# PRACTICAL NO: - 01

Manorath Ital
DISA 19
Adv. Devops        Exp-1

AIM: To understand the benefits of cloud infra
and setup AWS cloud9 IDE, launch AWs
cloud9 IDE and perform collaboration.

THEORY: Amazon web Services (AWS) is a comprehensive
        cloud computing platform provided by Amazon. It
offers wide range of cloud-based services, including
computer power, storage and databases, machine
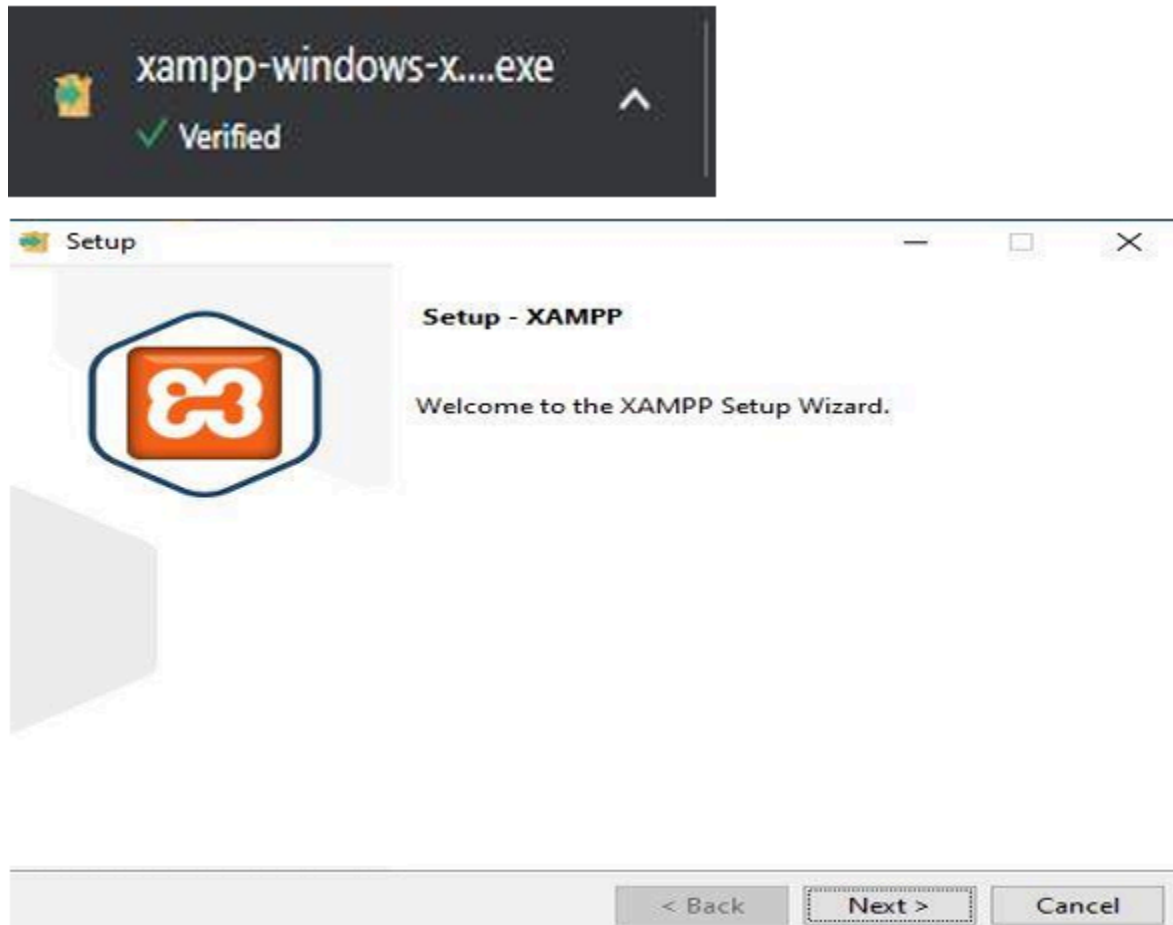learning and more.
        Amazon EC2 is a core Service within AWS
that provides scalable virtual servers known as
EC2 instances. These instances are designed to
handle various workloads from basic web application
to high-performance computing tasks. EC2 allows
users to launch and manage virtual servers in
the cloud providing flexibility in terms of
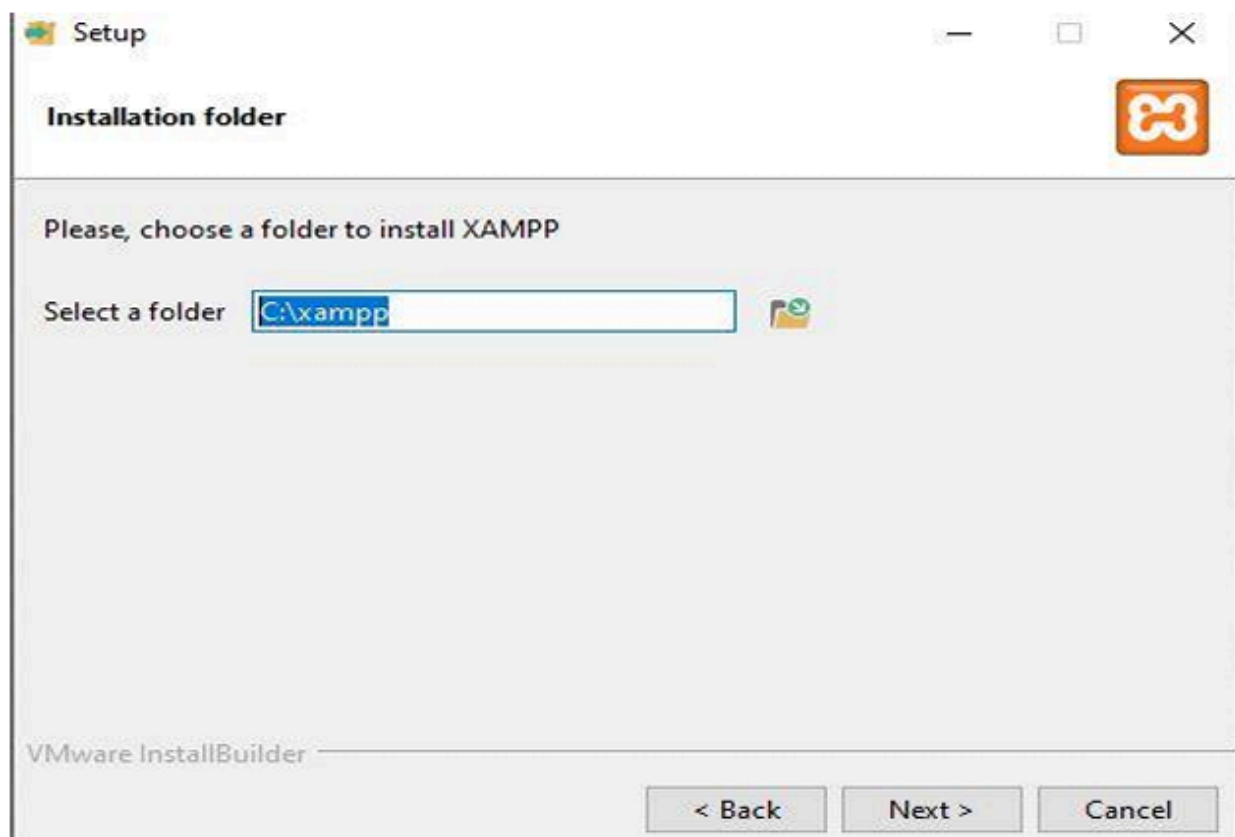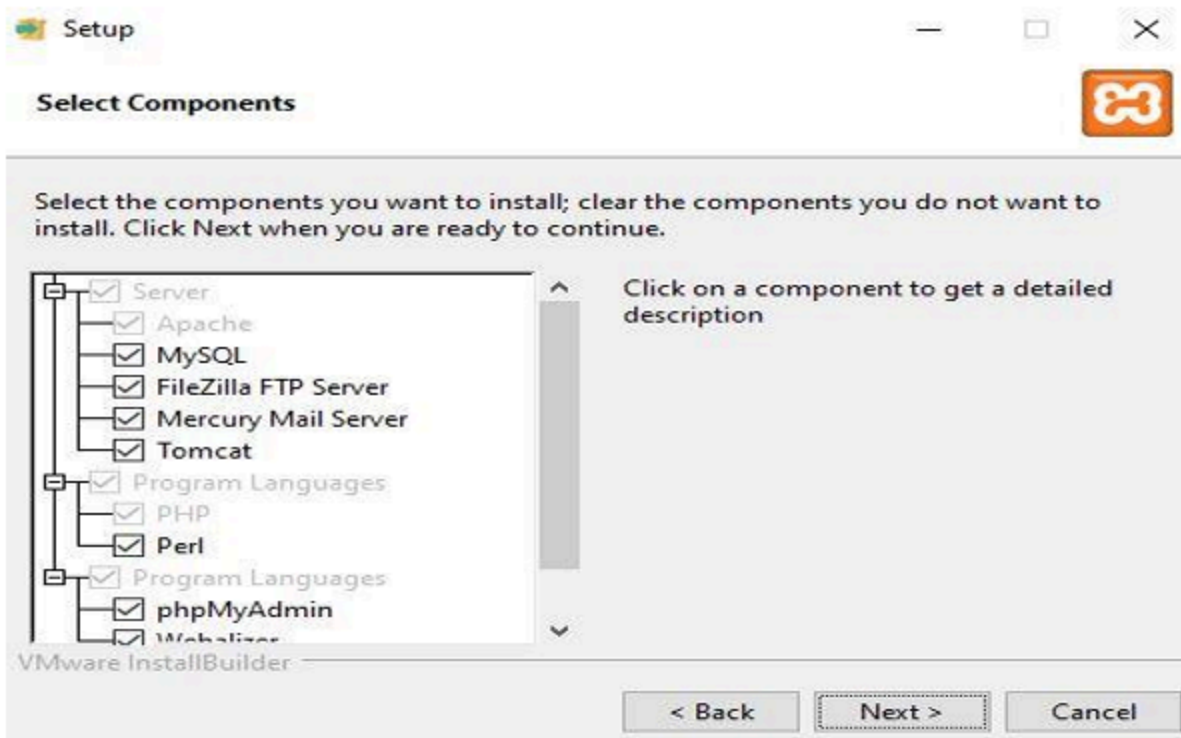computing power and operating system.
        An EC2 instance is a virtual server
within the Amazon EC2 service. It represents
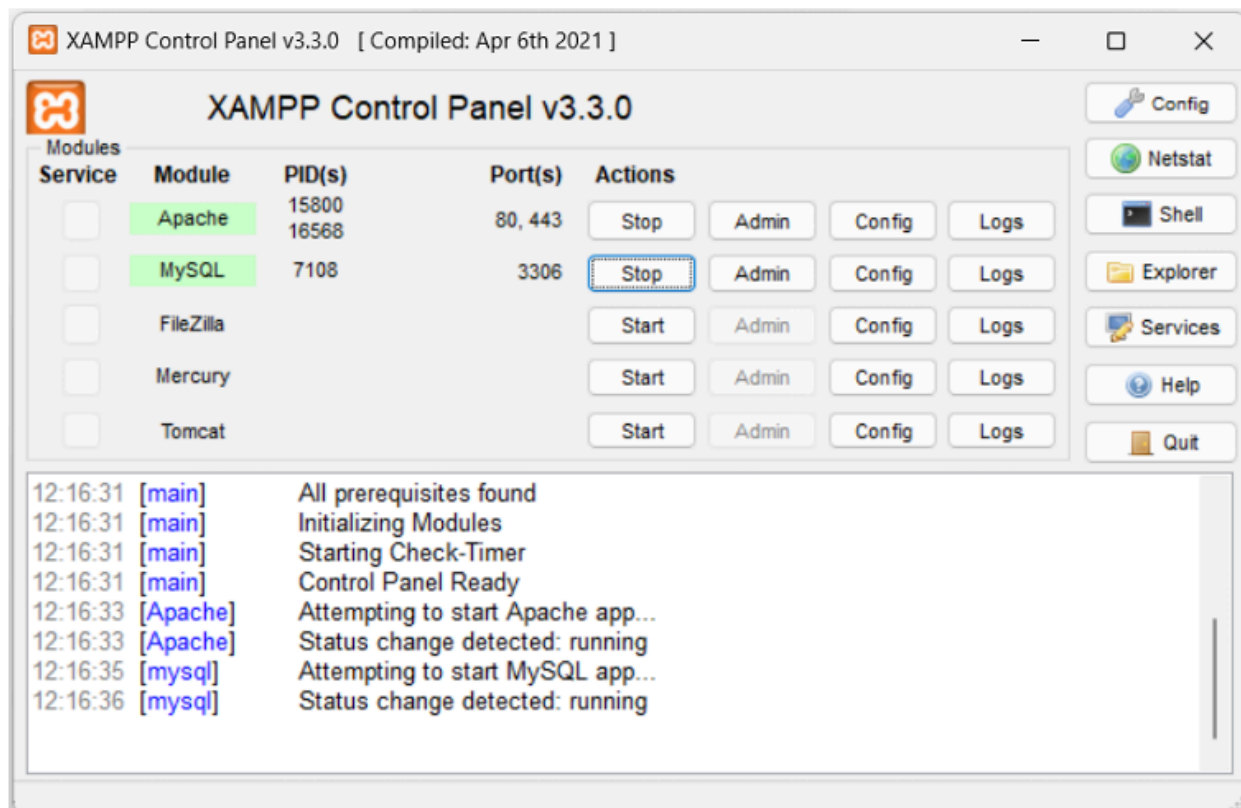a single unit of computing capacity in the
AWS cloud

Conclusion: Thus, we have understand the benifits
of cloud infra and setup AWS cloud9 IDE
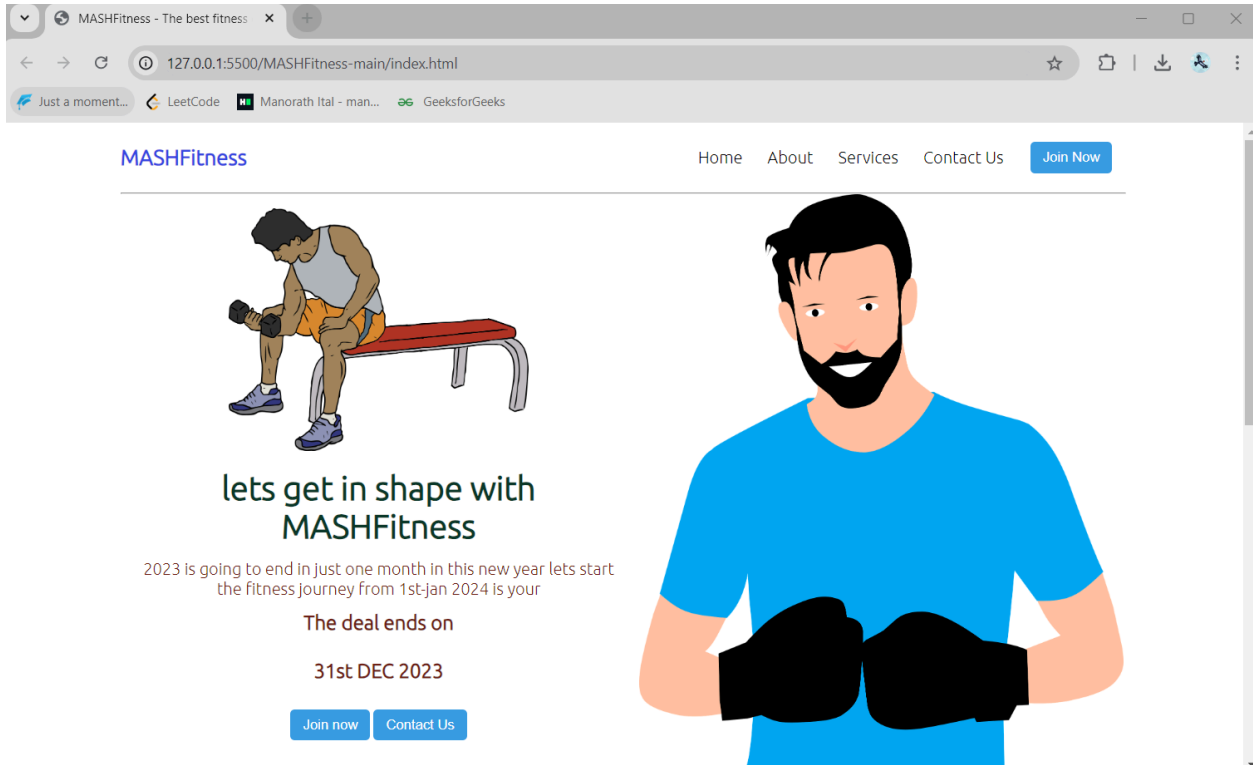Due to private access the S3 website was not
accessible

# Part 1: a) To develop a website and host it on your local machine on a VM

➢ Steps to host Website using Xampp Server

**Setup** — □ ✕

## Select Components

Select the components you want to install; clear the components you do not want to install. Click Next when you are ready to continue.

- ☑ Server
  - ☑ Apache
  - ☑ MySQL
  - ☑ FileZilla FTP Server
  - ☑ Mercury Mail Server
  - ☑ Tomcat
- ☑ Program Languages
  - ☑ PHP
  - ☑ Perl
- ☑ Program Languages
  - ☑ phpMyAdmin
  - ☑ Webalizer

Click on a component to get a detailed description

VMware InstallBuilder

[ < Back ] [ Next > ] [ Cancel ]

---

**Setup** — □ ✕

## Installation folder

Please, choose a folder to install XAMPP

Select a folder  C:\xampp

VMware InstallBuilder

[ < Back ] [ Next > ] [ Cancel ]

➢ Launching EC2 on AWS

## EC2 Dashboard
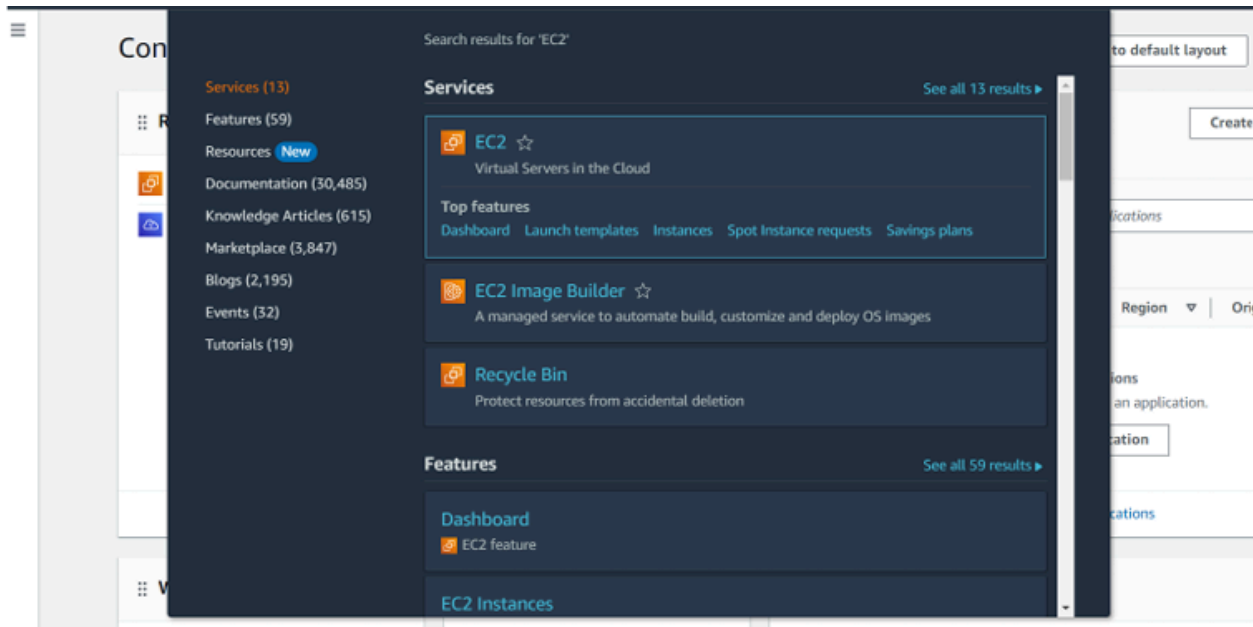
- EC2 Dashboard
- EC2 Global View
- Events
- Console-to-Code  Preview

▼ Instances
- Instances
- Instance Types
- Launch Templates
- Spot Requests
- Savings Plans
- Reserved Instances
- Dedicated Hosts
- Capacity Reservations

▼ Images
- AMIs
- AMI Catalog

▼ Elastic Block Store
- Volumes

### Resources

EC2 Global View ⧉   ⚙   ↻

You are using the following Amazon EC2 resources in the US East (N. Virginia) Region:

| | | | | | |
|---|---|---|---|---|---|
| Instances (running) | 0 | Auto Scaling Groups | 0 | Dedicated Hosts | 0 |
| Elastic IPs | 0 | Instances | 0 | Key pairs | 1 |
| Load balancers | 0 | Placement groups | 0 | Security groups | 1 |
| Snapshots | 0 | Volumes | 0 | | |

### Account attributes

↻

**Default VPC** ⧉
vpc-0d93715b8c7682b9a

**Settings**
Data protection and security

Zones

EC2 Serial Console

Default credit specification

EC2 console preferences

### Launch instance
To get started, launch an Amazon EC2 instance, which is a virtual server in the cloud.

**Launch instance** ▼

**Migrate a server** ⧉

Note: Your instances will launch in the US East (N. Virginia) Region

### Service health

AWS Health Dashboard ⧉   ↻

**Region**
US East (N. Virginia)

**Status**
⊘ This service is operating normally.

Zones

### Explore AWS

✕

**Save up to 90% on EC2 with Spot Instances**
Optimize price-performance by combining EC2 purchase options in a single EC2 ASG. Learn more ⧉

**Enable Best Price-Performance with AWS Graviton2**
AWS Graviton2 powered EC2 instances enable up to

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## EC2 Dashboard

- EC2 Dashboard
- EC2 Global View
- Events
- Console-to-Code  Preview

▶ Instances

▼ Images
- AMIs
- AMI Catalog

▼ Elastic Block Store
- Volumes
- Snapshots
- Lifecycle Manager

▼ Network & Security
- Security Groups
- Elastic IPs
- Placement Groups
- Key Pairs
- Network Interfaces

### Instances  Info

↻   Connect   Instance state ▼   Actions ▼   **Launch instances** ▼   ⧗

🔍 Find Instance by attribute or tag (case-sensitive)    All states ▼

Instance state = running ✕   Clear filters    ‹ 1 › ⚙

| ☐ | Name ✎ ▽ | Instance ID | Instance state ▽ | Instance type ▽ | Status check | Alarm status | Availability Zone ▽ | Public IPv4 |
|---|---|---|---|---|---|---|---|---|

No matching instances found

### Select an instance

⚙ ✕

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### Name and tags  Info

**Name**

| practical1 | Add additional tags |

### ▼ Application and OS Images (Amazon Machine Image)  Info

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

🔍 Search our full catalog including 1000s of application and OS images

**Quick Start**

| Amazon Linux | macOS | Ubuntu | Windows | Red Hat | SUSE Li | 🔍 Browse more AMIs |
|---|---|---|---|---|---|---|
| aws | Mac | ubuntu | Microsoft | RedHat | SUSE | Including AMIs from AWS, Marketplace and the Community |

Amazon Machine Image (AMI)

### ▼ Summary

**Number of instances**  Info

| 1 |

**Software Image (AMI)**
Canonical, Ubuntu, 24.04 LTS, ...read more
ami-04a81a99f5ec58529

**Virtual server type (instance type)**
t2.micro

**Firewall (security group)**
New security group

**Storage (volumes)**
1 volume(s) - 8 GiB

ⓘ **Free tier:** In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which     ✕

Cancel          **Launch instance**

Review commands

## Create key pair

Key pair name

Key pairs allow you to connect to your instance securely.

practical1

The name can include up to 255 ASCII characters. It can't include leading or trailing spaces.

Key pair type

**RSA**
RSA encrypted private and public key pair

**ED25519**
ED25519 encrypted private and public key pair
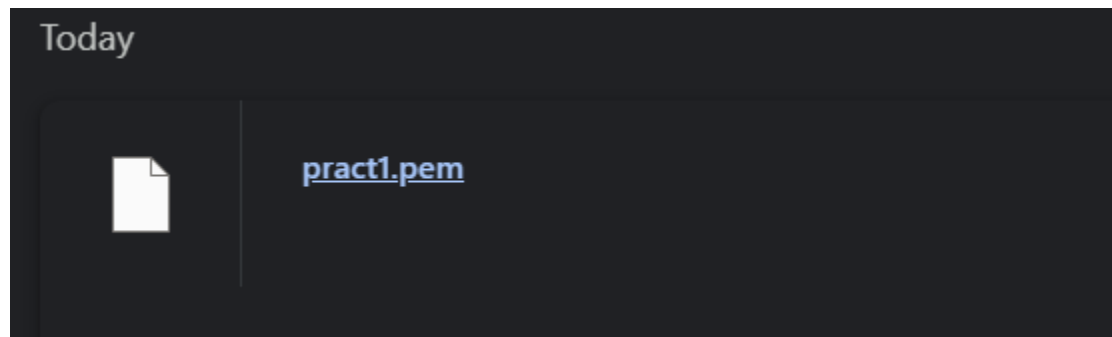
Private key file format

**.pem**
For use with OpenSSH

**.ppk**
For use with PuTTY

⚠ When prompted, store the private key in a secure and accessible location on your computer. **You will need it later to connect to your instance.** Learn more ↗

Cancel    **Create key pair**

Today

📄    pract1.pem

**Network** | Info

vpc-0d93715b8c7682b9a

**Subnet** | Info

No preference (Default subnet in any availability zone)

**Auto-assign public IP** | Info

Enable

Additional charges apply when outside of free tier allowance

**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 '**launch-wizard-1**' with the following rules:

☑ Allow SSH traffic from               | Anywhere                    ▾ |
Helps you connect to your instance      | 0.0.0.0/0                      |

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

☐ Allow HTTP traffic from the internet
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.     ✕

**▼ Summary**

**Number of instances** | Info

[ 1 ]

**Software Image (AMI)**
Canonical, Ubuntu, 24.04 LTS, ...read more
ami-04a81a99f5ec58529

**Virtual server type (instance type)**
t2.micro

**Firewall (security group)**
New security group

**Storage (volumes)**
1 volume(s) - 30 GiB

ⓘ **Free tier:** In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which     ✕

Cancel          **Launch instance**

Review commands

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EC2 > Instances > Launch an instance

⟲ **Launching instance**
**Creating security group rules**

━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 21%

▶ Details

**Please wait while we launch your instance.**

**Do not close your browser while this is loading.**

⊡ CloudShell    Feedback                              © 2024, Amazon Web Services, Inc. or its affiliates.    Privacy    Terms    Cookie preferences

## Instances (1) Info

Connect | Instance state ▼ | Actions ▼ | **Launch instances** ▼

Find Instance by attribute or tag (case-sensitive)

All states ▼

Instance ID = i-0a05901d6f25b1800  ✕ | **Clear filters**

< 1 >

| ☐ | Name ✎ | ▽ | Instance ID | Instance state | ▽ | Instance type | ▽ | Status check | Alarm status | Availability Zone | ▽ | Public II |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ☐ | practical1 | | i-0a05901d6f25b1800 | ⊘ Running ⊕ ⊖ | | t2.micro | | ⊘ Initializing | View alarms ✚ | us-east-1e | | ec2-18-: |

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## Select an instance

⚙ ✕

# Connect to instance Info

Connect to your instance i-0a05901d6f25b1800 (practical1) using any of these options

**EC2 Instance Connect** | Session Manager | SSH client | EC2 serial console

⚠ **Port 22 (SSH) is open to all IPv4 addresses**
Port 22 (SSH) is currently open to all IPv4 addresses, indicated by **0.0.0.0/0** in the inbound rule in your security group. For increased security, consider restricting access to only the EC2 Instance Connect service IP addresses for your Region: 18.206.107.24/29. Learn more.

**Instance ID**
⬚ i-0a05901d6f25b1800 (practical1)

**Connection Type**

◉ **Connect using EC2 Instance Connect**
Connect using the EC2 Instance Connect browser-based client, with a public IPv4 address.

○ **Connect using EC2 Instance Connect Endpoint**
Connect using the EC2 Instance Connect browser-based client, with a private IPv4 address and a VPC endpoint.

**Public IP address**
⬚ 18.208.119.124

**Username**
Enter the username defined in the AMI used to launch the instance. If you didn't define a custom username, use the default username, ubuntu.

🔍 ubuntu    ✕

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```
* Support:        https://ubuntu.com/pro

System information as of Wed Aug  7 16:13:20 UTC 2024

  System load:  0.08              Temperature:            -273.1 C
  Usage of /:   26.1% of 6.71GB   Processes:              115
  Memory usage: 25%               Users logged in:        1
  Swap usage:   0%                IPv4 address for ens5:  172.31.47.250

* Ubuntu Pro delivers the most comprehensive open source security and
  compliance features.

  https://ubuntu.com/aws/pro

Expanded Security Maintenance for Applications is not enabled.

48 updates can be applied immediately.
27 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status


Last login: Wed Aug  7 16:00:42 2024 from 13.48.4.203
ubuntu@ip-172-31-47-250:~$ sudo nano index.html
ubuntu@ip-172-31-47-250:~$ []
```

```
GNU nano 7.2                                          index.html
            <select name="card_type" id="card_type" required>
                <option value="">--select a card type--</option>
                <option value="visa">Visa</option>
                <option value="master_card">Master card</option>
                <option value="rupay">Rupay</option>

            </select>
        </p>
        <p>
            Card Number*<input type="number" name="card_number" id="card_number required">

        </p>
        <p>
            Expiration* <input type="date" name="exp_date" id="exp_date" required>
        </p>
        <p>CVV* <input type="password" name="cvv" id="cvv" required> </p>
        <input type="submit" value="Pay Now">
    </form>
    </form>
</body>

</html>

^G Help      ^O Write Out   ^W Where Is   ^K Cut        ^T Execute    ^C Location   M-U Undo     M-A Set Mark   M-] To Bracket  M-Q Previous
^X Exit      ^R Read File   ^\ Replace    ^U Paste      ^J Justify    ^/ Go To Line M-E Redo     M-6 Copy       ^Q Where Was    M-W Next
```

i-0c626571b222761aa (website)                                                                                                          ✕

PublicIPs: 13.49.238.53   PrivateIPs: 172.31.47.250

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Payment Form  ✕

← → C  ⓘ 127.0.0.1:5500/payment.html                                                           ☆  ⚙ | ⚛ :

🔶 Just a moment...   🔷 LeetCode   ▣ Manorath Ital - man...   ⧉ GeeksforGeeks

## Payment Form

### Contact Information

Name*: [_____]

gender
Male ○   female ○

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## CONCLUSION:

Understood the EC2 instances and successfully hosted website on local host XAMPP using
APACHE,MYSQL and on AWS EC2 service.