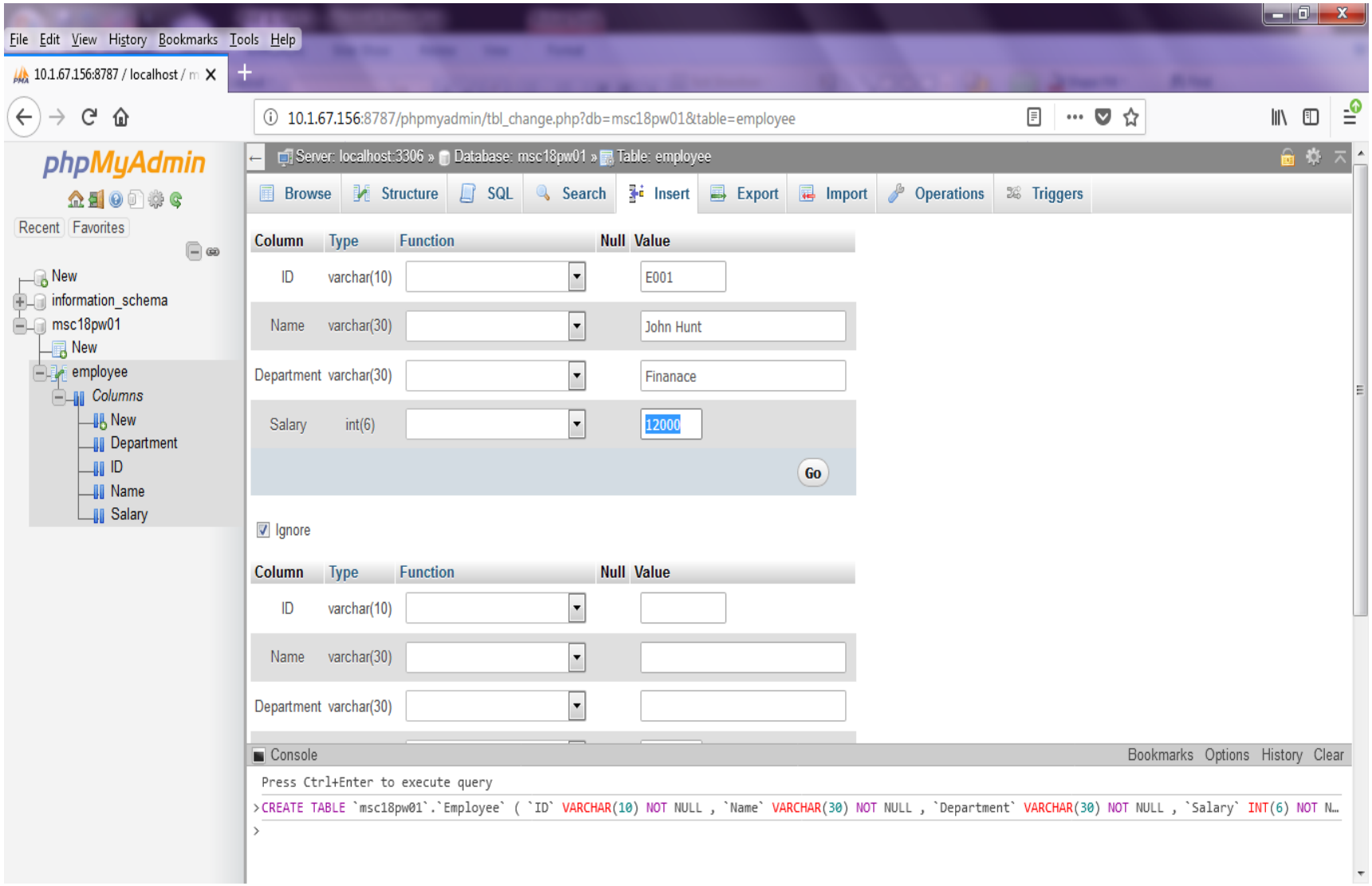
Click the database shown in left side, type the table name as *"Employee"* in the textbox, select number of columns to generate in the table and click *"Go"* button.



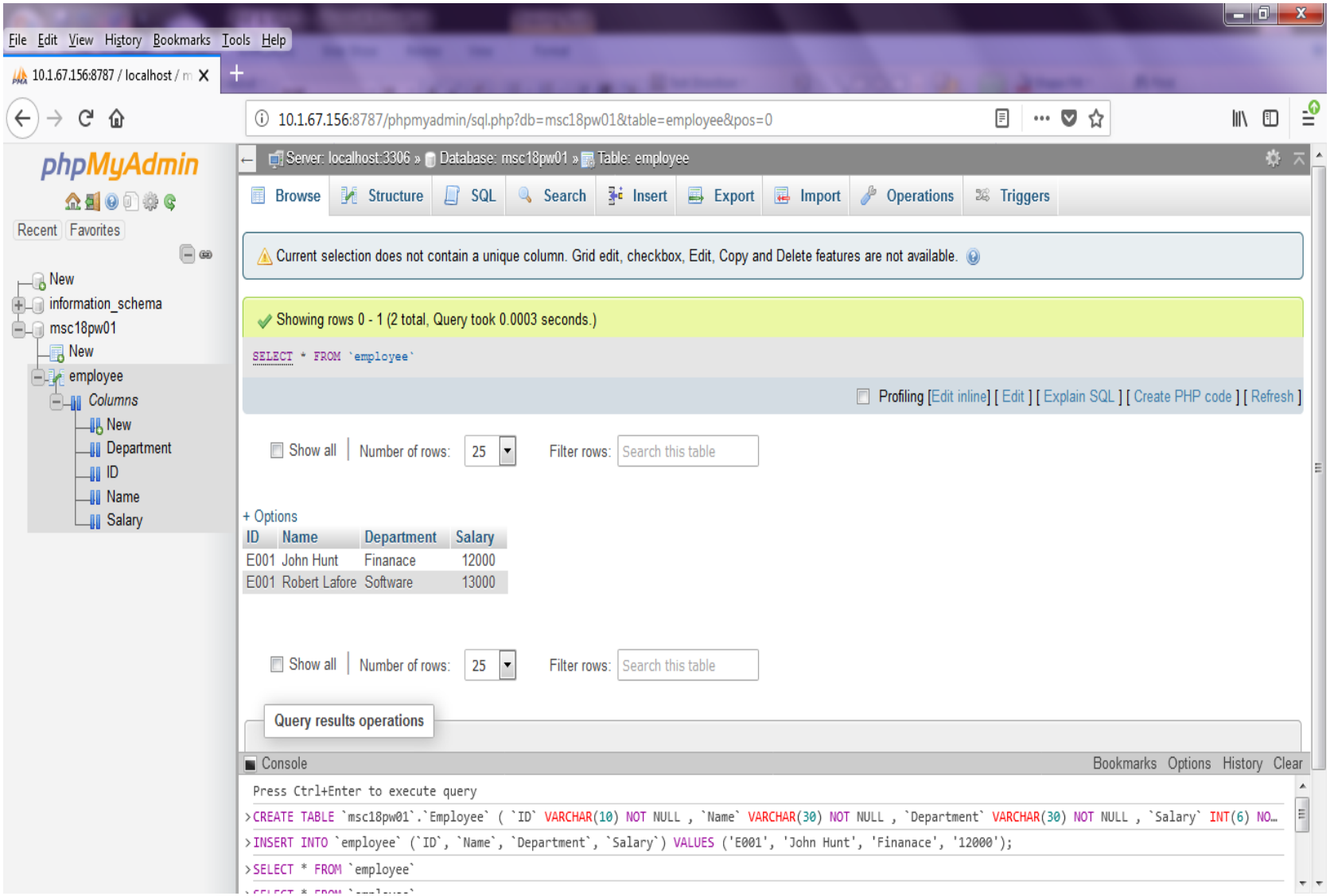
Type the required column name and type. Click the *"Save"* button.



Click the *"Insert"* tab and enter the records. Click the *"Go"* button. Repeat this operation to insert few more records…

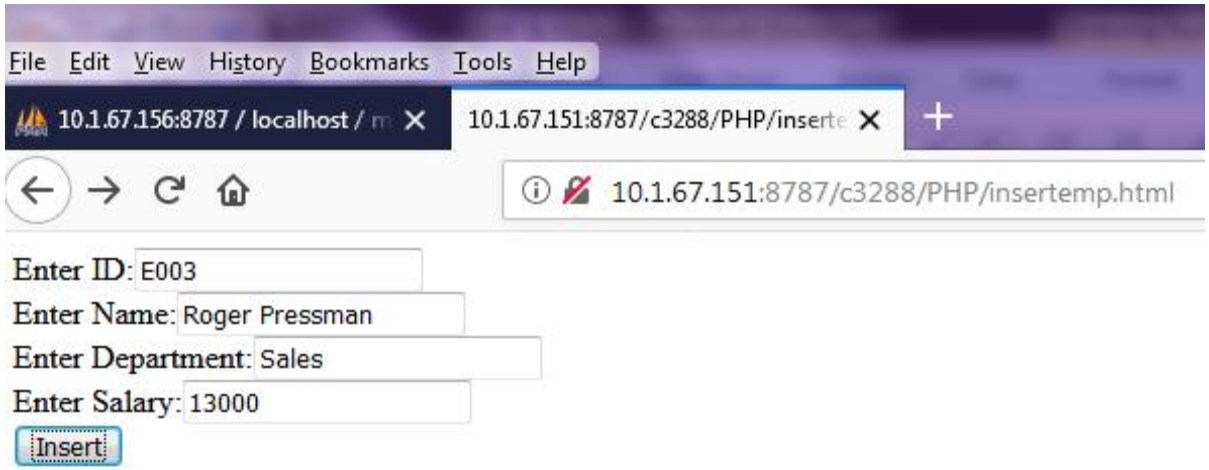


Click the *"Browse"* tab to view inserted record.

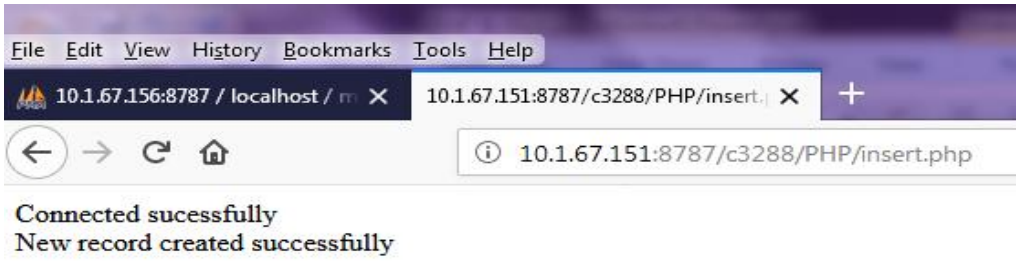


Insert Record using HTML form: “insertemp.html”

```
<html>
  <body>
    <form action="insert.php" method="post">
      Enter ID:<input type="text" name="id"/><br>
      Enter Name:<input type="text" name="ename"/><br>
      Enter Department:<input type="text" name="dept"/><br>
      Enter Salary:<input type="text" name="sal"/><br>
      <input type="submit" value="Insert">
    </form>
  </body>
</html>
```

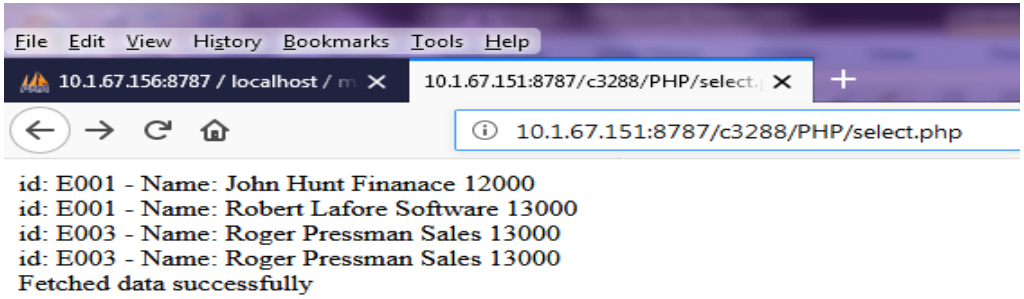


PHP code to insert data in MySQL Database: “insert.php”




```
<?php
  $servername = "10.1.67.156";
  $username = "msc18pw01";
  $password = "aa";
  $dbname = "msc18pw01";
  // Create connection
  $conn = mysqli_connect($servername, $username, $password, $dbname);
  // Check connection
  if (!$conn){
    die("Connection failed: " . mysqli_connect_error());
  }
    echo " Connected sucessfully <br>" ;
  $sql = "INSERT INTO employee (ID, Name, Department, Salary) VALUES
('$_POST[id]','$_POST[ename]','$_POST[dept]',$_POST[sal])";
  if (mysqli_query($conn, $sql)) {
    echo "New record created successfully";
  }
  else
  {
      echo "Error: " . $sql . "<br>" . mysqli_error($conn);
  }
  mysqli_close($conn);
?>
```

PHP code to select data from MySQL Database: “select.php”




```
<?php
  $servername = "10.1.67.156";
  $username = "msc18pw01";
  $password = "aa";
  $dbname = "msc18pw01";
  // Create connection
  $conn = mysqli_connect($servername, $username, $password, $dbname);
  if(!$conn)
  {
    die('Could not connect: '.mysqli_connect_error());
  }
   $sql="Select ID, Name, Department, Salary from employee";
   $retval=mysqli_query($conn,$sql);
   if (mysqli_num_rows($retval) > 0) {
    // output data of each row
    while($row = mysqli_fetch_assoc($retval)) {
        echo "id: " . $row["ID"]. " - Name: " . $row["Name"]. " " . $row["Department"]. " " . $row["Salary"]. "<br>";
    }
  } else {
    echo "0 results\n <br>";
  }
  echo "Fetched data successfully\n";
  mysqli_close($conn);
?>
```

References

- ***https://www.w3schools.com/php/php_mysql_intro.asp***
- ***http://www.mysqltutorial.org/php-mysql/***
- ***https://www.siteground.com/tutorials/php-mysql/***