Cloud (AWS) Week 1 Task

Deploy Application in monolithic and Microservices Architecture

*Description:

Task 1: For Microservices: 2 EC2 instances , 1 for Wordpress and EC2 instances, 1 for MYSQL.
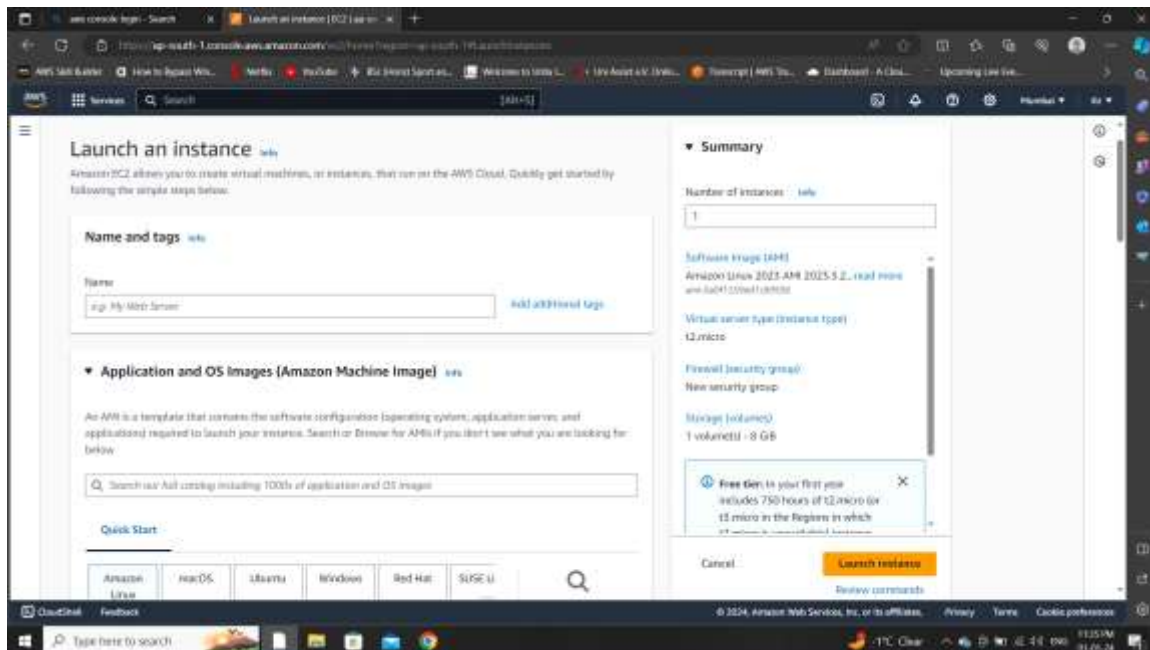
-Configure the necessarysecurity group for the instances

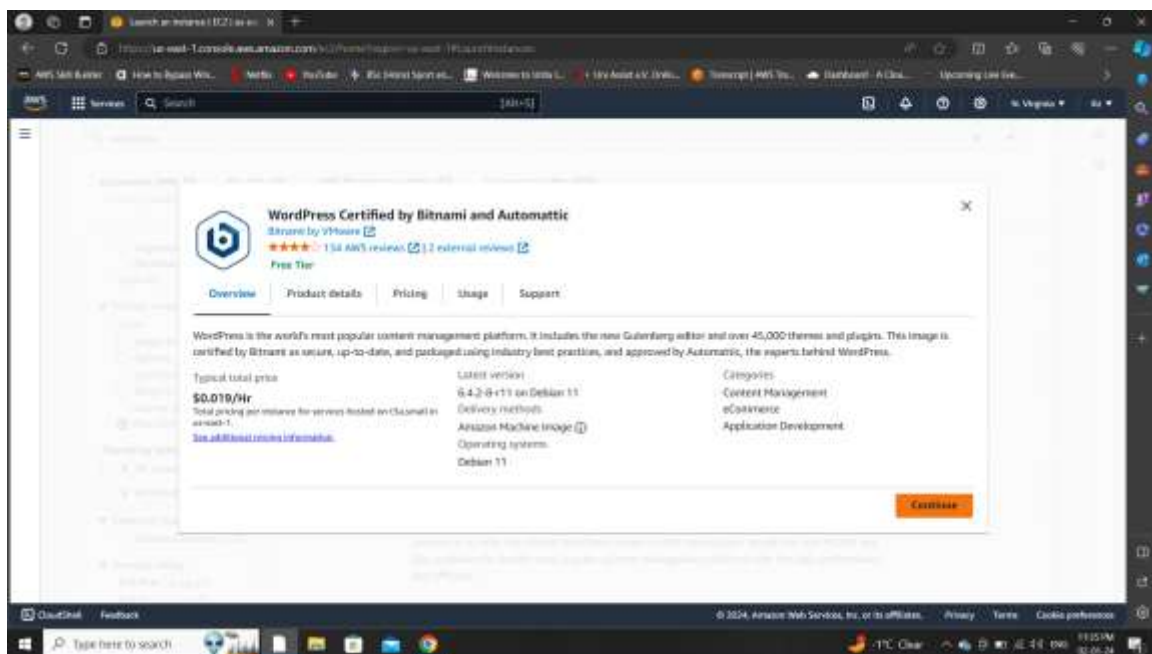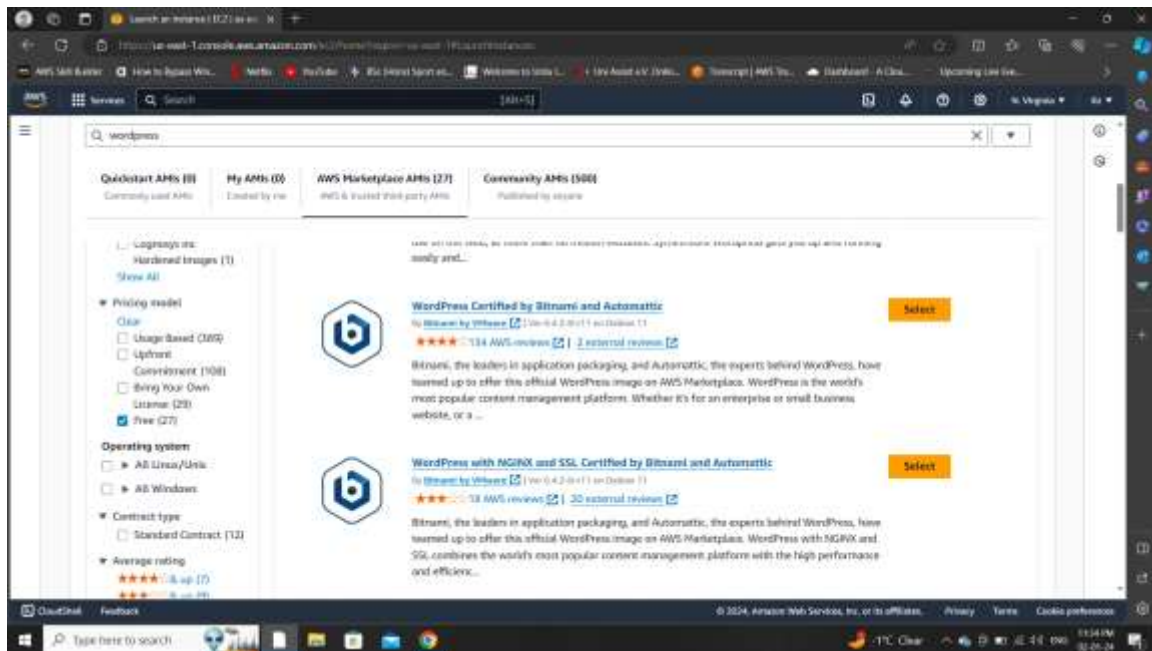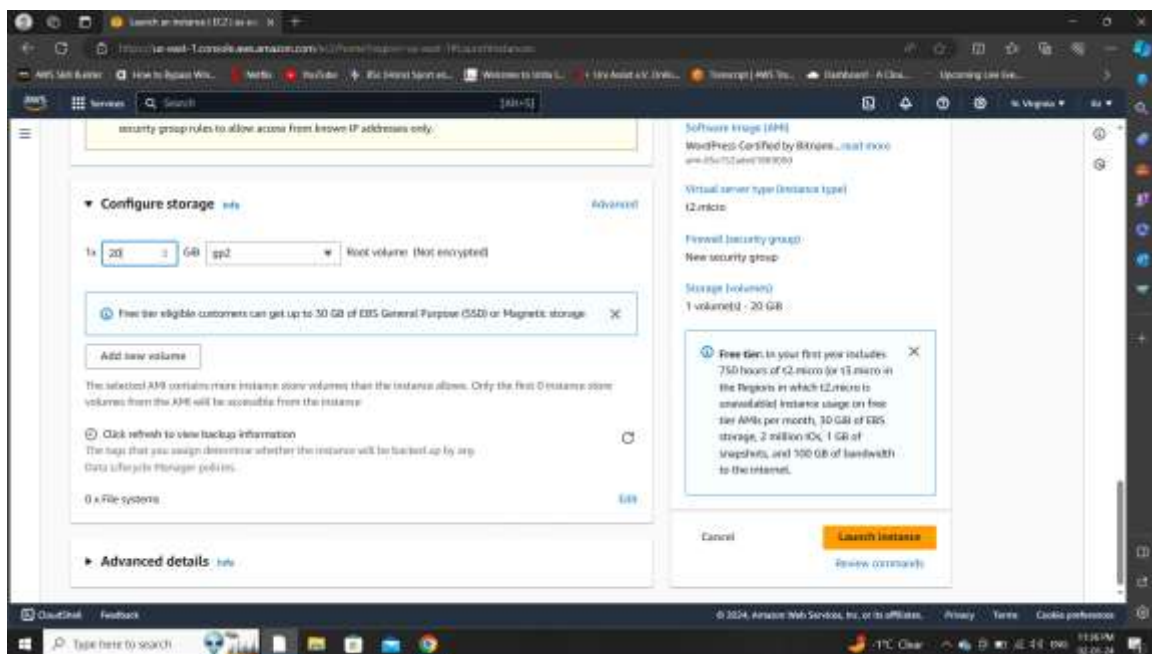-EC2 instance type:t2 micro, AMI-Ubuntu-*
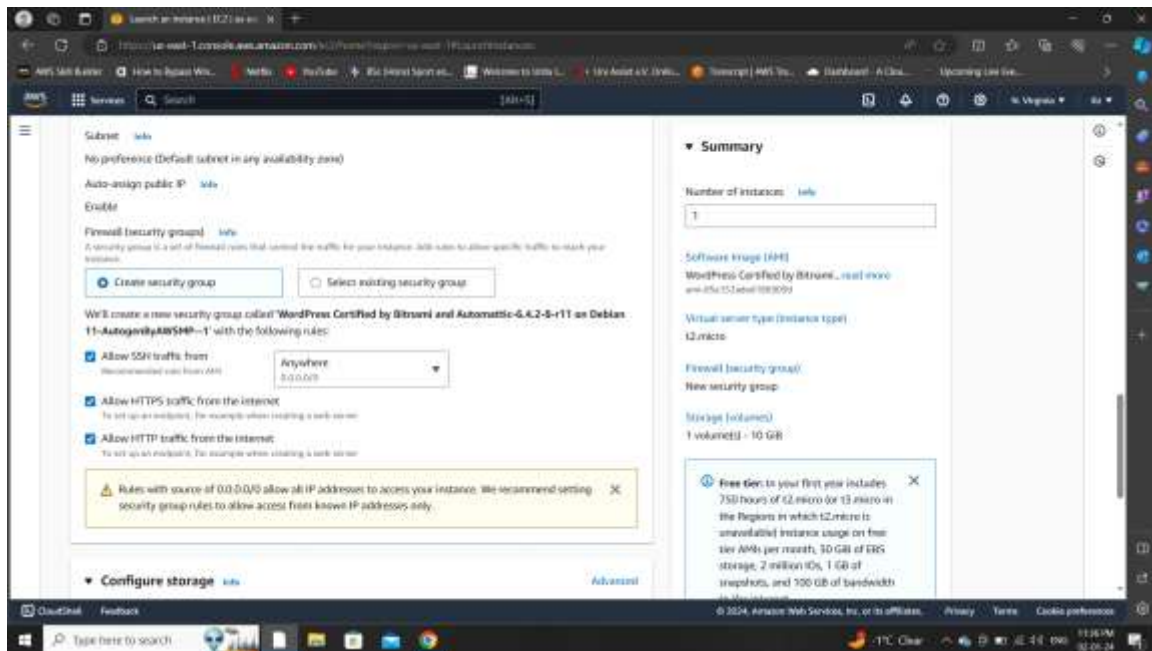
Task 1

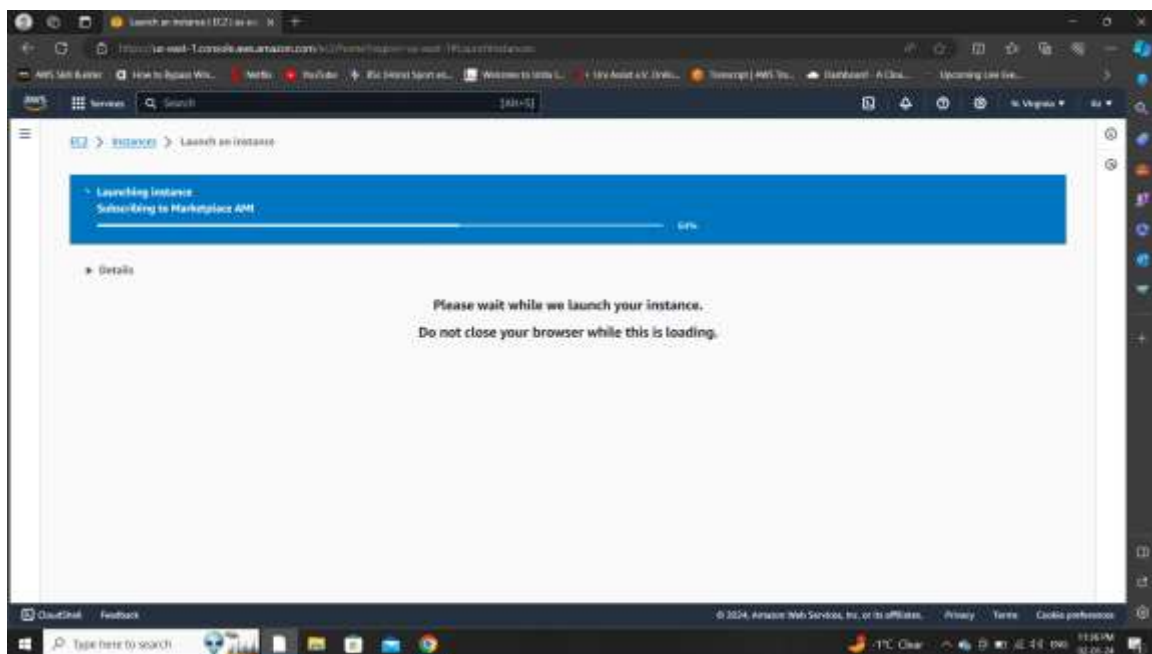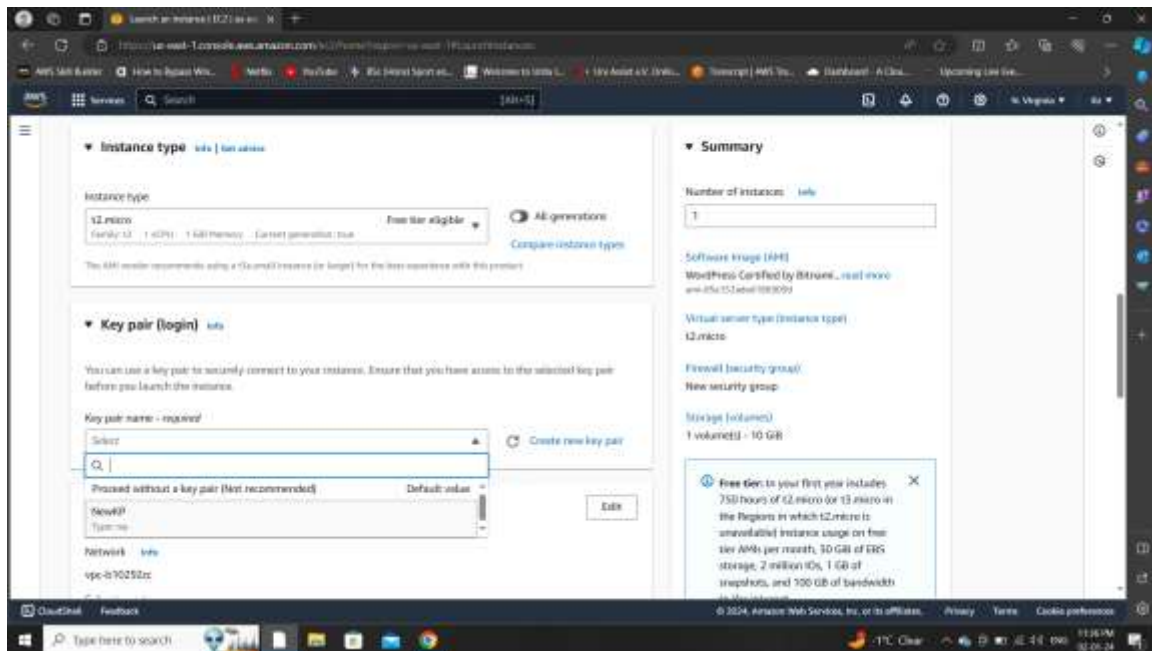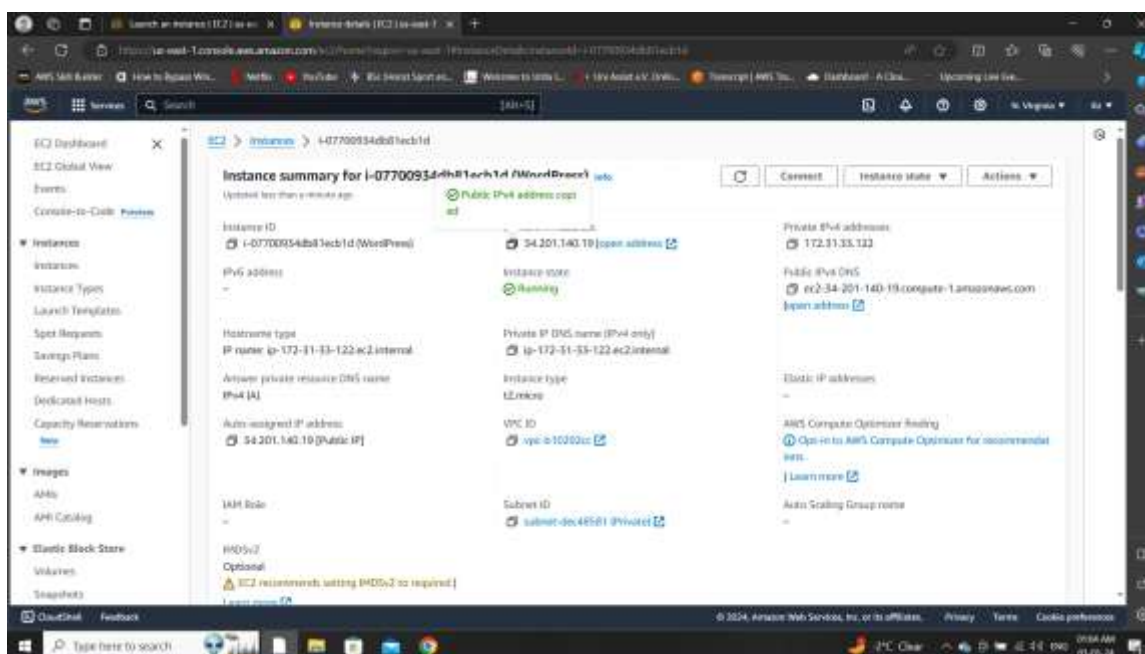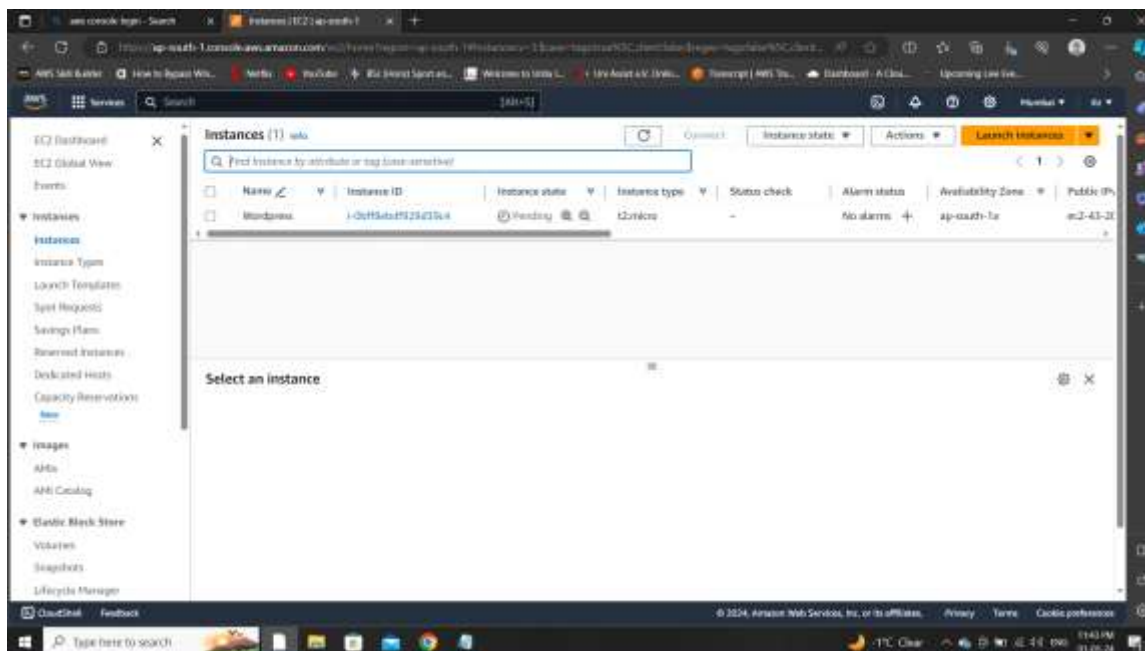For Microservices: 2 EC2 instances , 1 for Wordpress and 1 EC2 instances, 1 for MYSQL.

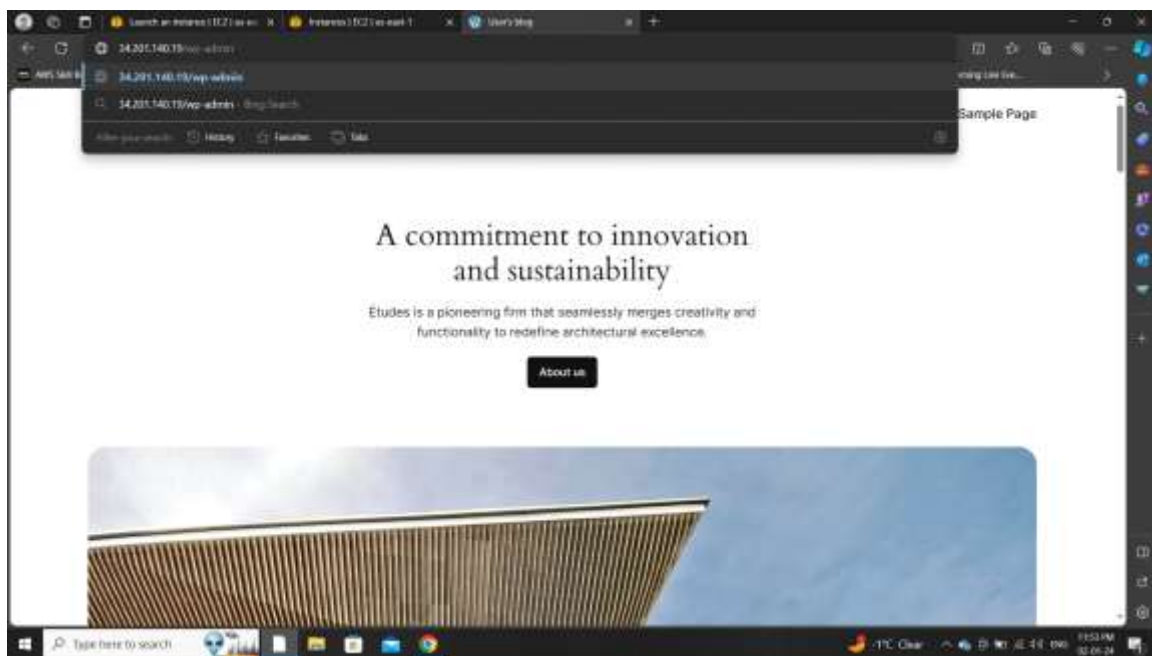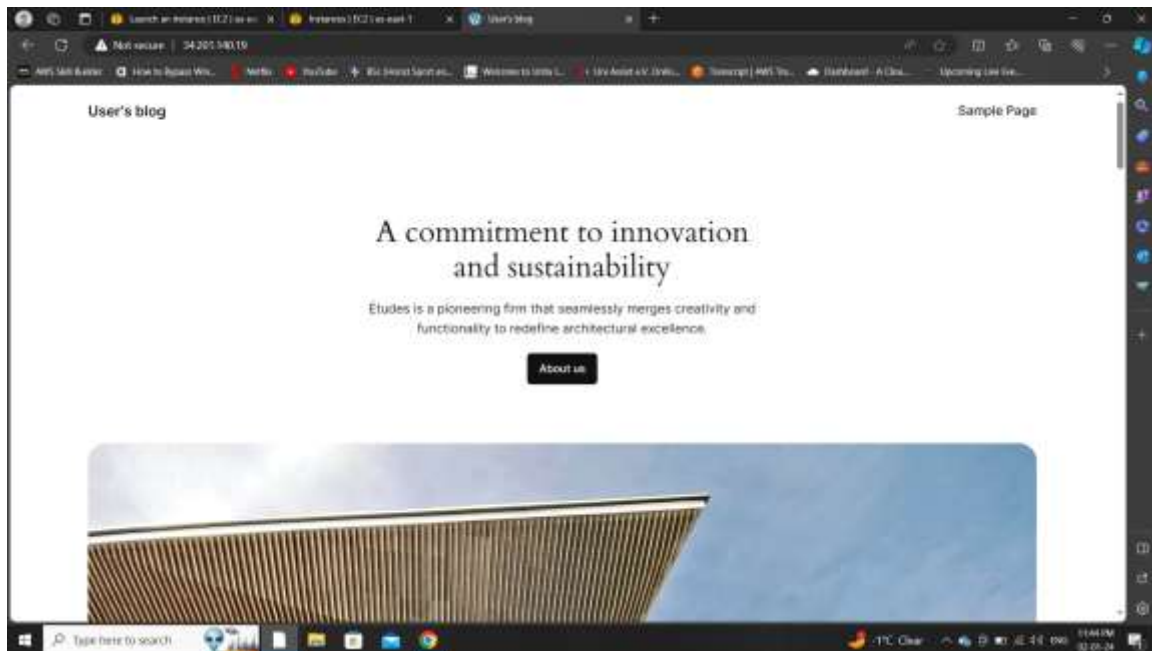a) 1 EC2 instance for Wordpress

Create a Wordpress instance launch

Subnet Info

No preference (Default subnet in any availability zone)

Auto-assign public IP Info

Enable

Firewall (security groups) Info

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

○ **Create security group**   ○ Select existing security group

We'll create a new security group called 'WordPress Certified by Bitnami and Automatic-6.4.2-8-r11 on Debian 11-AutogenByAWSMP--1' with the following rules:

☑ **Allow SSH traffic from**
Recommended rule from AMI
Anywhere
0.0.0.0/0 ▼

☑ **Allow HTTPS traffic from the internet**
To set up an endpoint, for example when creating a web server

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To set up an endpoint, for example when creating a web server

⚠ Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting   ✕
security group rules to allow access from known IP addresses only.

▼ **Configure storage** Info   Advanced

▼ Summary

Number of instances Info

1

Software Image (AMI)
WordPress Certified by Bitnami...read more
ami-05a752abed1083093

Virtual server type (instance type)
t2.micro

Firewall (security group)
New security group

Storage (volumes)
1 volume(s) - 10 GiB

ⓘ **Free tier:** In your first year includes   ✕
750 hours of t2.micro (or t3.micro in
the Regions in which t2.micro is
unavailable) instance usage on free
tier AMIs per month, 30 GiB of EBS
storage, 2 million IOs, 1 GB of
snapshots, and 100 GB of bandwidth

---

security group rules to allow access from known IP addresses only.

▼ **Configure storage** Info   Advanced

1x   20   GiB gp2 ▼   Root volume (Not encrypted)

ⓘ Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage   ✕

Add new volume

The selected AMI contains more instance store volumes than the instance allows. Only the first 0 instance store volumes from the AMI will be accessible from the instance.

⊕ Click refresh to view backup information   ↻
The tags that you assign determine whether the instance will be backed up by any
Data Lifecycle Manager policies.

0 x File systems   Edit

▶ **Advanced details** Info

Software Image (AMI)
WordPress Certified by Bitnami...read more
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storage, 2 million IOs, 1 GB of
snapshots, and 100 GB of bandwidth
to the internet.

Cancel   **Launch instance**

Review commands

▼ Instance type Info | Get advice

Instance type

t2.micro — Free tier eligible
Family: t2   1 vCPU   1 GiB Memory   Current generation: true

○ All generations
Compare instance types

This AMI vendor recommends using a t2.small instance (or larger) for the best experience with this product.

▼ Key pair (login) Info

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required

Select ▲   C Create new key pair

Q |

Proceed without a key pair (Not recommended)   Default value
NewKP
TP

Network   Info

vpc-b1025Izc

▼ Summary

Number of instances   Info

1

Software Image (AMI)
WordPress Certified by Bitnami... read more
ami-05c152abd100309d

Virtual server type (instance type)
t2.micro

Firewall (security group)
New security group

Storage (volumes)
1 volume(s) - 10 GiB

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750 hours of t2.micro (or t3.micro in
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tier AMIs per month, 30 GiB of EBS
storage, 2 million IOs, 1 GB of
snapshots, and 100 GB of bandwidth

Edit

EC2 > Instances > Launch an instance

Launching instance
Subscribing to Marketplace AMI
64%

▶ Details

Please wait while we launch your instance.

Do not close your browser while this is loading.

1 EC2 Instance for MYSQL

Create a MYSQL Server instance Launch

Command:

Step 1: Update the system

sudo apt update

Step 2: Install MySql
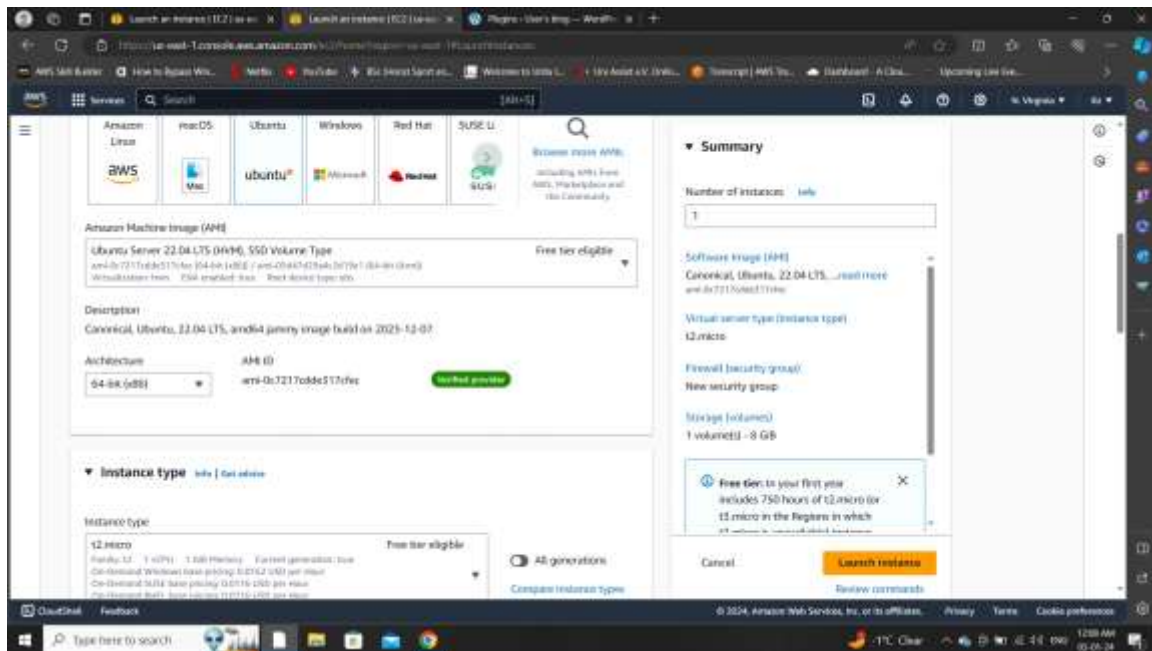
sudo apt install mysql-server

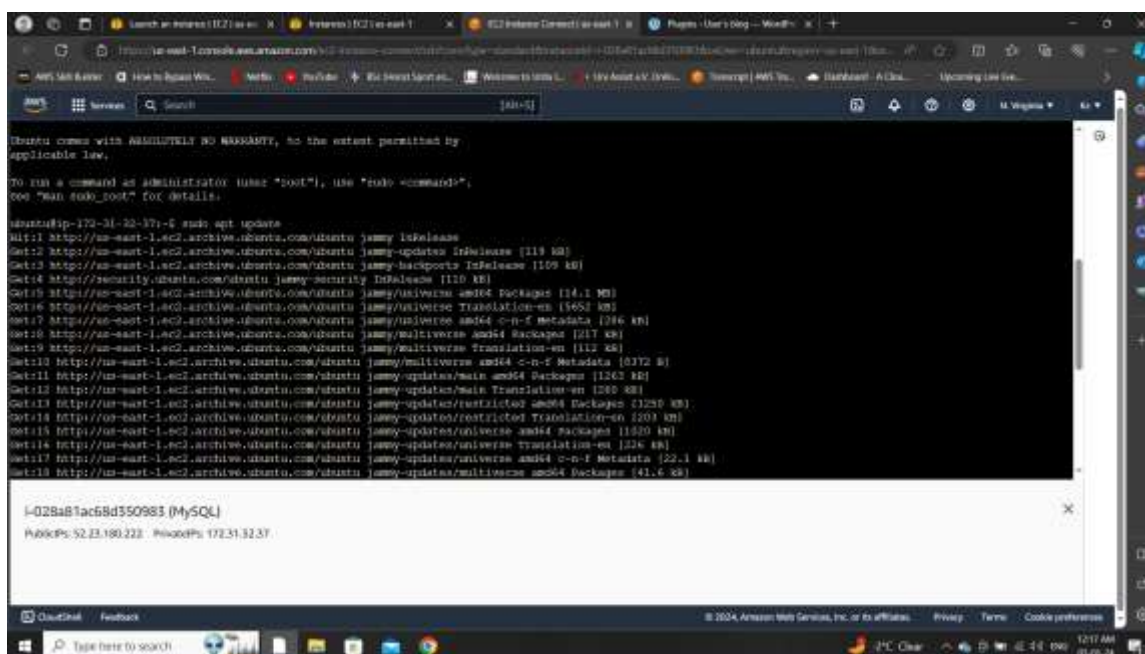Step 3: Check the Status of MySql (Active or Inactive)

sudo systemctl status mysql

Step 4: Login to MySql as a root

sudo mysql

Screenshot 1 terminal output:
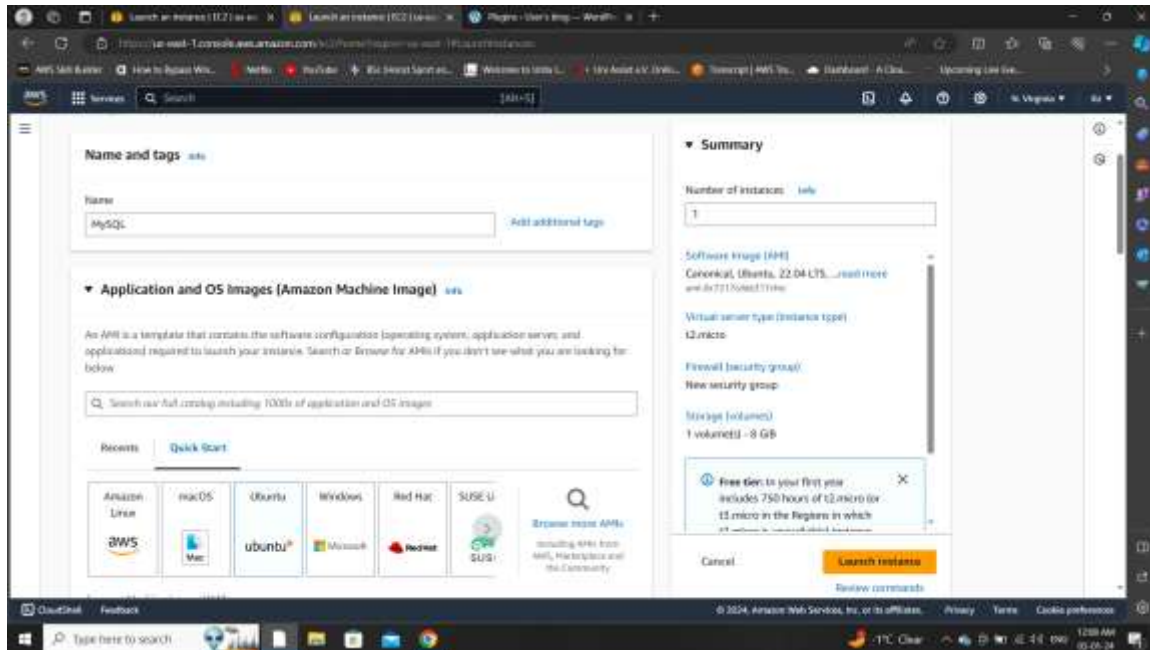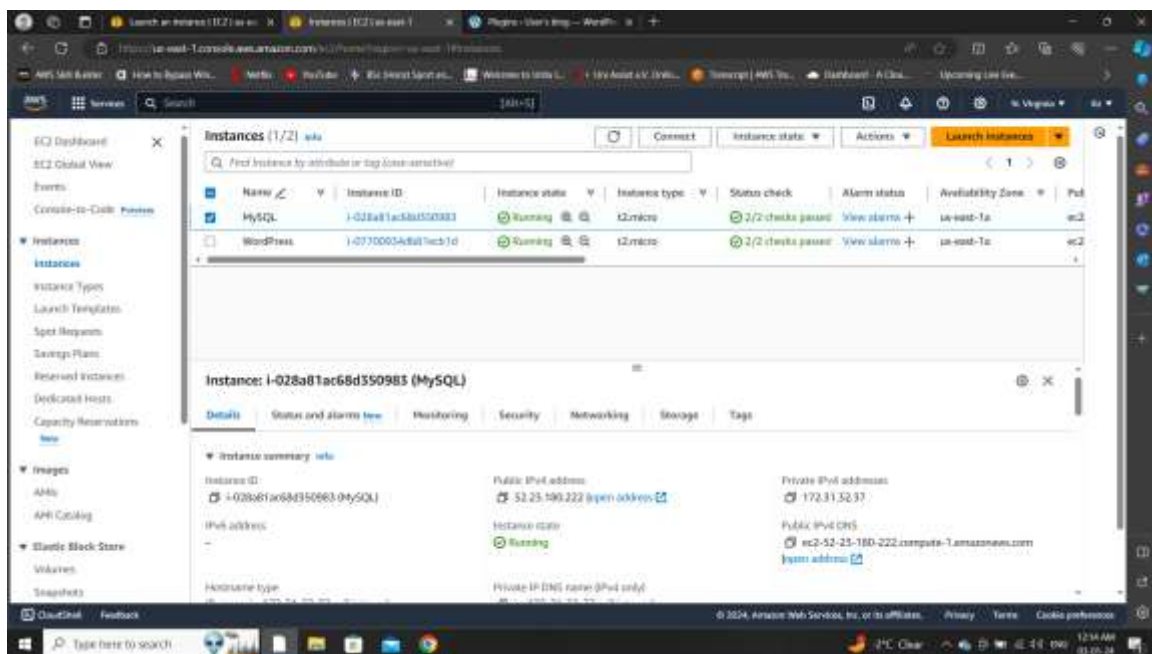
```
Get:19 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse Translation-en [9748 B]
Get:20 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 c-n-f Metadata [472 B]
Get:21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [41.7 kB]
Get:22 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main Translation-en [10.5 kB]
Get:23 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 c-n-f Metadata [385 B]
Get:24 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 c-n-f Metadata [116 B]
Get:25 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [28.3 kB]
Get:26 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [16.5 kB]
Get:27 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [644 B]
Get:28 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 B]
Get:29 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [1051 kB]
Get:30 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [200 kB]
Get:31 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [1226 kB]
Get:32 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [200 kB]
Get:33 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [823 kB]
Get:34 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [154 kB]
Get:35 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [16.0 kB]
Get:36 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [36.5 kB]
Get:37 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [7060 B]
Get:38 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [280 B]
Fetched 25.0 MB in 5s (5468 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
26 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-31-32-37:~$ sudo apt-get install mysql-server
```
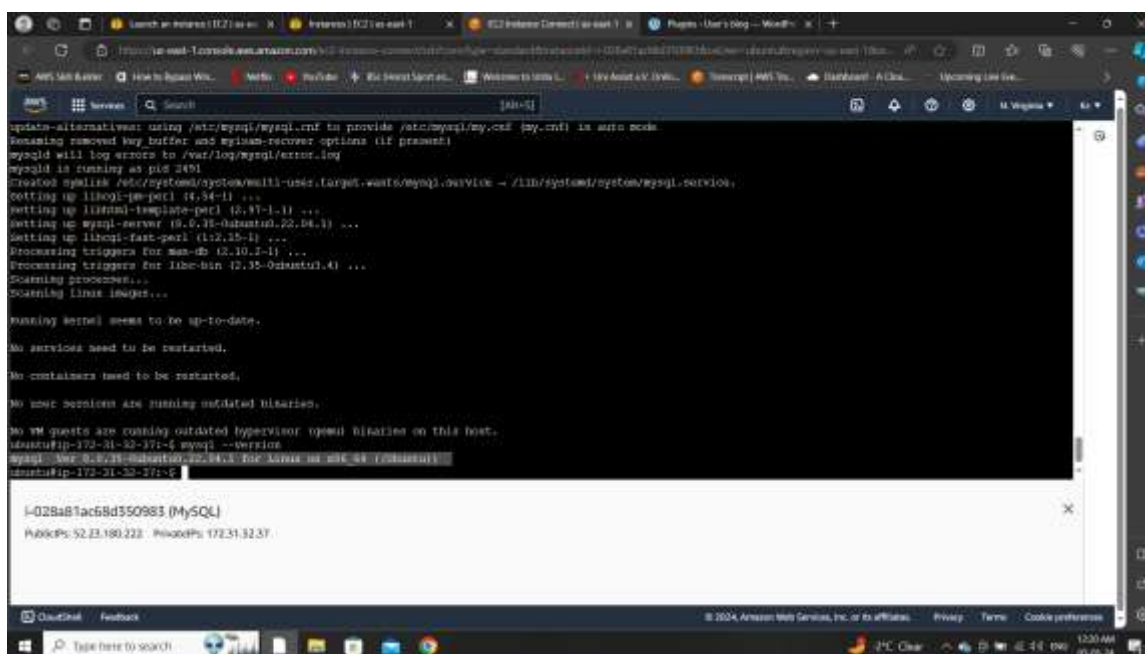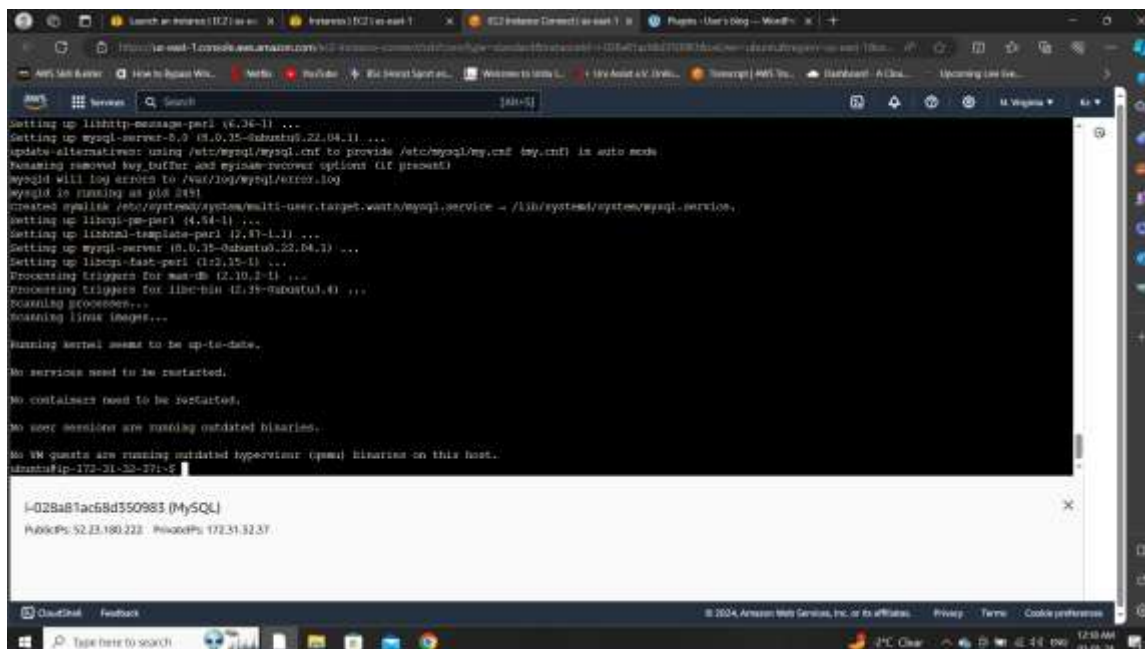
I-028a81ac68d350983 (MySQL)
PublicIPs: 52.23.180.222   PrivateIPs: 172.31.32.37

Screenshot 2 terminal output:

```
reading /usr/share/mecab/dic/ipadic/Noun.csv ... 60477
reading /usr/share/mecab/dic/ipadic/Adnominal.csv ... 135
reading /usr/share/mecab/dic/ipadic/Noun.place.csv ... 72999
reading /usr/share/mecab/dic/ipadic/Conjunction.csv ... 171
reading /usr/share/mecab/dic/ipadic/Filler.csv ... 19
reading /usr/share/mecab/dic/ipadic/Auxil.csv ... 199
reading /usr/share/mecab/dic/ipadic/Postp-col.csv ... 91
reading /usr/share/mecab/dic/ipadic/Symbol.csv ... 208
reading /usr/share/mecab/dic/ipadic/Adj.csv ... 27210
reading /usr/share/mecab/dic/ipadic/Noun.others.csv ... 151
reading /usr/share/mecab/dic/ipadic/Noun.name.csv ... 34202
reading /usr/share/mecab/dic/ipadic/Noun.org.csv ... 16668
reading /usr/share/mecab/dic/ipadic/Noun.proper.csv ... 27328
reading /usr/share/mecab/dic/ipadic/Noun.adverbal.csv ... 795
emitting double-array: 100% |#############################|
reading /usr/share/mecab/dic/ipadic/matrix.def ... 1316x1316
emitting matrix     : 100% |#############################|

done!
update-alternatives: using /var/lib/mecab/dic/ipadic-utf8 to provide /var/lib/mecab/dic/debian (mecab-dictionary) in auto mode
Setting up libhtml-parser-perl:amd64 (3.76-1build2) ...
Setting up libhttp-message-perl (6.36-1) ...
Setting up mysql-server-8.0 (8.0.35-0ubuntu0.22.04.1) ...
update-alternatives: using /etc/mysql/mysql.cnf to provide /etc/mysql/my.cnf (my.cnf) in auto mode
Renaming removed key_buffer and myisam-recover options (if present)
```

I-028a81ac68d350983 (MySQL)
PublicIPs: 52.23.180.222   PrivateIPs: 172.31.32.37

Thank you