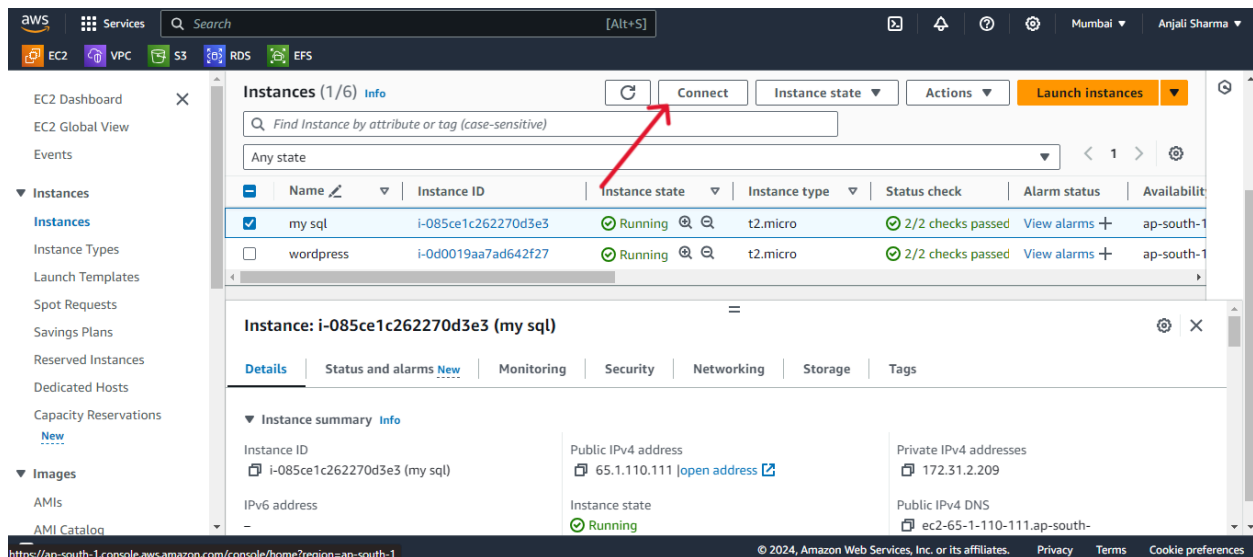


- **For monolithic:- Create an instance and deploy Wordpress and MYSQL within the same instance.**

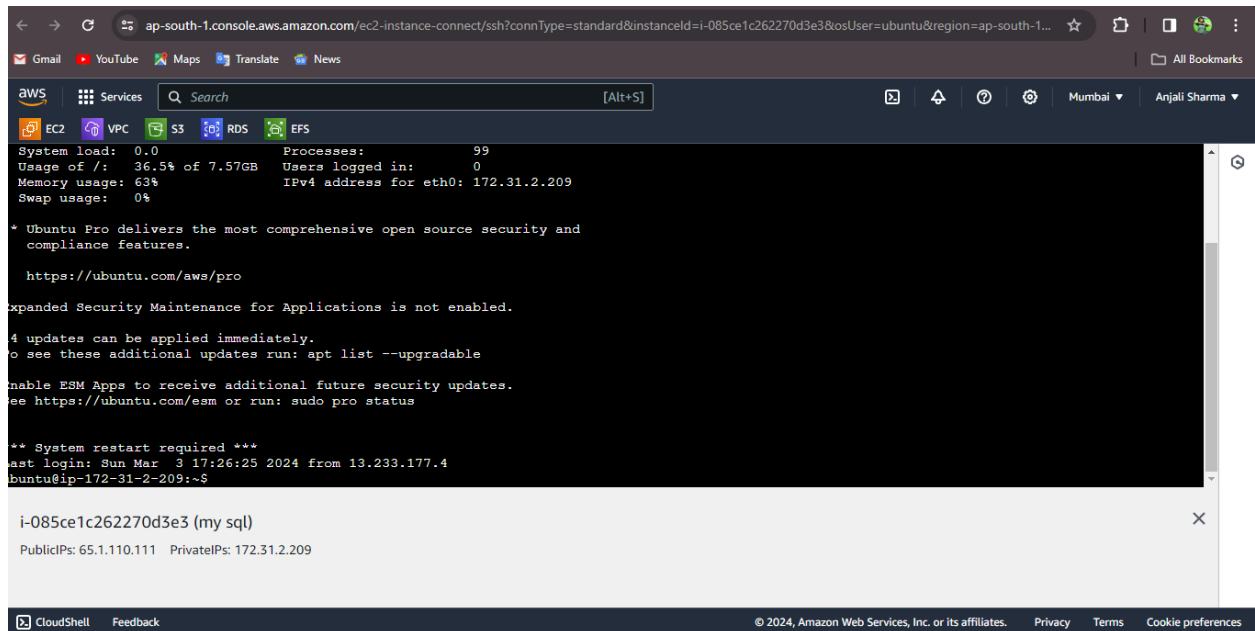
Step by Step create Ubuntu Ec2 Instance on Amazon Cloud (AWS)

1. login or Sign up for an AWS account
2. Go to AWS ec2 Dashboard
3. Launch Ec2 Instance for Ubuntu
4. Choose Ubuntu Linux Image
5. Choose the Instance Type(Take t2.micro for free tier account)
6. Create a new Key Pair (important)
7. Configure Storage for Instance
8. Assign Public Ip address to Ec2 Instance
9. Review Instance Launch
10. Open HTTPS and HTTP ports (optional)
11. Connect to your Amazon Ec2 Instance

After the successful launch of instance you will get a interface like this:



Now select the instance and connect the instance through ssh. After clicking the connect icon you will get an interface where you can direct connect your instance and now your screen will look like this:-



Now all you have to do is write the code in it starting with 'sudo -i' which will make you a root user.

Step by step procedure to deploy wordpress and mysql on the instance.

1. Install Apache server on Ubuntu

```
apt install apache2
```

2. Install php runtime and php mysql connector

```
apt install php libapache2-mod-php php-mysql
```

3. Install MySQL server

```
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 'Mytpassword@123';
```

6. Create a new database user for wordpress (change the password to something strong)

```
CREATE USER 'wp_user'@localhost IDENTIFIED BY 'Mytpassword@123';
```

7. Create a database for wordpress

```
CREATE DATABASE wp;
```

8. Grant all privileges on the database 'wp' to the newly created user
`GRANT ALL PRIVILEGES ON wp.* TO 'wp_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
```

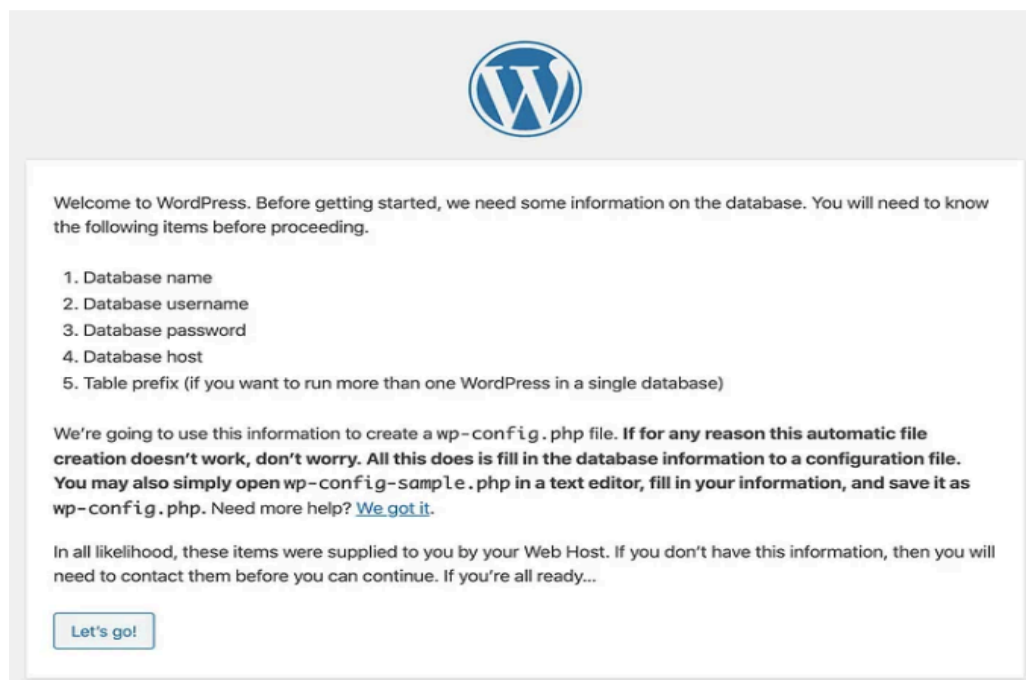
12. Now change directory to wordpress create a nano file wp-config.php

```
cd wordpress/
```

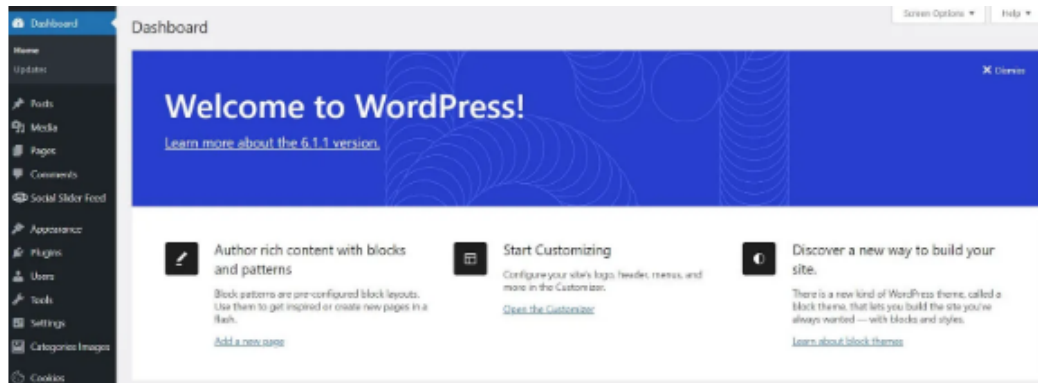
13. Create a nano file wp-config.php and paste the code in the nano file

```
nano wp-config.php
```

If you're now typing your IP address of the instance in your browser, you should see the WordPress installation guide.



Now click on "Let's go!". And now add your user name and password and you can create your own welcome page on wordpress which will somewhat look like this:-



Now you can create any websites here.

- **For microservices:- Create two instances one for Wordpress and one for MYSQL. Configure the necessary security groups and create a welcome page in wordpress.**

As I have mentioned above the step by step process of creating an instance. The only changes you need to do is the allotment of security groups to the particular instance i.e. while making an instance just change the security rules for the instance. Let us see

As we know we have to create two instances one for wordpress and one for mysql. Here are the changes we have to make:

For MYSQL instance edit the network settings. Just allow SSH(port 22) and MYSQL/Aurora(3306).

For Wordpress instance edit the network settings. Just allow SSH(port 22) and HTTP(80).

Now after these changes just launch your instance and connect those instances using SSH. After connecting those instances now we have to write the code for each instance.

For MYSQL instance: 1. Install Apache server on Ubuntu

```
apt install apache2
```

2. Install php runtime and php mysql connector

```
apt install php libapache2-mod-php php-mysql
```

3. Install MySQL server

```
apt install mysql-server mysql-client
```

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'@'%' IDENTIFIED WITH mysql_native_password by 'Mypassword@123';
```

6. Create a new database user for wordpress (change the password to something strong)

```
CREATE USER 'wp_user'@localhost IDENTIFIED BY 'Mypassword@123';
```

7. Create a database for wordpress

```
CREATE DATABASE wp;
```

8. Grant all privileges on the database 'wp' to the newly created user

```
GRANT ALL PRIVILEGES ON wp.* TO 'wp_user'@'%';
```

9. Configure MySQL (if necessary):

You might need to configure MySQL to allow remote connections if you plan to connect to MySQL from a client outside of your EC2 instance. Edit the MySQL configuration file:

```
sudo nano /etc/mysql/mysql.conf.d/mysqld.cnf
```

10. Find the line that says bind-address and change its value to the private IP address of your EC2 instance or 0.0.0.0 to allow connections from any IP address.

Save the file and exit.

Restart MySQL service to apply changes:

```
sudo systemctl restart mysql
```

11. To know the private IP of your MySQL instance just type

```
curl ifconfig.me
```

Now this IP will be used when we install wordpress.

That's it! You now have MySQL installed and running on your Ubuntu instance in AWS. Make sure to properly configure security groups to control access to your MySQL server.

For Wordpress instance: 1. Install Apache server on Ubuntu

```
apt install apache2
```

2. Install php runtime and php mysql connector

```
apt install php libapache2-mod-php php-mysql
```

3. Download and Configure WordPress (Download the latest version of Wordpress)

```
cd /tmp
wget https://wordpress.org/latest.tar.gz
```

4. Extract the downloaded archive:
`tar xzvf latest.tar.gz`

5. Move WordPress files to Apache's root directory:
`sudo mv wordpress/* /var/www/html/`

6. Set appropriate permissions:
`sudo chown -R www-data:www-data /var/www/html/`
`sudo chmod -R 755 /var/www/html/`

7. Configure wordpress:
`sudo mv /var/www/html/wp-config-sample.php /var/www/html/wp-config.php`

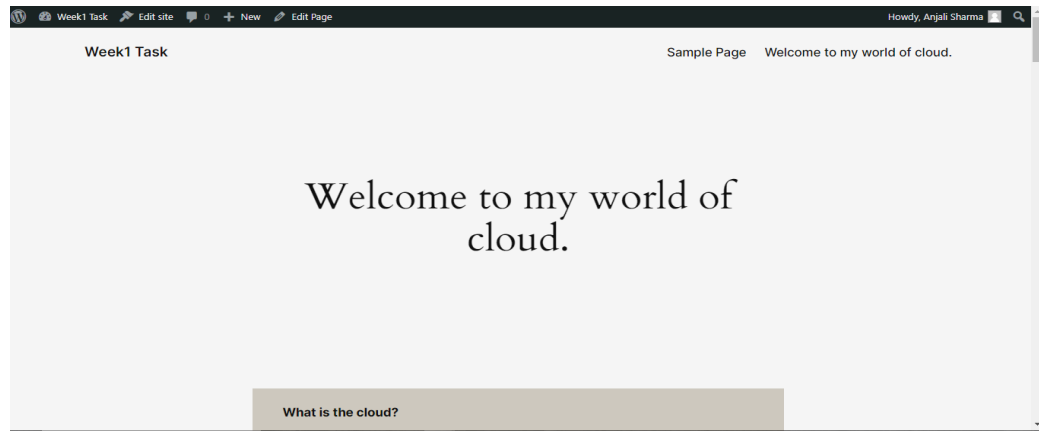
8. Edit the configuration file:
`sudo nano /var/www/html/wp-config.php`
Update the database details (DB_NAME, DB_USER, DB_PASSWORD) with the details you set up earlier.

9. Restart apache
`sudo systemctl restart apache2`

Complete WordPress Installation:

Open your web browser and navigate to your EC2 instance's public IP address. Follow the WordPress installation prompts, providing the requested information. After login into your wordpress you will be able to open your welcome page. One thing you have to change is the localhost value. This value will be the value we got from the mysql instance after the command `curl ifconfig.me`. This IP should be placed in the localhost part.

This is how your welcome page will look like after editing



you.

Thank