

REFERENCE MANUAL FOR THE LAB SESSION – 28/06/2023

PARSE URL:

```
parse_url($url) // returns a parsed url as associative array
Ex: $url = "https://ict.annauniv.edu/ICT-Comreg/";
echo var_dump(parse_url($url));
urldecode()
```

validate and sanitize data

```
filter_var($str, FILTER_VALIDATE_URL);
filter_var($str, FILTER_SANITIZE_URL);
other filter constants: FILTER_VALIDATE_EMAIL,
FILTER_SANITIZE_STRING
```

HANDLING JSON WITH PHP

JSON – JAVASCRIPT OBJECT NOTATION (light weight, exchange format)

File extension : .json

MIME type: application/json

```
{"uname":"alpha", "bat":"Q", "dept":"CSE"}
```

```
json_encode(); //convert php object to a json object
```

```
json_decode(); // convert json object to a php object
```

```
$jsen = json_encode($asar); //json encode
```

```
echo $jsen."<br>";
```

```
$jsde = var_dump(json_decode($jsen));
```

```
echo $jsde."<br>";
```

CONNECTING TO A DB:

MARIADB – open source relational database

PHPMYADMIN – IS a DB management tool for MYSQL databases written in PHP.

SQL: Standard language for accessing and manipulating databases.

CRUD operations: CREATE, READ, UPDATE, DELETE

Standard DB operations: INSERT,SELECT, UPDATE, DELETE

SQL with PHP using mysqli:

- i) Connect to a server; // only one time.

```
$conn = mysqli_connect($server, $user, $pass);  
    //assuming the values of these variables are set as  
    //(localhost, root, "") in that order.  
    if (!$conn){  
        echo "NO CONNECTION "; }  
    else {echo "Connected successfully";}
```

- ii) Executing a query: // there are 2 steps:
 creating a query and using mysqli_query with the connection and the query. The result of the query could be true or false. Whenever we execute a query it results in data access, manipulation and retrieval.

```
$sql1 = "some sql query goes here";  
mysqli_query($conn, $sql1);  
closing the connection with the server:
```

- iii) Closing the connection

```
mysqli_close($conn);
```

- iv) Creating a DB:

```
$sql1 = "CREATE DATABASE sample";  
mysqli_query($conn, $sql);
```

- v) Creating a Table within a database:

```
$sql2 = "CREATE TABLE TestData (  
id INT(3) UNSIGNED AUTO_INCREMENT PRIMARY KEY,  
uname VARCHAR(10) NOT NULL,  
bat VARCHAR(1) NOT NULL  
)";  
mysqli_query($conn, $sql2); // executing a query
```

- vi) INSERT query:
`$sql3 = "INSERT INTO TestData (uname, bat)
VALUES ('$uname', '$bat')";
mysqli_query($conn, $sql3);`
- vii) SELECT query:
`$sql4 =SELECT * from TestData;
$res4 = mysqli_query($conn, $sql4);
// Fetch a result row as a numeric array and as an associative
//array:
mysqli_fetch_array($res4);
//$res4[0], $res4[1], ...
mysqli_fetch_assoc($res4);
//$res4["id"], $res4["bat"], ...`
- viii) UPDATE query:
`$sql5 = "UPDATE TestDATA SET uname=$uname WHERE
id=$id";
mysqli_query($conn, $sql5);`

Summary of mysqli functions:

`mysqli_connect()
mysqli_query()
mysqli_close()
mysqli_fetch_row()
mysqli_fetch_array()
mysqli_fetch_assoc()`

Alternative to the above two functions:

`mysqli_fetch_array($result, MYSQLI_NUM)
mysqli_fetch_array($result, MYSQLI_ASSOC)`

Code Example

Files used:

[Config.php](#) //included in every file

along with config.php the following files are used in this order

[createdb](#)>[createtable](#)>[insertval](#)>[selectval](#)>[editformdata](#)>[updatedb](#)

insert: is to **insert values** to a specific table in a specific database

update: is to **select values** from database that are to be updated and perform **update** operation on a specific table in a specific database

LAB EXERCISES for 28-JUNE-2023

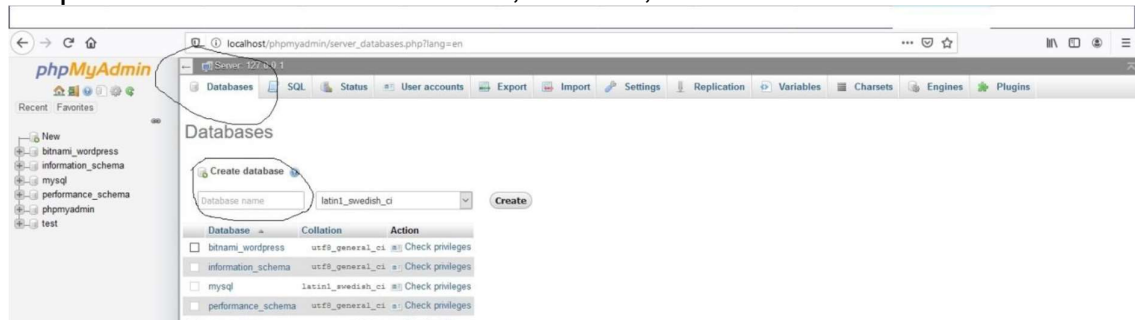
1. Experiment with parse url()
2. Experiment with filter var() to validate, sanitize data.
3. Using JSON with PHP
4. Understand the phpmyadmin environment.

Access the phpmyadmin using *http://localhost/phpmyadmin/*

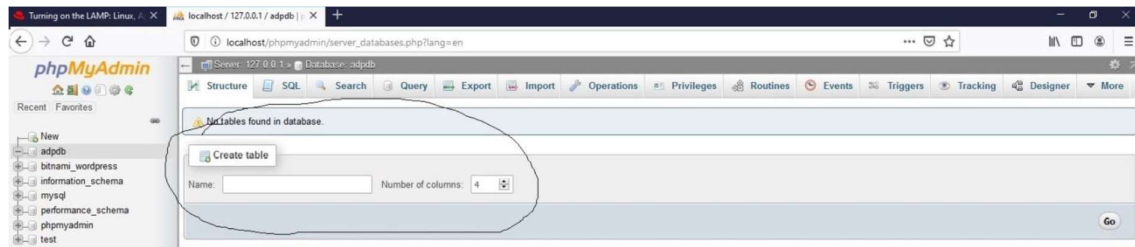
5. Using the phpMyAdmin environment

Step-1: Note down the version of various applications running on the server, (you can find details on the right panes: Database server, Web Server, phpMyadmin.) server type, Apache, php, user, server charset

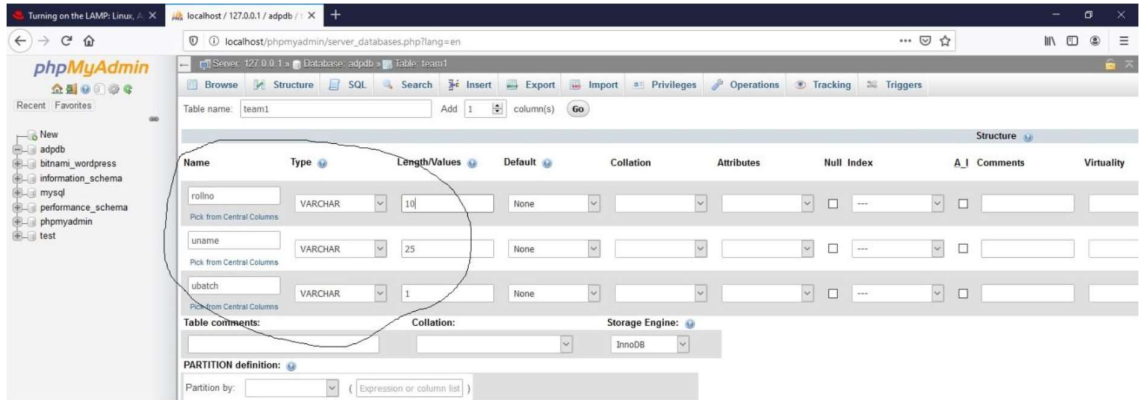
Step-2: Learn how to create a DB, a Table, and data.



In the create database option, enter any new name (say 'adpdb') for your database and press the create button. A new database will be created.

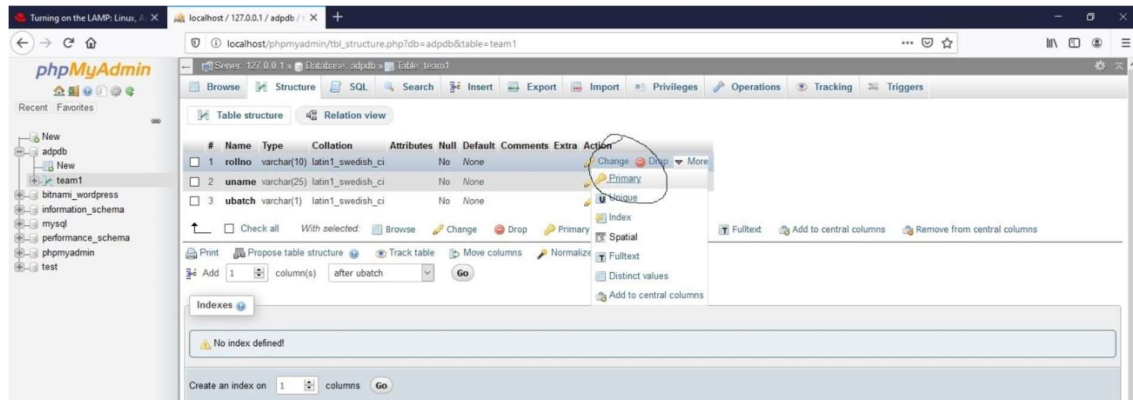


Give any Name to the new Table (say 'team1') and change the number of columns to two and change number of columns to 3 and click Go button.



Create data in the first three columns as follows
 rollno:varchar:10
 unname:varchar:20
 bat:varchar:1

click 'save' button to save the data entered.



Now that the table with three columns is created as shown above, the next step is to select the primary key. In the 'more' option choose the option 'primary' (that has a key symbol prefixed) to make the 'rollno' column the primary key. Select OK to proceed.

4. Now that the db is ready to be used, let's learn to use the INSERT operation.

create a simple html form (say form1.html) with atleast three text fields 'rollno', 'unname' and 'bat' with a submit button and point it to a server side script (say getform1.php).

getform1.php should receive the data and should access the database and store the data in the respective columns.

Now create a new file 'config.php' and include it in the getform1.php.

config.php

```
<?php
$dbhost="localhost";
$dbuser = "root";
$dbpass = ""; //password of your admin
$dbname = "team1";
$con = mysqli_connect($dbhost, $dbuser, $dbpass, $dbname);
if(!$con){
echo "Could not connect to database ".mysqli_error($con);}}
```

```
else{
echo "connected to server";}
?>
```

getform1.php

```
<?php
include 'config.php';
$rollno=$_POST["rollno"];
$username=$_POST["uname"];
$bat=$_POST["bat"];
$sql1 = "INSERT INTO team1 (rollno, uname, bat) VALUES ('$rollno', '$uname', '$bat')";
if(mysqli_query($con, $sql1)){
echo "Records inserted successfully.";
} else{
echo "ERROR: Could not able to execute $sql. " . mysqli_error($con);
}
// Close connection
mysqli_close($con);
?>
```

Now to check if the records are inserted successfully, access your phpmyadmin using <http://localhost:80/phpmyadmin>, and verify if a new row is inserted in your table.

5. In this exercise you should be able to retrieve the contents from database and return it to the client.

Now we will fetch the data from the database and display it on the client. Create a new server side script (say retrievedata.php), that uses SELECT operation to retrieve data from database.

retrievedata.php

```
<?php
include 'config.php';
$rollno=$_POST["rollno"];
$username=$_POST["uname"];
$bat=$_POST["bat"];
$sql = "SELECT * FROM team1";
$result = mysqli_query($con, $sql);
if (mysqli_num_rows($result) > 0) {
//read one row at a time
while($row = mysqli_fetch_assoc($result)) {
echo "rollno: " . $row["rollno"]. " Name: " . $row["uname"]. "Batch: " . $row["bat"]. "<br>";
}
//alternatively while($row = mysqli_fetch_row($result)) {
// echo "rollno: " . $row[0]. " Name: " . $row[1]. "Batch: " . $row[2]. "<br>";
// }
} else {
echo "0 results";
}
// Close connection
mysqli_close($con);
?>
*****
```