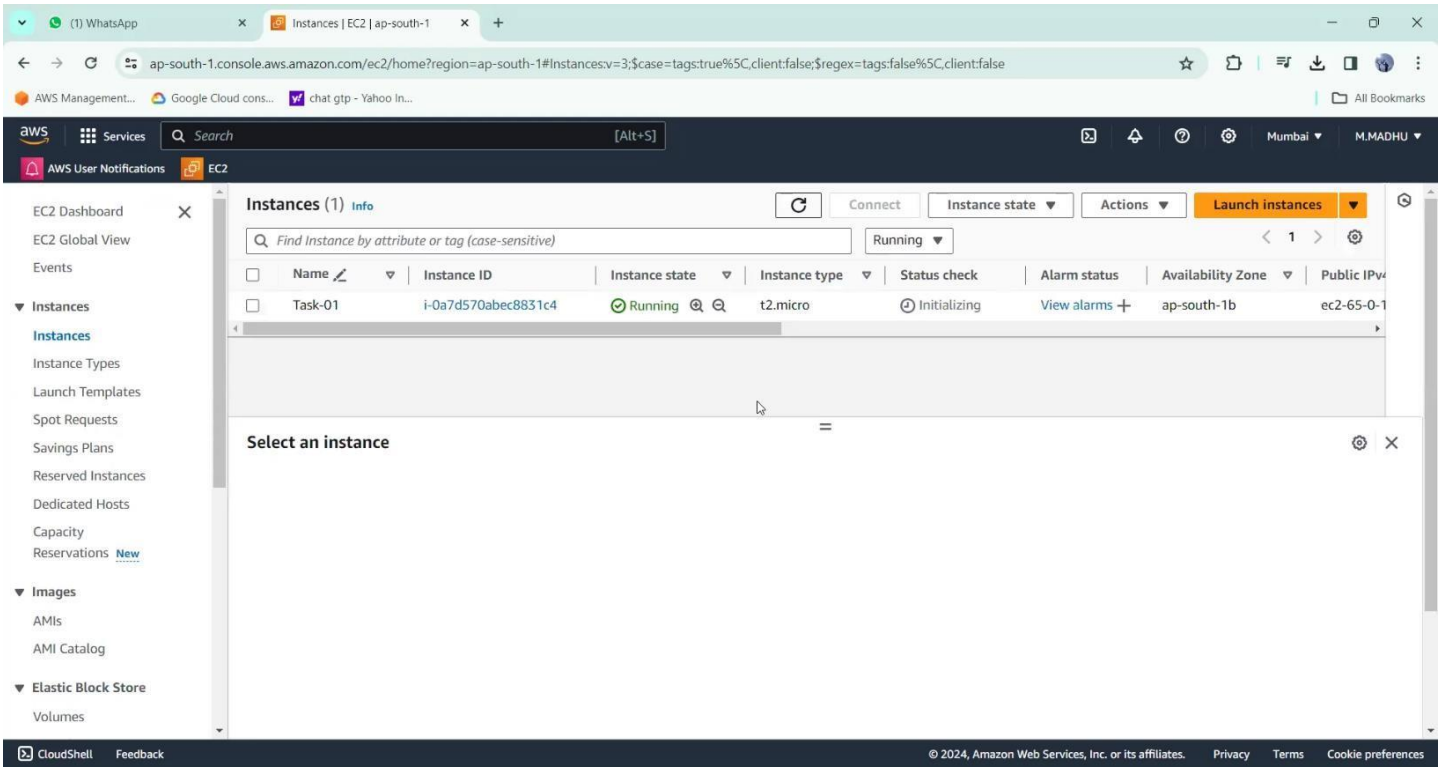
Deploying a WordPress Homepage in Monolithic Architecture

Description:

- 1 EC2 instance, deploy word press and MYSQL on the same instances**.**
- Configure the necessary security group for the instances.
- EC2 instance type: t2-micro, AMI: ubuntu-*.
- Create a welcome page in wordpress that will be the homepage.

Launch an AWS EC2 Instance:

- Log in to your AWS Management Console.
- Navigate to the EC2 Dashboard and click on **“Launch Instance”**
- Give the instance name as **“Ec2_monolithic_Wpserver”**.
- Select Amazon Machine Image (AMI) that fits your needs. Choose an image with the latest version of your preferred Linux distribution. I will be using the **“ubuntu"**.
- Choose an instance type based on your requirements. I will choose a **“t2.micro”** instance.
- Configure instance details, such as the number of instances, network settings, and storage. Make sure to add a security group that allows HTTP (port 80) and HTTPS (port 443) inbound traffic.
- Review the configurations and click on the “**Launch instance”.**



Commands:

1. **Install Apache server on Ubuntu**
   - sudo apt install apache2
2. **Install php runtime and php mysql connector**
   - sudo apt install php libapache2-mod-php php-mysql
3. **Install MySQL server**
   - sudo apt install mysql-server
4. **Login to MySQL server**
   - sudo mysql -u root

5. **Change authentication plugin to mysql_native_password (change the password to something strong)**
    - ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql_native_password by 'Madhu@123';

6. **Create a new database user for wordpress (change the password to something strong)**
    - CREATE USER 'Madhu_user'@localhost IDENTIFIED BY 'Madhu@123';

7. **Create a database for wordpress**
    - CREATE DATABASE Madhu_db;

8. **Grant all privilges on the database 'wp' to the newly created user**
    - GRANT ALL PRIVILEGES ON Madhu_db.* TO 'Madhu_user'@localhost;

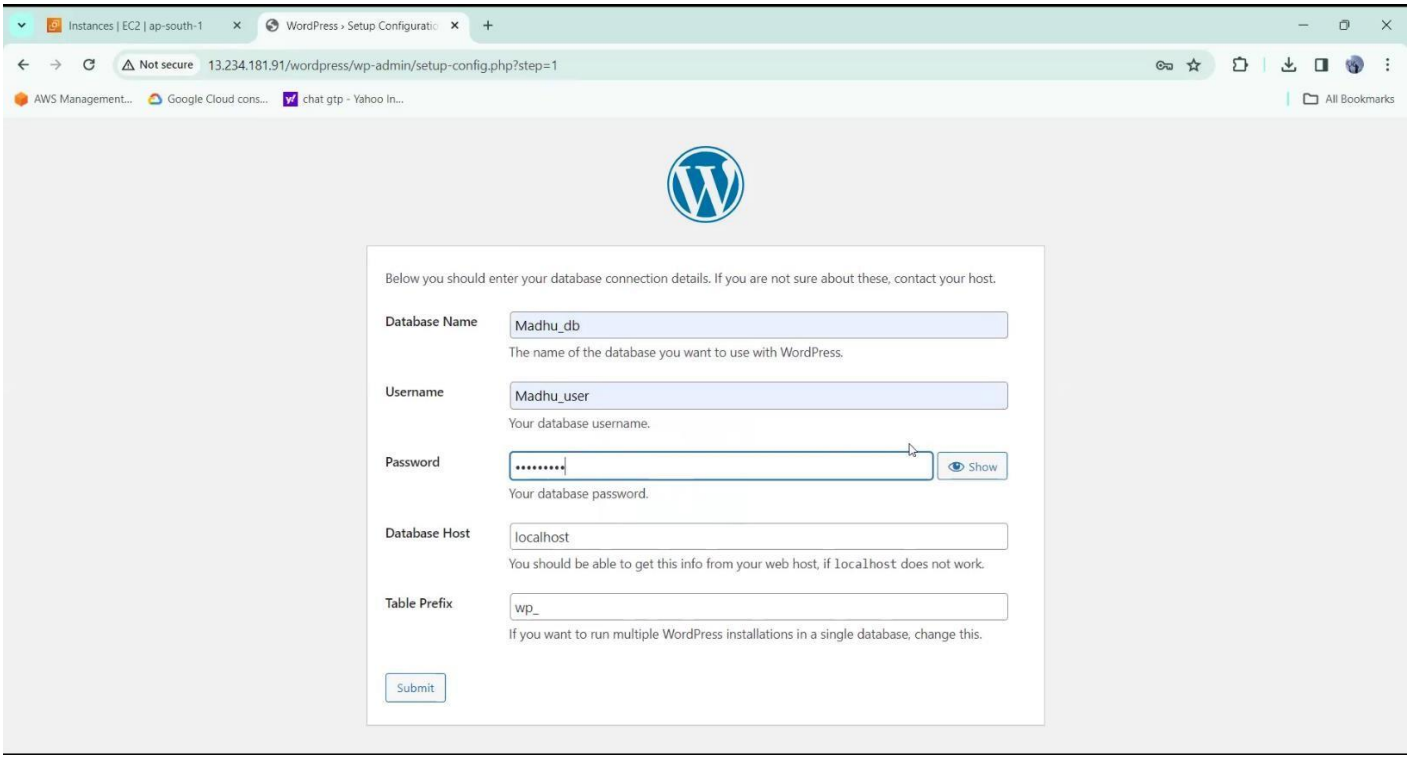
9. **Download wordpress**
    - cd /tmp
    - wget https://wordpress.org/latest.tar.gz

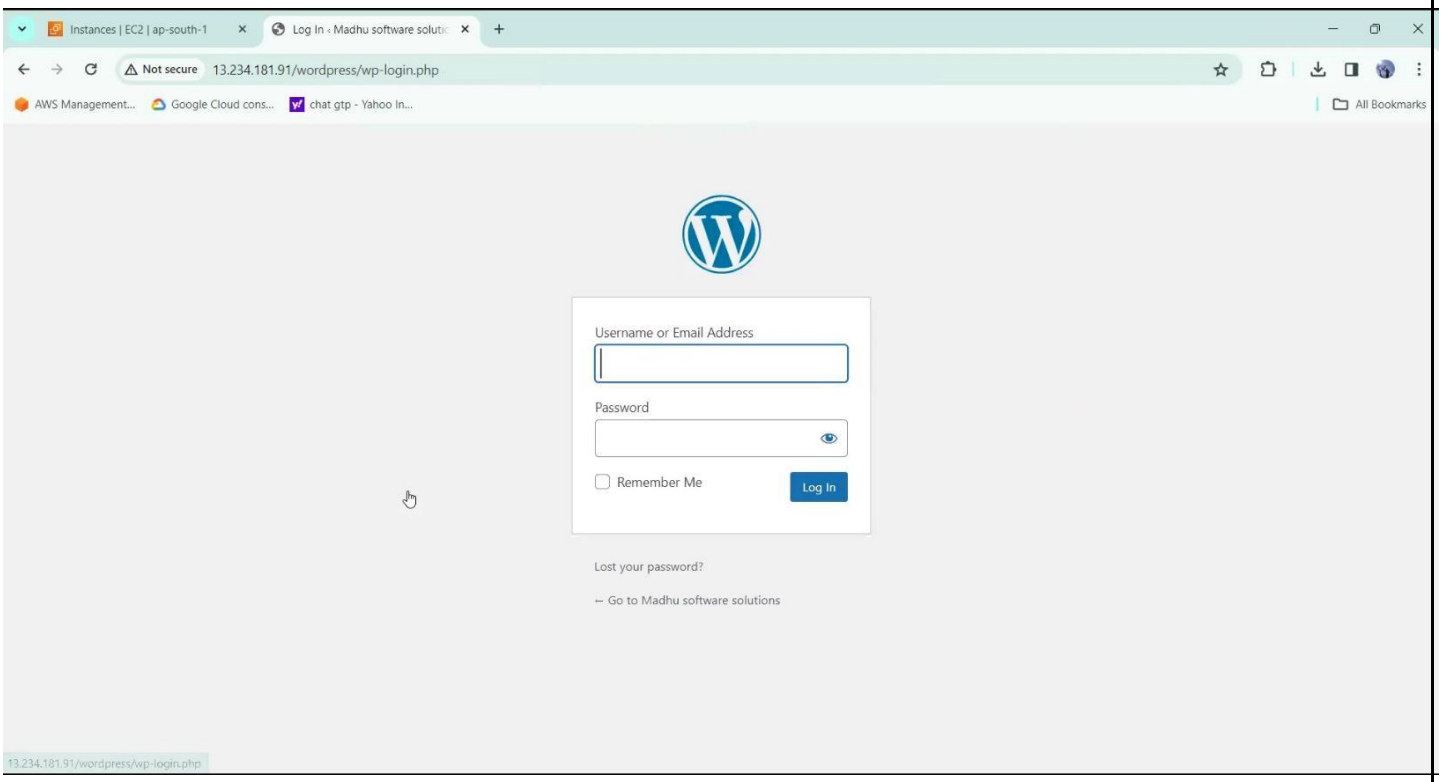
10. **Unzip**
    - tar -xvf latest.tar.gz

11. **Move wordpress folder to apache document root**
    - sudo mv wordpress/ /var/www/html

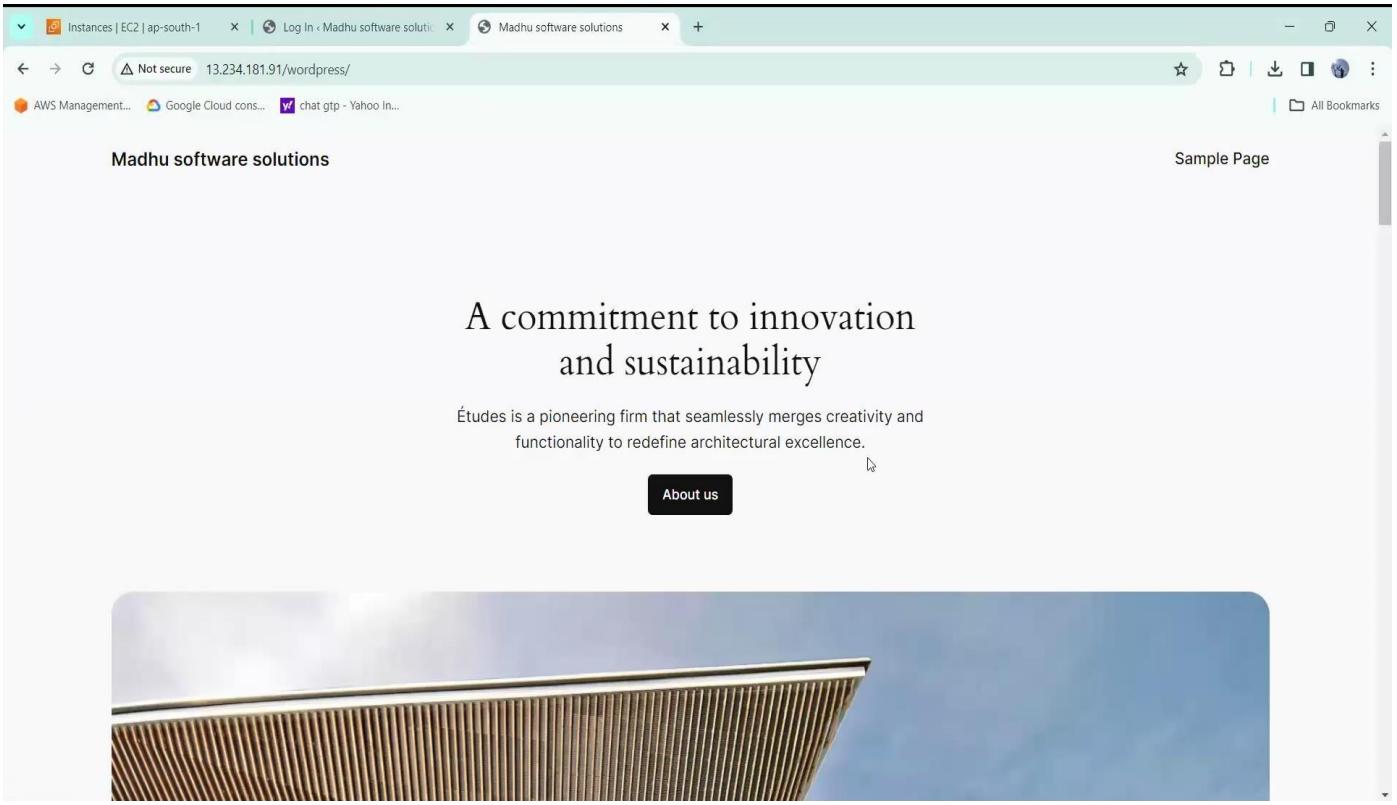
12. **Command to restart/reload apache server**
    - sudo systemctl restart apache2
13. **Now**
    - cd /var/www/html
    - cd wordpress
    - vim wp-config.php

Open your browser and navigate to your WordPress instance's public IP address. Follow the WordPress installation wizard to complete the setup.





Complete setup is now done, browse with your public IP. And Wordpress will automatically connect to the MySQL server on another EC2.



Deploying a WordPress Homepage in Microservice Architecture

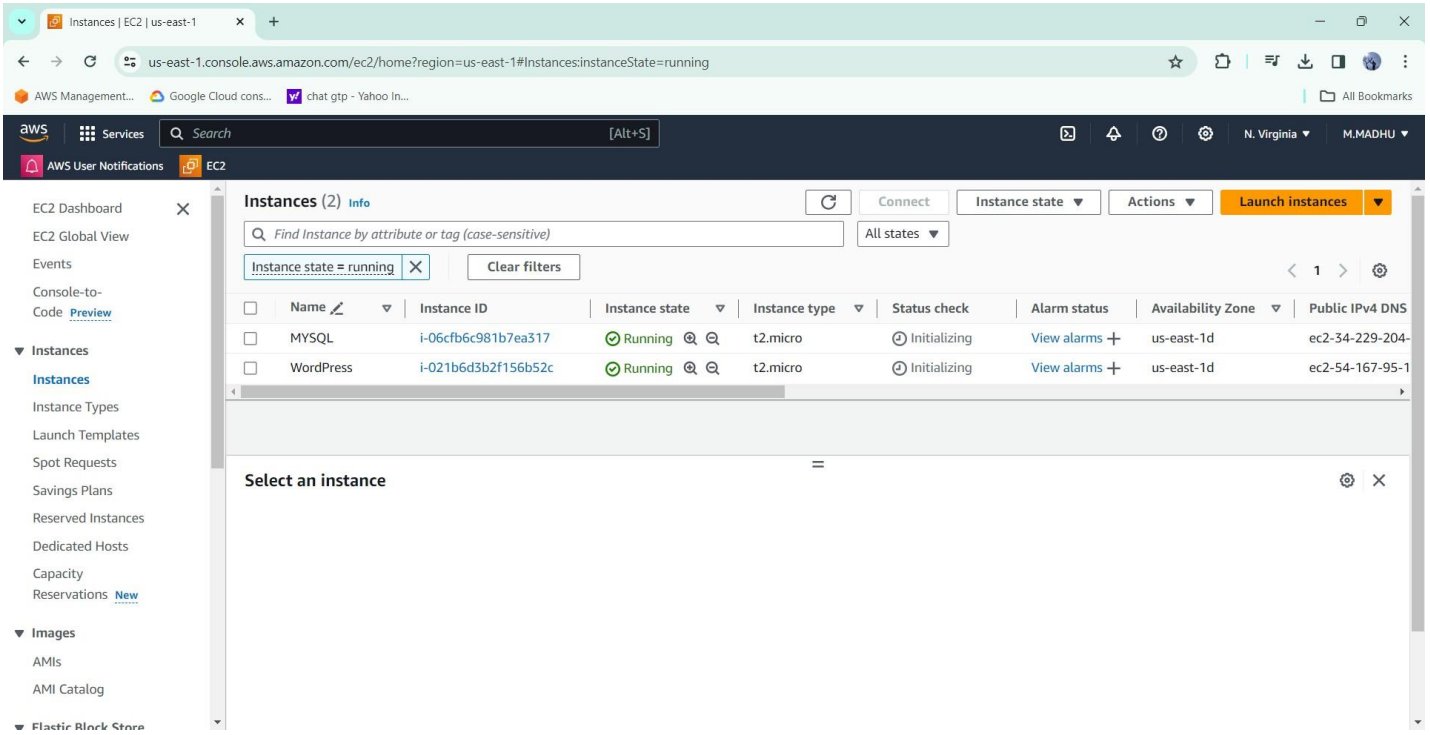
Description:

- Setting up Wordpress and MYSQL in two different EC2 instances
- Configure the necessary security group for the instances.
- EC2 instance type: t2-micro, AMI: ubuntu-*.
- Create a welcome page in wordpress that will be the homepage.

Creating Instances for Wordpress as well AS MySQL

- Log in to your AWS Management Console.
- Navigate to the EC2 Dashboard and click on **“Launch Instance”**
- Give the instance name as **“MYSQL”**.
- Select Amazon Machine Image (AMI) that fits your needs. Choose an image with the latest version of your preferred Linux distribution. I will be using the **“ubuntu"**.
- Choose an instance type based on your requirements. I will choose a **“t2.micro”** instance.
- Configure instance details, such as the number of instances, network settings, and storage. Make sure to add a security group that allows HTTP (port 80) and HTTPS (port 443) inbound traffic.
- Review the configurations and click on the **“Launch instance”.**

Note: This setup is common for both the instances. Now, setup for **“WORDPRESS”** we need to ssh login to the system for that find note the Public IP and key.



Setting Up MYSQL First:

1. **Install MySQL on MySQL Instance:**
   - sudo apt update
   - sudo apt install mysql-server

2. **Secure MySQL Installation(**optional**):**
   - sudo mysql_secure_installation

3. **Create MySQL Database SetUp:**
   - mysql -u root -p
   - ALTER USER 'root'@'localhost' IDENTIFIED BY 'Madhu12345';
   - CREATE DATABASE bablu_db;
   - CREATE USER 'Madhu_user'@'%' IDENTIFIED BY 'Madhu12345';
   - GRANT ALL PRIVILEGES ON Madhu_db.* TO 'Madhu_user'@'%';
   - FLUSH PRIVILEGES;
   - Exit;

4. **Now**
   - sudo nano /etc/mysql/mysql.conf.d/mysqld.cnf (change bind to address 0.0.0.0)
   - systemctl restart mysql

Install PHP and Other Dependencies on WordPress Instance:

- sudo apt update
- sudo apt install apache2
- sudo apt install php libapache2-mod-php php-mysql
- sudo systemctl restart apache2

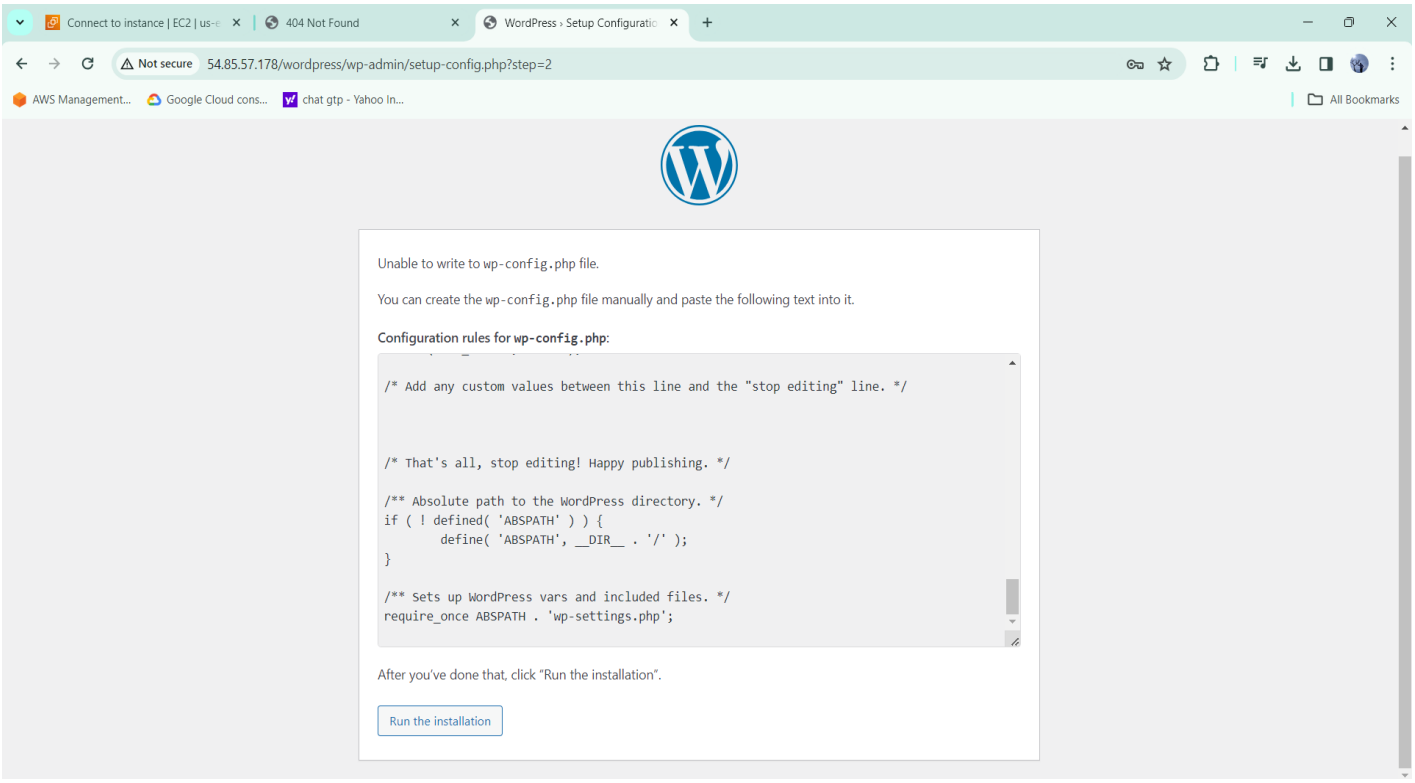
1. **Download WordPress**:
   - wget https://wordpress.org/latest.tar.gz
   - tar xzvf latest.tar.gz
   - sudo mv wordpress /var/www/html/

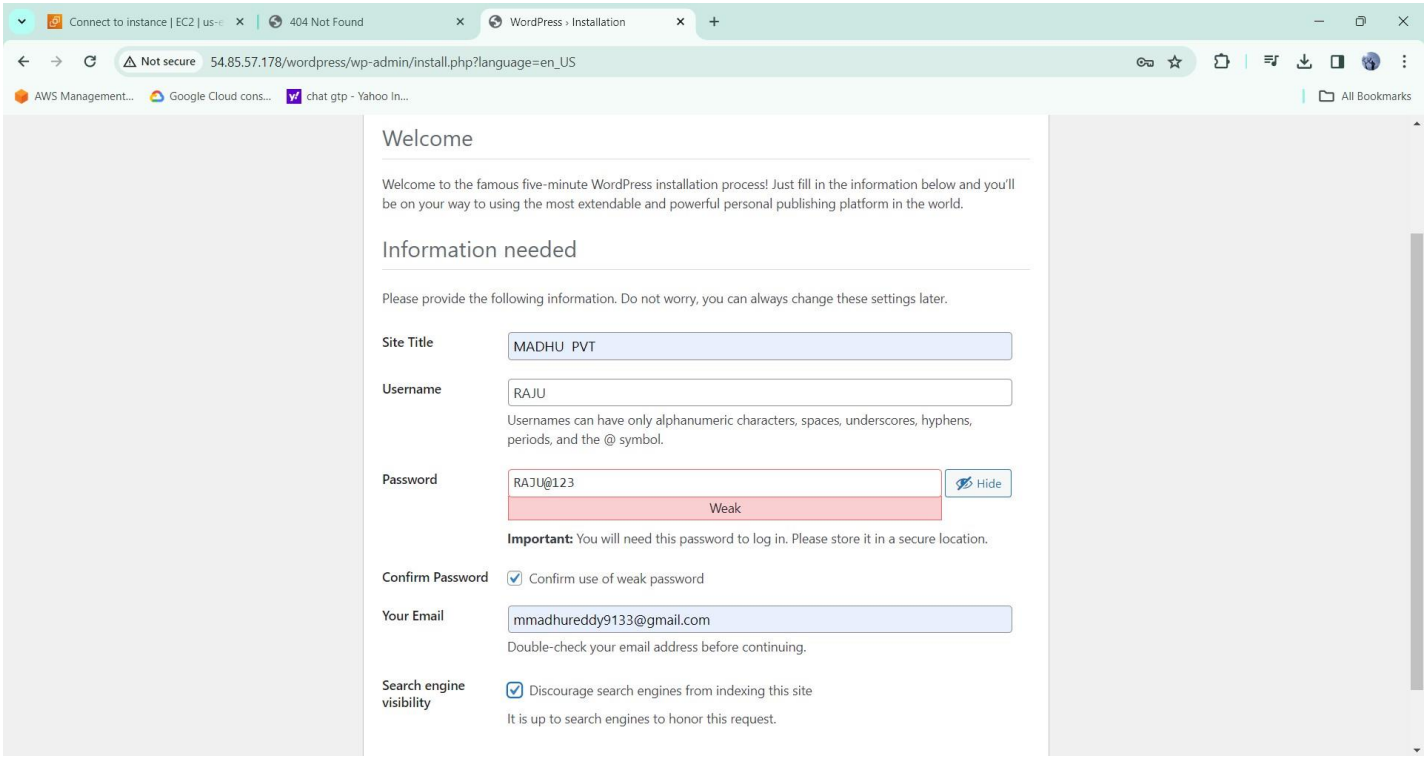
2. **Configure WordPress:**
   - cd /var/www/html/wordpress

3. **Update the database settings:**
   - define('DB_NAME', 'Madhu_db');
   - define('DB_USER', 'Madhu_user');
   - define('DB_PASSWORD', 'Madhu12345');
   - define('DB_HOST', 'MySQL_Instance_IP_Address');

4. **Now**
   - vim wp-config.php
   - sudo systemctl restart apach

Open your browser and navigate to your WordPress instances public IP address. Follow the WordPress installation to complete the setup





Complete setup is now done, browse with your public IP. And WordPress will automatically connect to the MySQL server on another EC2.