**Project Work- Set Up a Live WordPress Instance on AWS EC2**

**Objective**

By the end of this exercise, you will have a live WordPress blog running on an AWS EC2 instance with a LAMP stack (Linux, Apache, MySQL/MariaDB, PHP).

**Step 1: Launch an EC2 Instance**

1. Sign in to the **AWS Management Console** → go to **EC2** service.
2. Click **Launch Instance**.
3. Configure:
   * **Name**: WordPress-Lab
   * **AMI**: Select **Amazon Linux 2 AMI** (free tier eligible).
   * **Instance Type**: Choose **t2.micro** (Free Tier).
   * **Key Pair**: Select or create a key pair for SSH access.
   * **Network Settings**:
     + Allow HTTP (port 80) and SSH (port 22).
   * Leave storage defaults.
4. Click **Launch Instance**.

**Step 2: Connect to the Instance**

1. Once the instance is running, select it and click **Connect**.
2. Use SSH from your terminal:

**Step 3: Install LAMP Stack**

Run the following commands to set up Apache, PHP, and MariaDB:

# Update system

sudo yum update -y

# Install Apache

sudo yum install -y httpd

# Start Apache

sudo systemctl start httpd

sudo systemctl enable httpd

# Install MariaDB (MySQL compatible)

sudo dnf install -y mariadb105-server

sudo systemctl start mariadb

sudo systemctl enable mariadb

systemctl status mariadb

# Install PHP

sudo amazon-linux-extras enable php8.0

sudo yum install -y php php-mysqlnd

sudo systemctl restart httpd

**Step 4: Secure the Database**

1. Run the MySQL secure installation:
2. sudo mysql\_secure\_installation
   * Set root password
   * Remove anonymous users
   * Disallow remote root login
   * Remove test database
   * Reload privileges
3. Log in to MySQL and create a database for WordPress:

sudo mysql -u root -p

CREATE DATABASE wordpress;

CREATE USER 'wpuser'@'localhost' IDENTIFIED BY 'wppassword';

GRANT ALL PRIVILEGES ON wordpress.\* TO 'wpuser'@'localhost';

FLUSH PRIVILEGES;

EXIT;

**Step 5: Install WordPress**

1. Download and extract WordPress:

cd /tmp

curl -O https://wordpress.org/latest.tar.gz

tar -xzf latest.tar.gz

sudo cp -r wordpress/\* /var/www/html/

**Set permissions:**

sudo chown -R apache:apache /var/www/html/

sudo chmod -R 755 /var/www/html/

**Configure WordPress:**

cd /var/www/html

sudo cp wp-config-sample.php wp-config.php

sudo nano wp-config.php

**Update database settings:**

define('DB\_NAME', 'wordpress');

define('DB\_USER', 'wpuser');

define('DB\_PASSWORD', 'wppassword');

define('DB\_HOST', 'localhost');

**Restart Apache:**

sudo systemctl restart httpd

**Step 6: Access WordPress in Browser**

1. Get your EC2 **Public IP** from the AWS console.
2. Open a browser and visit:

http://<Public-IP>

1. Complete the WordPress installation wizard:
   * Site Title
   * Admin Username & Password
   * Email

**Step 7: Publish Your First Blog**

1. Log in to the WordPress Admin Dashboard (http://<Public-IP>/wp-admin).
2. Go to **Posts → Add New**.
3. Write and publish your first blog post.
4. View it live at your WordPress site homepage.