**Title: LAMP Stack Setup and PHP-MySQL Integration on Ubuntu 20.04**

### **✅ Objective:**

To set up a LAMP stack (Linux, Apache, MySQL, PHP) on Ubuntu 20.04, verify PHP processing, and test MySQL connectivity using a PHP script.

## **🛠️ Step-by-Step Documentation Plan (Markdown Format)**

### **1. System Details**

* **OS**: Ubuntu 20.04
* **MySQL Version**: 8.0.42

### **2. LAMP Stack Installation Summary**

sudo apt update

sudo apt install apache2

sudo apt install mysql-server

sudo apt install php libapache2-mod-php php-mysql

### **3. Configure Apache Virtual Host (Optional Custom Domain)**

sudo mkdir -p /var/www/your\_domain

sudo chown -R $USER:$USER /var/www/your\_domain

sudo nano /etc/apache2/sites-available/your\_domain.conf

Sample config:

<VirtualHost \*:80>

ServerName rinku-test.local

ServerAlias www.rinku-test.local

ServerAdmin webmaster@localhost

DocumentRoot /var/www/rinku-test

ErrorLog ${APACHE\_LOG\_DIR}/error.log

CustomLog ${APACHE\_LOG\_DIR}/access.log combined

</VirtualHost>

Then:

sudo a2ensite rinku.test.conf

sudo a2dissite 000-default.conf

sudo systemctl reload apache2

### **4. PHP Info Test**

nano /var/www/your\_domain/info.php

Contents:

<?php  
phpinfo();   
?>

Access:

http://your\_domain/info.php

Remove it after testing:

sudo rm /var/www/your\_domain/info.php

### **5. MySQL Database and User Creation**

CREATE DATABASE test\_db;

CREATE USER 'rinku'@'%' IDENTIFIED BY '1qaz';

GRANT ALL ON test\_db.\* TO 'rinku'@'%';

Test login:

mysql -u rinku -p

**6. Create and Populate Table**  
CREATE TABLE test\_db.todo\_list (

item\_id INT AUTO\_INCREMENT,

content VARCHAR(255),

PRIMARY KEY(item\_id)

);

Insert sample data:

INSERT INTO test\_db.todo\_list (content) VALUES ("Buy groceries");

INSERT INTO test\_db.todo\_list (content) VALUES ("Practice more");

INSERT INTO test\_db.todo\_list (content) VALUES ("Fix bugs");

### **7. PHP Script to Read MySQL Data**

nano /var/www/your\_domain/todo\_list.php

Contents:

<?php

$user = "rinku";

$password = "1qaz";

$database = "test\_db";

$table = "todo\_list";

try {

$db = new PDO("mysql:host=localhost;dbname=$database", $user, $password);

echo "<h2>TODO</h2><ol>";

foreach($db->query("SELECT content FROM $table") as $row) {

echo "<li>" . $row['content'] . "</li>";

}

echo "</ol>";

} catch (PDOException $e) {

print "Error!: " . $e->getMessage() . "<br/>";

die();

}

?>

Access:

http://rinku.test/todo\_list.php

8. Output Screenshot:

