

**Aim:** Understanding DevOps Cloud.

**Problem Statement:** Set up a virtual cloud server using AWS EC2 and deploy a basic service on it.

**Objectives:**

1. Understand the role of cloud platforms in DevOps.
2. Create and configure an EC2 instance on AWS.

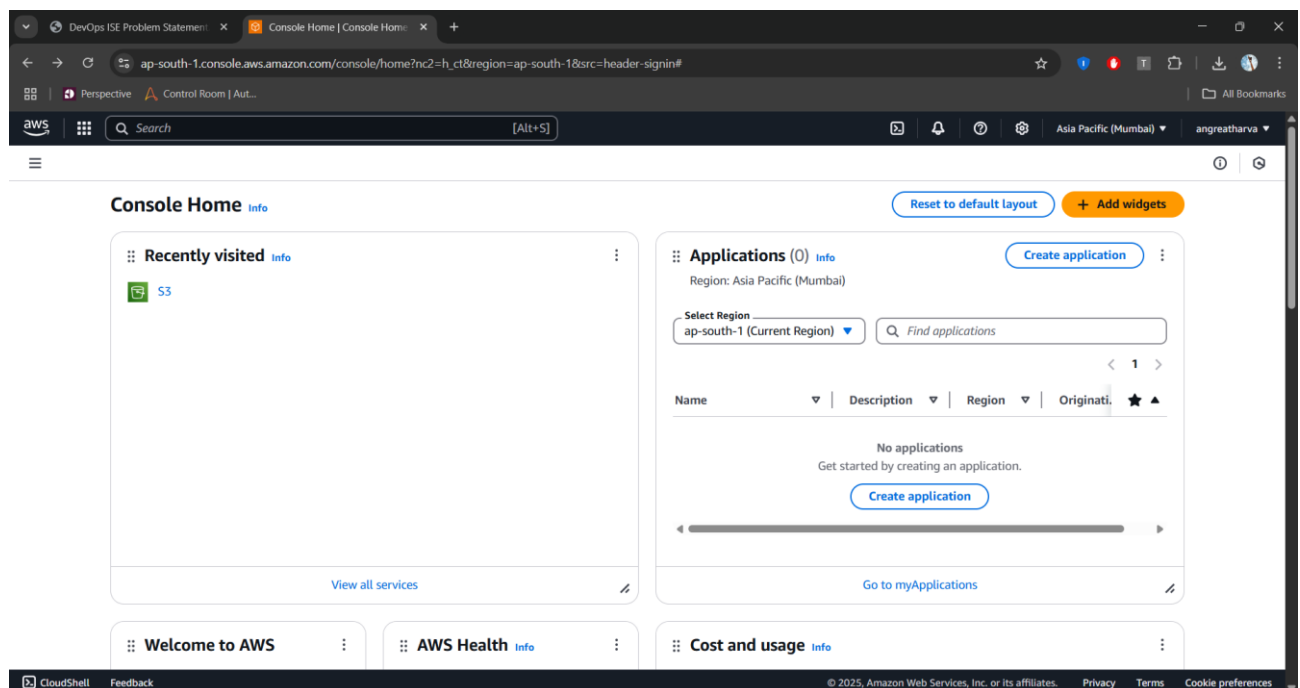
**Tools Used:** Chrome, AWS

**Concept:**

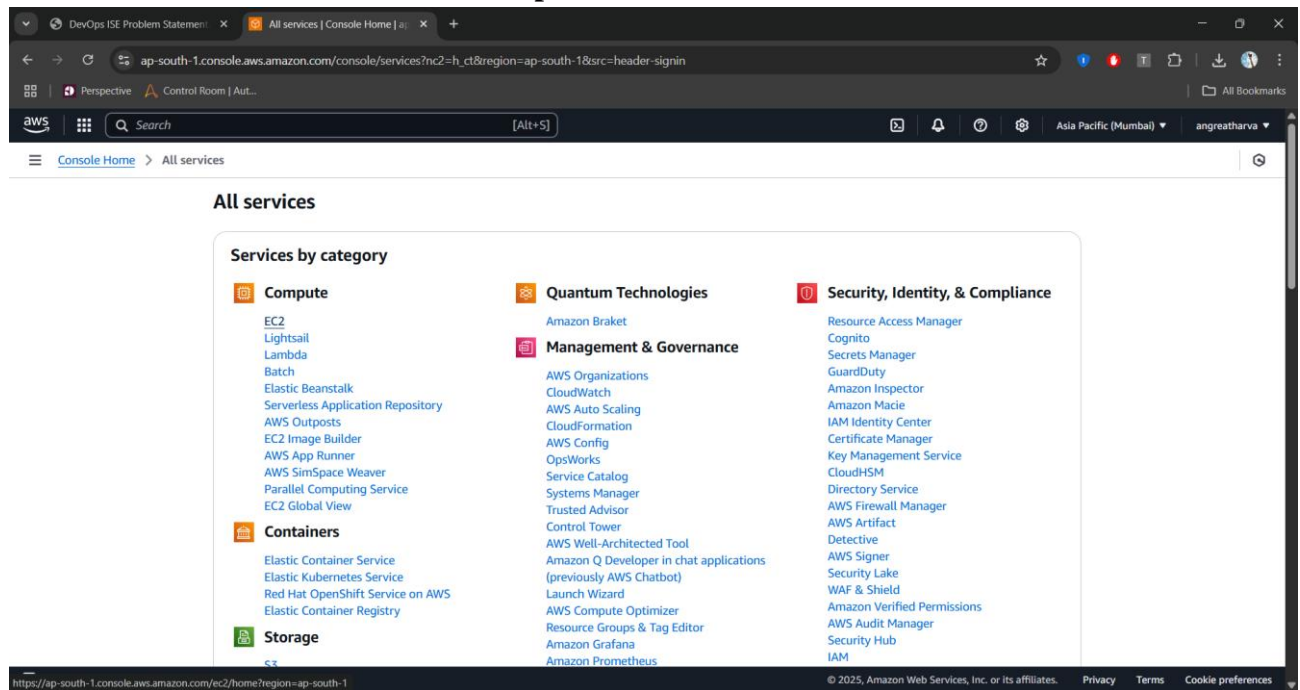
1. Cloud Computing plays a vital role in the DevOps ecosystem by providing scalable, flexible, and on-demand infrastructure. It eliminates the need for physical hardware and enables rapid provisioning of environments to support development, testing, and deployment.
2. AWS EC2 (Elastic Compute Cloud) is a web service that allows users to rent virtual servers in the cloud. It supports automated deployments, CI/CD pipelines, and efficient application hosting by offering features like elasticity, security, and integration with DevOps tools.
3. Cloud platforms enable Infrastructure-as-Code (IaC), real-time monitoring, and seamless integration with tools such as Jenkins, Docker, and Ansible, which are essential for modern DevOps workflows.

**Steps:**

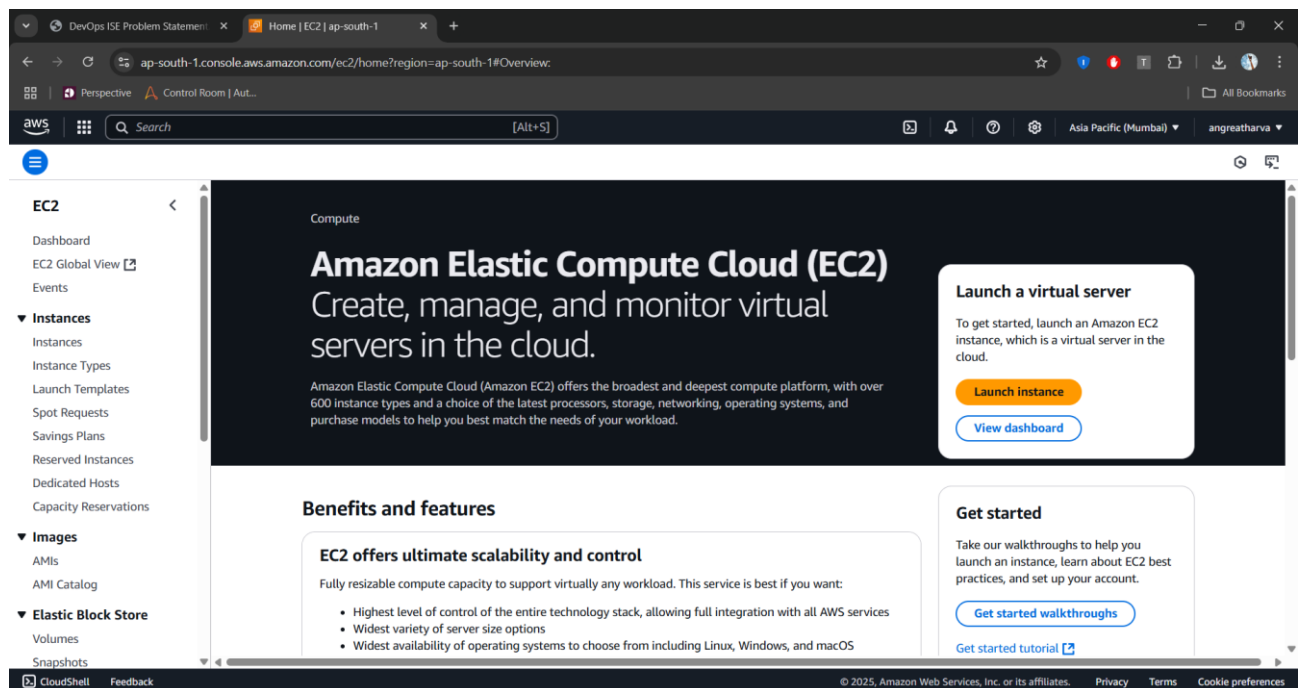
### 1. Login to your AWS Management Console.



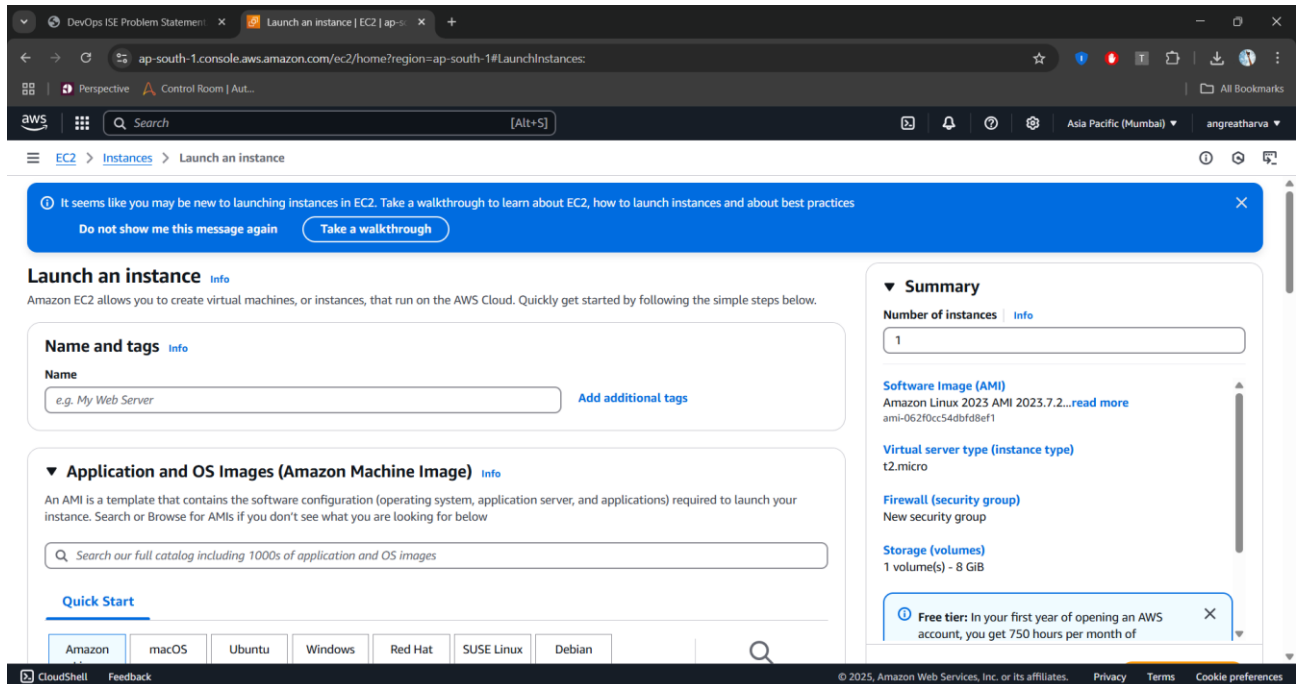
## 2. Click on Services □ Click on Compute □ Select EC2.



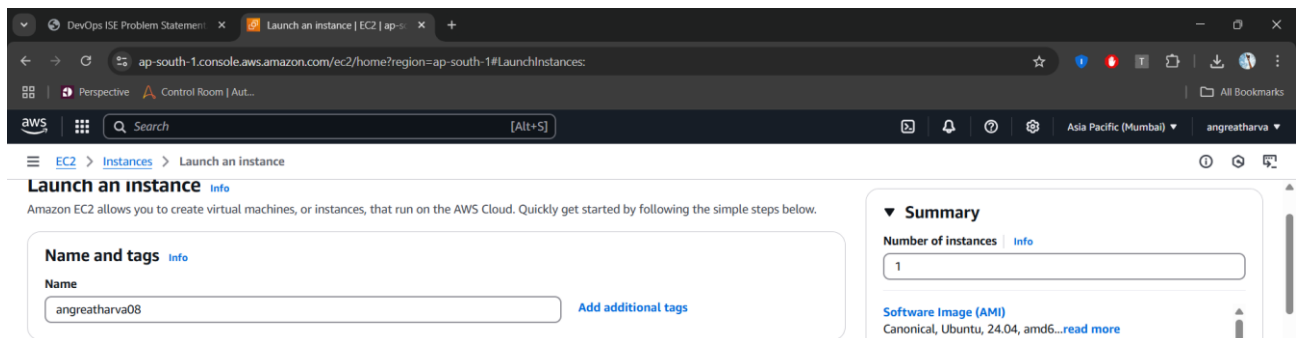
## 3. A new window will appear Click on Launch instance.



#### 4. Now a page will appear where you configure your Linux or any OS virtual machine.



#### 5. Give name to your machine.



## 6. Here you can select your desired OS image. I am selecting ubuntu.

The screenshot displays the AWS Management Console interface for launching an EC2 instance. The browser address bar shows the URL: `ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#LaunchInstances:`.

**Launch an instance** [Info](#)

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

**Name and tags** [Info](#)

Name:  [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

**Quick Start**

Amazon Linux macOS **Ubuntu** Windows Red Hat SUSE Linux Debian

[Browse more AMIs](#)  
Including AMIs from AWS, Marketplace and the Community

**Summary**

**Number of instances** [Info](#)  
1

**Software Image (AMI)**  
Canonical, Ubuntu, 24.04, amd64...[read more](#)  
ami-0e35ddab05955cf57

**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 of opening an AWS account, you get 750 hours per month of

[Cancel](#) [Launch instance](#) [Preview code](#)

CloudShell Feedback © 2025, Amazon Web Services, Inc. or its affiliates. [Privacy](#) [Terms](#) [Cookie preferences](#)

## 7. Keep the default configuration of free tier.

**▼ Instance type** [Info](#)

Instance type

t2.micro

Family: t2 1 vCPU 1 GiB Memory Current generation: true

On-Demand Linux base pricing: 0.0124 USD per Hour

On-Demand Windows base pricing: 0.017 USD per Hour

On-Demand RHEL base pricing: 0.0724 USD per Hour

On-Demand SUSE base pricing: 0.0124 USD per Hour

Free tier eligible

☐ All generations

[Compare instance types](#)

Additional costs apply for AMIs with pre-installed software

## 8. Here is an option of network configuration settings keep default.

DevOps ISE Problem Statement | Launch an instance | EC2 | ap-south-1

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#LaunchInstances:

Search [Alt+S]

Asia Pacific (Mumbai) angreatharva

EC2 > Instances > Launch an instance

**▼ Network settings** [Info](#) [Edit](#)

**Network** [Info](#)  
vpc-050bd730e2d4df282

**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  
Helps you connect to your instance Anywhere  
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

**▼ Summary**

**Number of instances** [Info](#)  
1

**Software Image (AMI)**  
Canonical, Ubuntu, 24.04, amd64...[read more](#)  
ami-0e35ddab05955cf57

**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 of opening an AWS account, you get 750 hours per month of

[Cancel](#) [Launch instance](#) [Preview code](#)

CloudShell Feedback

© 2025, Amazon Web Services, Inc. or its affiliates. [Privacy](#) [Terms](#) [Cookie preferences](#)

## 9. In this section you can configure storage.

**▼ Configure storage** [Info](#) Advanced

1x  GiB  ▼ Root volume (Not encrypted)

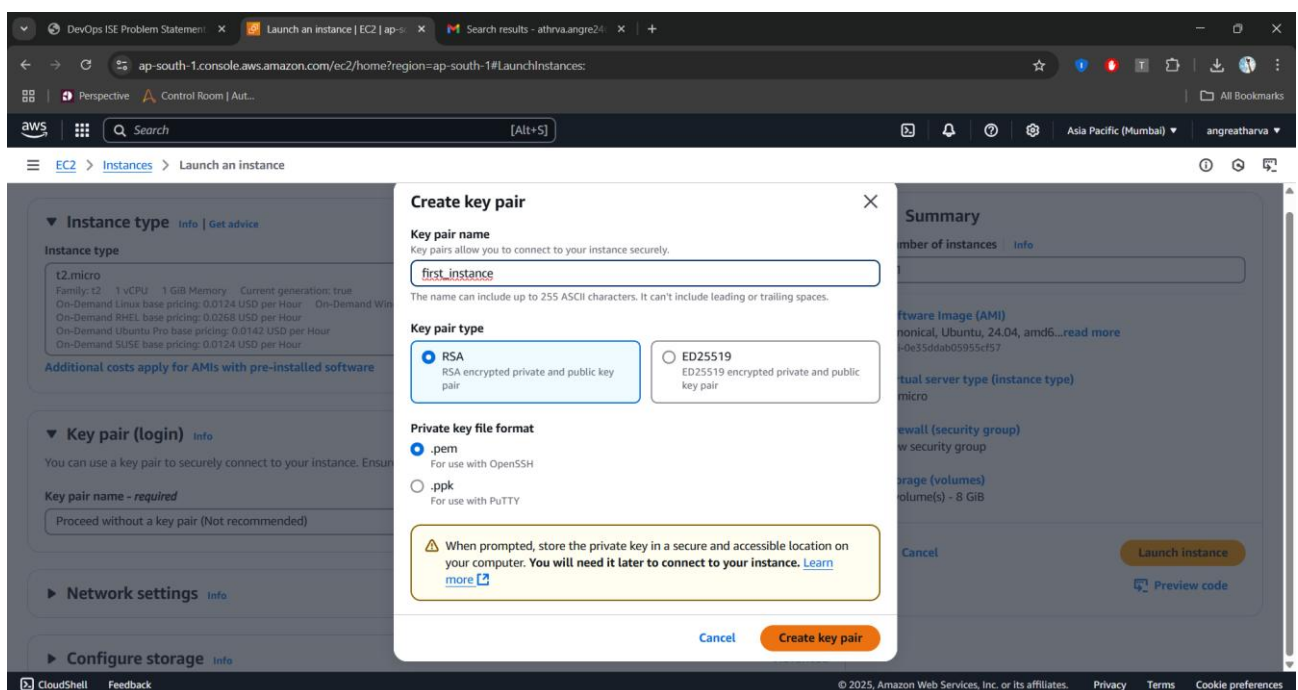
[Free tier eligible customers can get up to 30 GB of EBS General Purpose \(SSD\) or Magnetic storage](#) [×](#)

[Add new volume](#)

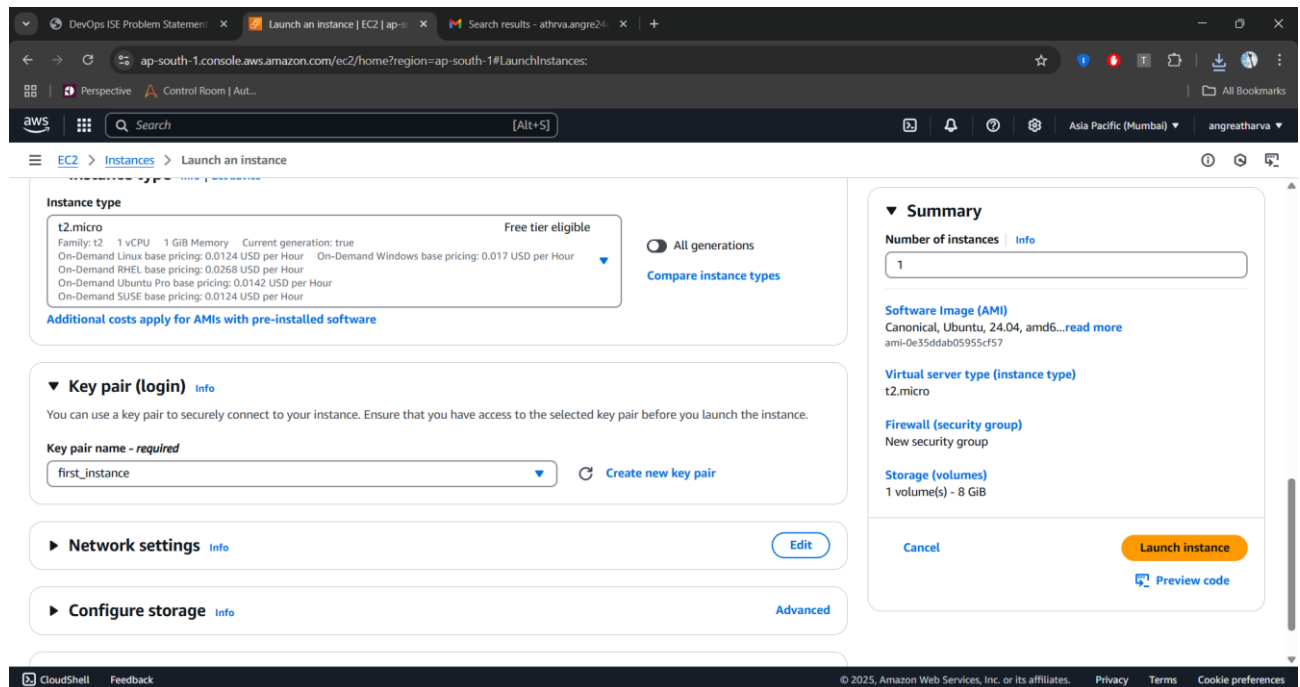
The selected AMI contains more instance store volumes than the instance allows. Only the first 0 instance store volumes from the AMI will be accessible from the instance

0 x File systems [Edit](#)

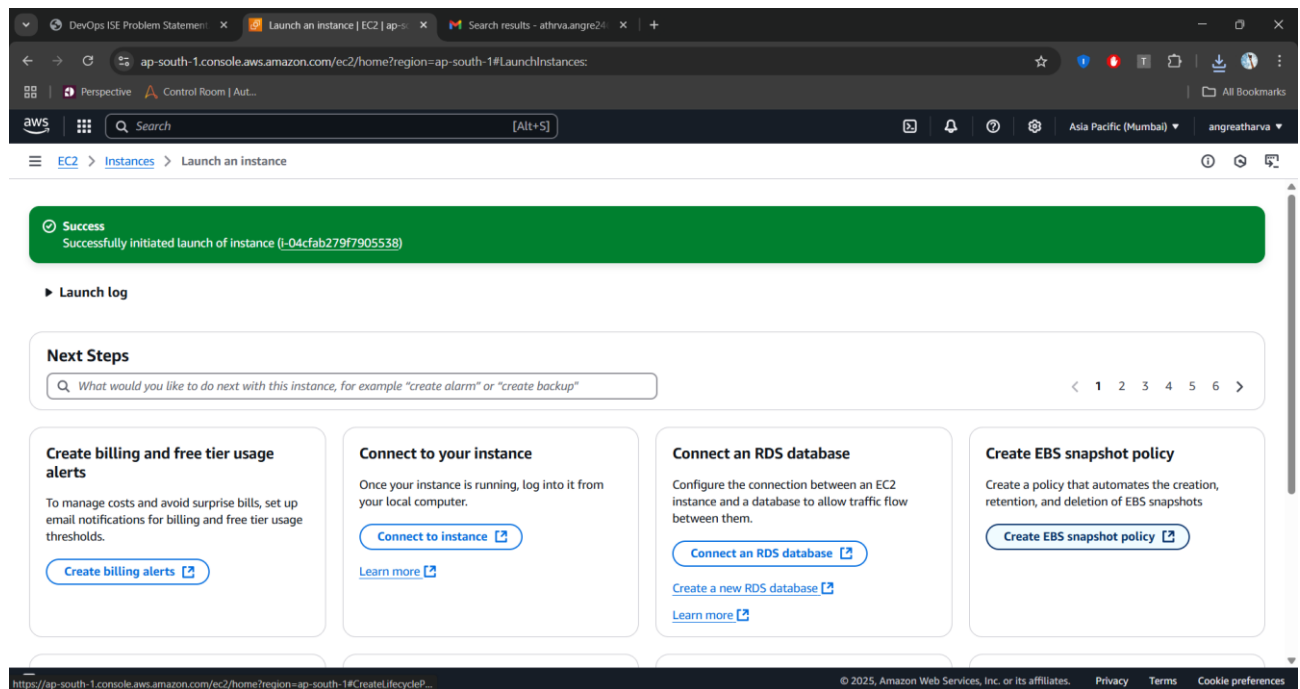
## 10. To access you machine form anywhere you need to create “key pair”. It allows you to securely login to your virtual machine.



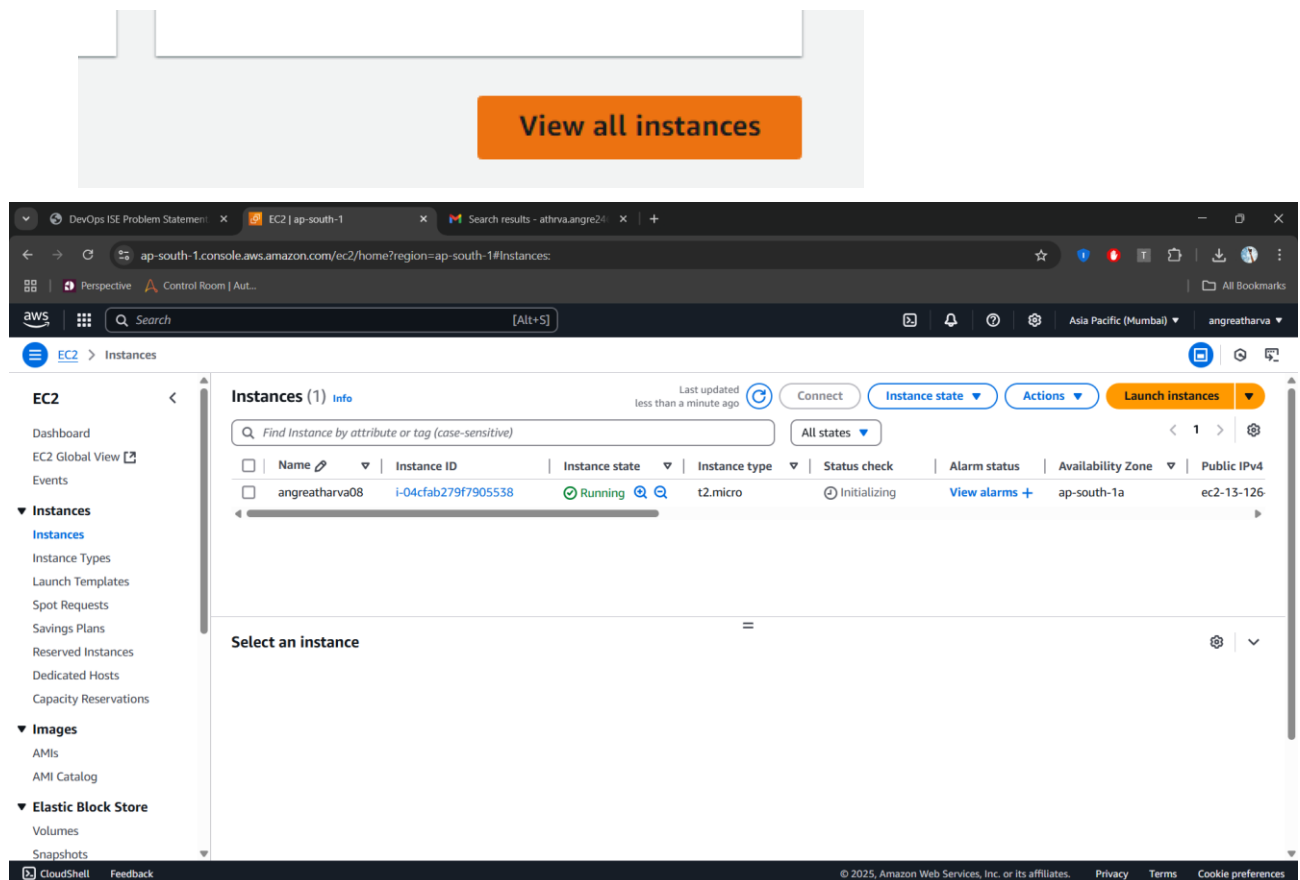
## 11. On right panel you can see summary of your machine. After reviewing at bottom Click on Launch instance.



## 12. After clicking on Launch instance. An instance will start up and running.



### 13. Click on View all instances at bottom right to view your created instance.



The screenshot displays the AWS Management Console interface for the EC2 service. At the top right, there is a prominent orange button labeled "View all instances". Below this, the console shows the "Instances (1)" page. The left-hand navigation pane includes sections for "EC2", "Instances", "Images", and "Elastic Block Store". The main content area features a table with the following data:

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4
angreatharva08	i-04cfab279f7905538	Running	t2.micro	Initializing	View alarms +	ap-south-1a	ec2-13-126

Below the table, there is a section titled "Select an instance" with a search bar and a dropdown menu. The bottom of the console shows the "CloudShell" and "Feedback" buttons, along with the copyright notice "© 2025, Amazon Web Services, Inc. or its affiliates." and links for "Privacy", "Terms", and "Cookie preferences".

### Observation:

In this practical, setting up a virtual server using AWS EC2 provides hands-on experience in understanding the role of cloud platforms within the DevOps ecosystem. By following a simple and structured process, users can quickly provision scalable and secure virtual machines, enabling them to host and manage applications efficiently. The integration of services like key pair authentication ensures secure remote access, which is vital in real-world DevOps practices. This exercise highlights how cloud platforms eliminate hardware dependencies, support automated deployments, and contribute to faster development and testing cycles. Overall, AWS EC2 serves as a powerful tool to implement core DevOps principles in a cloud environment.