AWS

Amazon Web Services (AWS) is a comprehensive cloud computing platform provided by Amazon. It offers a wide range of on-demand computing resources such as servers, storage, databases, networking, machine learning, analytics, and more. AWS enables businesses and individuals to build, deploy, and scale applications and infrastructure without the need for physical hardware.

Key Features of AWS

1. **Scalability**
    - Automatically scale resources up or down based on demand.
2. **Cost-Effectiveness**
    - Pay-as-you-go pricing model with no upfront costs.
3. **Global Infrastructure**
    - Operates in multiple regions and availability zones for high availability and low latency.
4. **Wide Range of Services**
    - Offers over 200 services, including compute (EC2), storage (S3), databases (RDS, DynamoDB), machine learning (SageMaker), and more.
5. **Security**
    - Provides advanced security features like encryption, compliance certifications, and access controls.
6. **Developer-Friendly**
    - Supports a variety of tools, SDKs, and APIs for integration and automation.

Why Use AWS?

1. **Flexibility:** Supports multiple operating systems, programming languages, and platforms.
2. **Reliability:** Built for fault tolerance and disaster recovery.
3. **Innovation:** Provides cutting-edge technologies like AI, IoT, and data analytics.
4. **Ecosystem:** Large community support, extensive documentation, and third-party integrations.

Use Cases of AWS

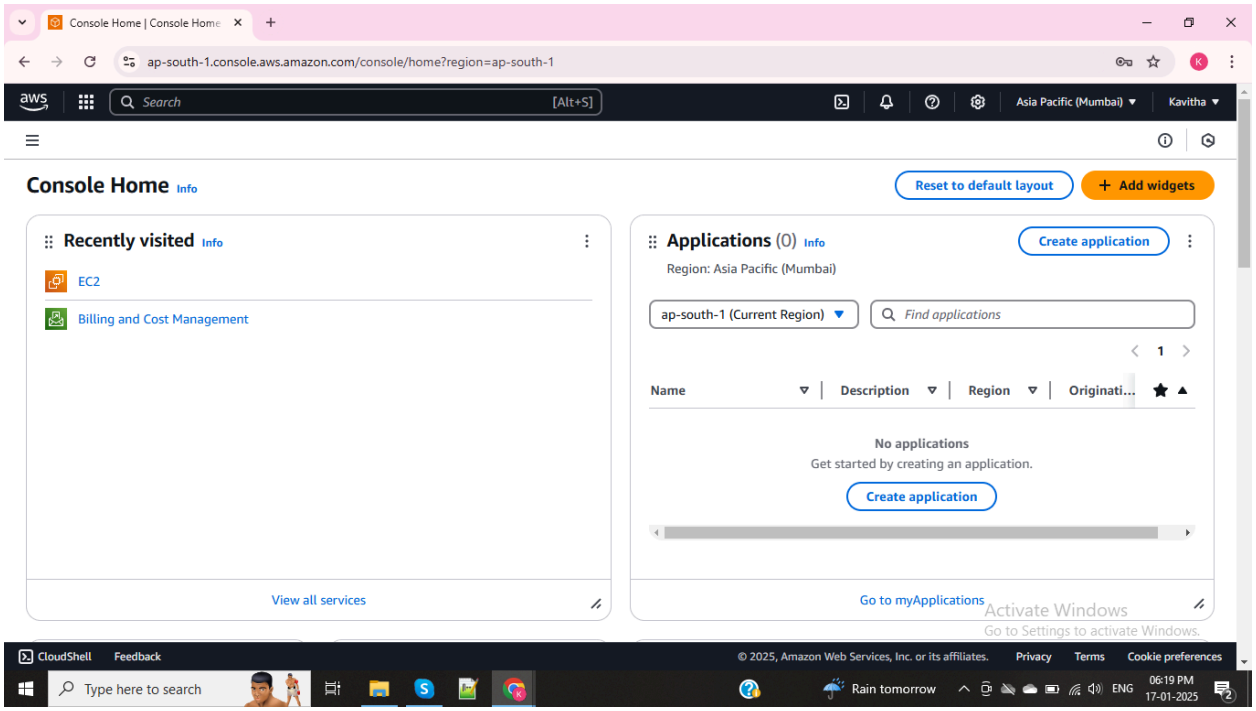
1. **Web Hosting:** Host websites and web applications.
2. **Data Analytics:** Process and analyze big data efficiently.
3. **Application Development:** Build and deploy scalable applications.
4. **Disaster Recovery:** Implement cost-effective and resilient disaster recovery solutions.
5. **Gaming:** Power online multiplayer games with scalable backend servers.

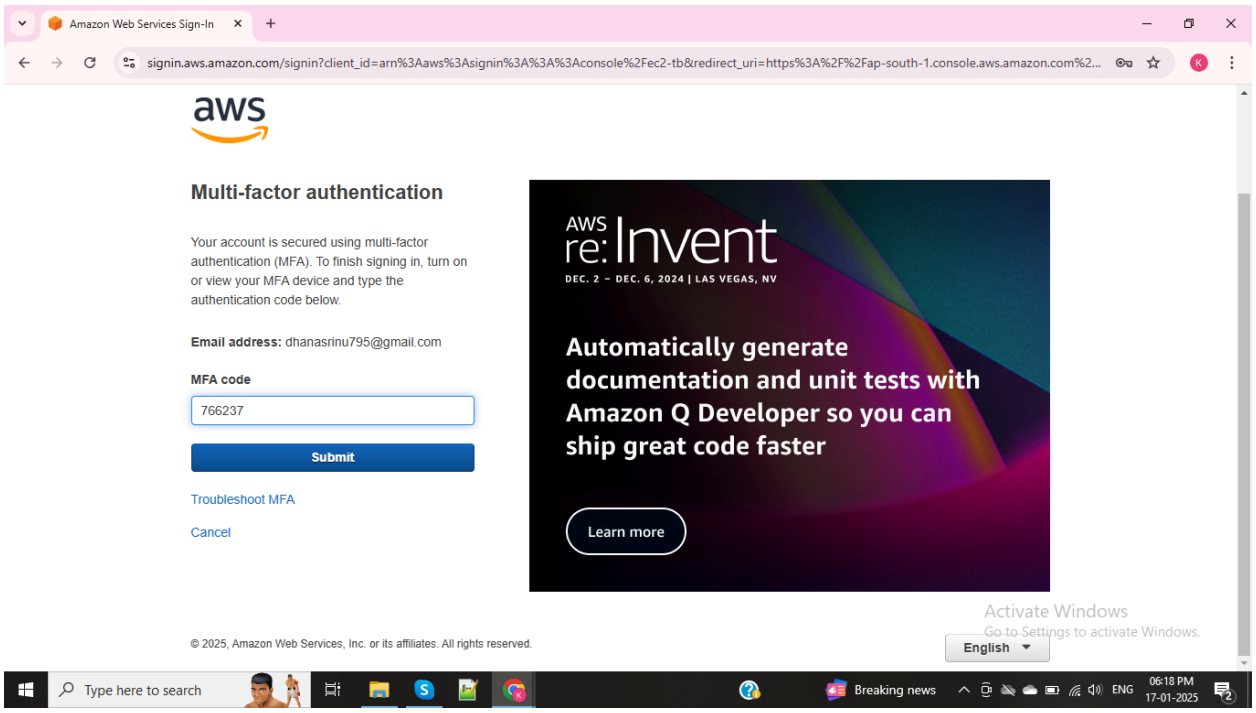
AWS is widely popular because of its ease of use, flexibility, and reliability, making it the leader in the cloud computing market.

Popular AWS Services

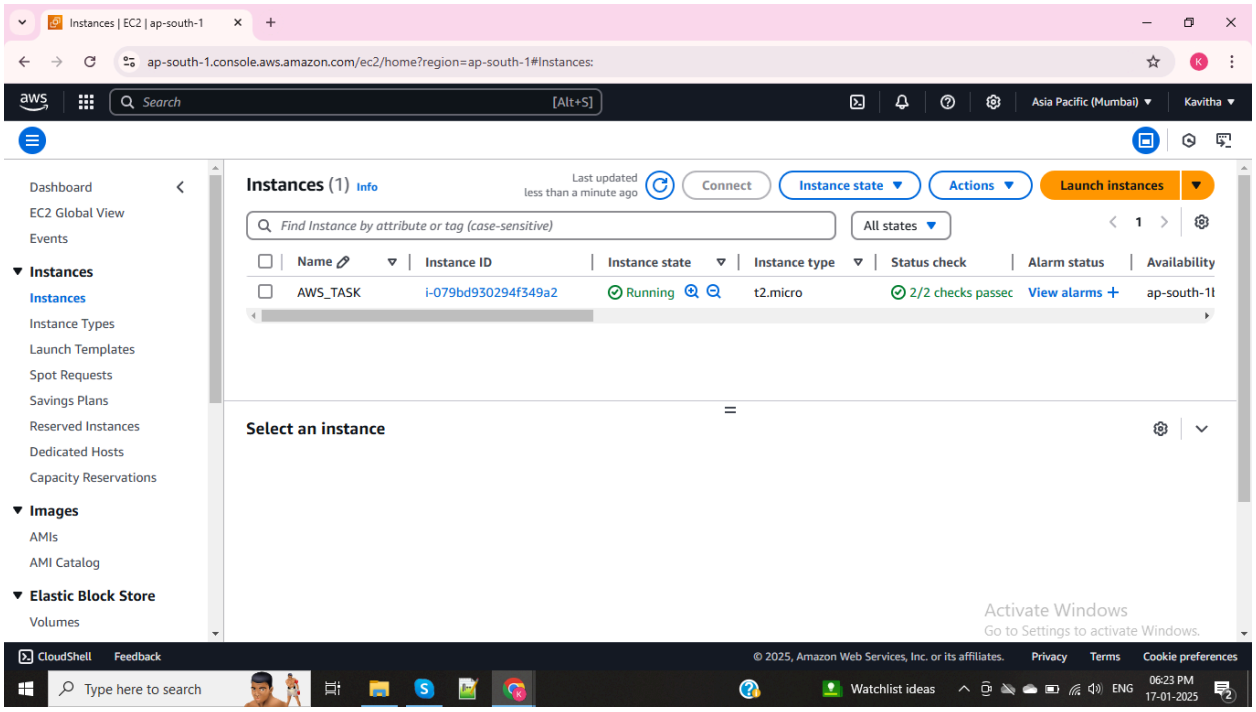
Category	Service Name	Purpose
Compute	EC2, Lambda	Virtual servers, serverless computing
Storage	S3, EBS, Glacier	Object storage, block storage, archiving
Databases	RDS, DynamoDB, Redshift	Relational, NoSQL, data warehousing
Networking	VPC, Route 53, CloudFront	Private networking, DNS, content delivery
AI/ML	SageMaker, Rekognition	Machine learning, image recognition
Monitoring	CloudWatch, CloudTrail	Monitoring and logging services
DevOps	CodePipeline, CodeBuild, CodeDeploy	Continuous integration and delivery

Task 1 : AWS Account created and set Multi-factor authentication

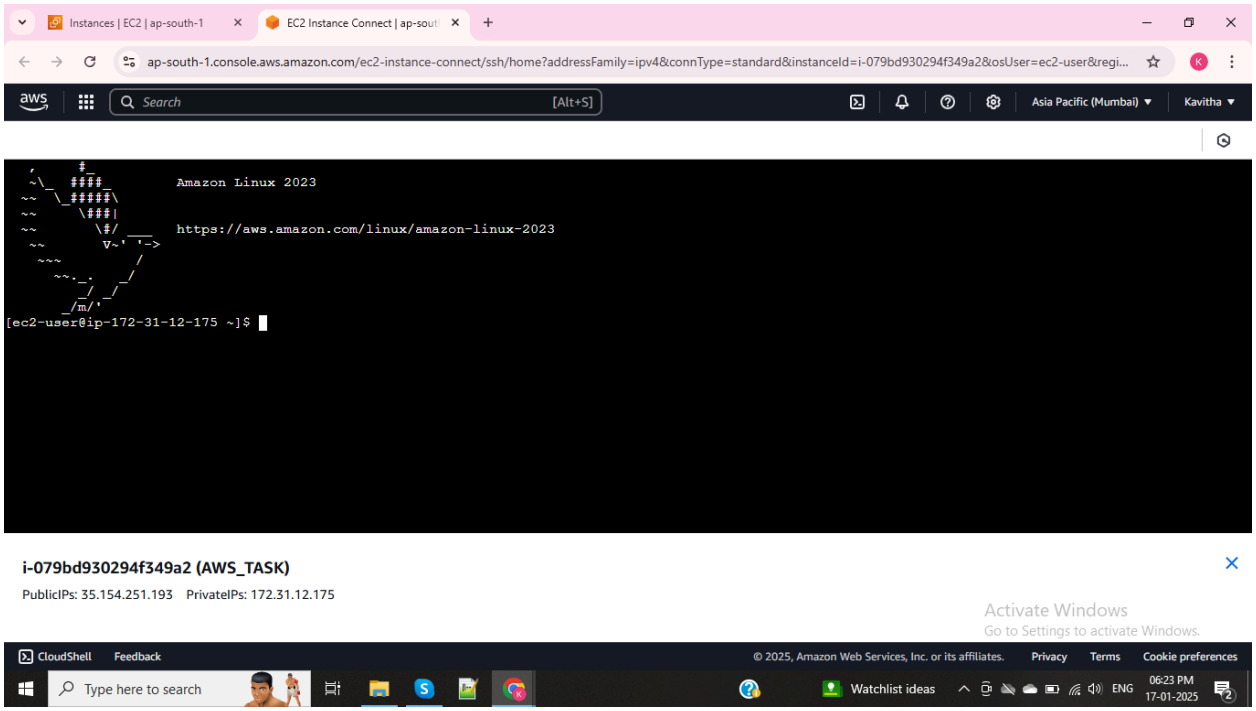




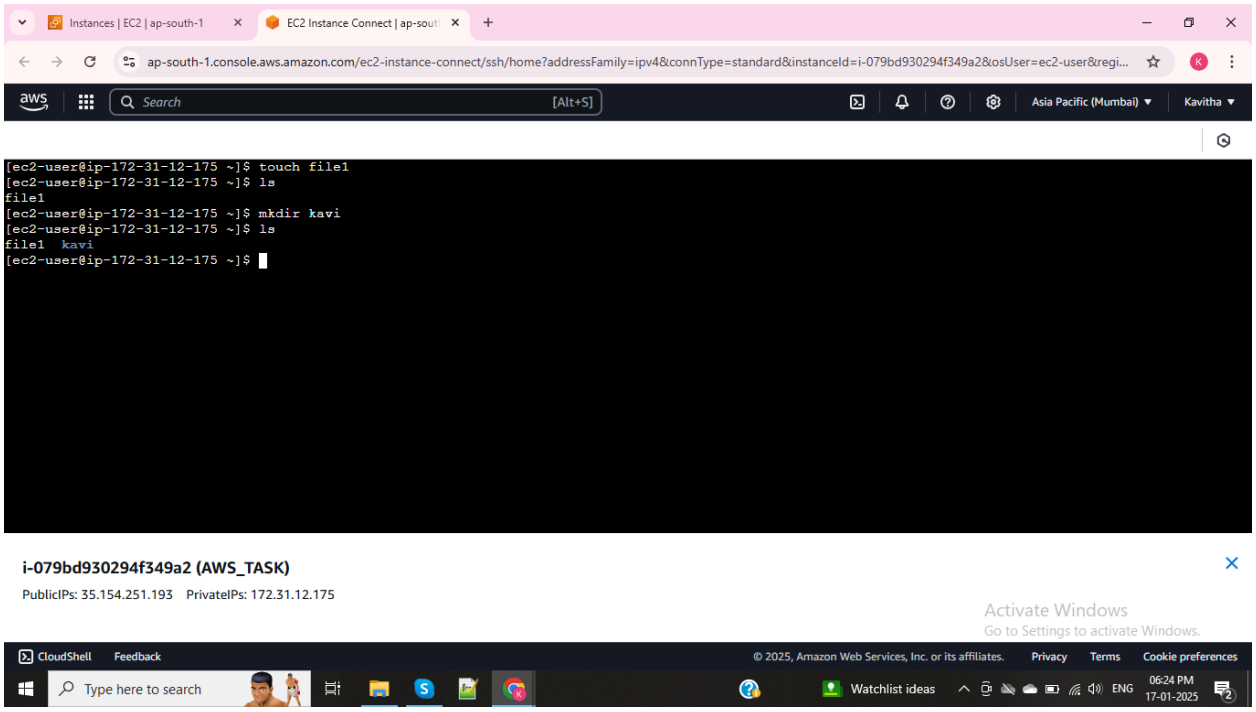
Task 2 : Creating an EC2 instance and execute shell commands



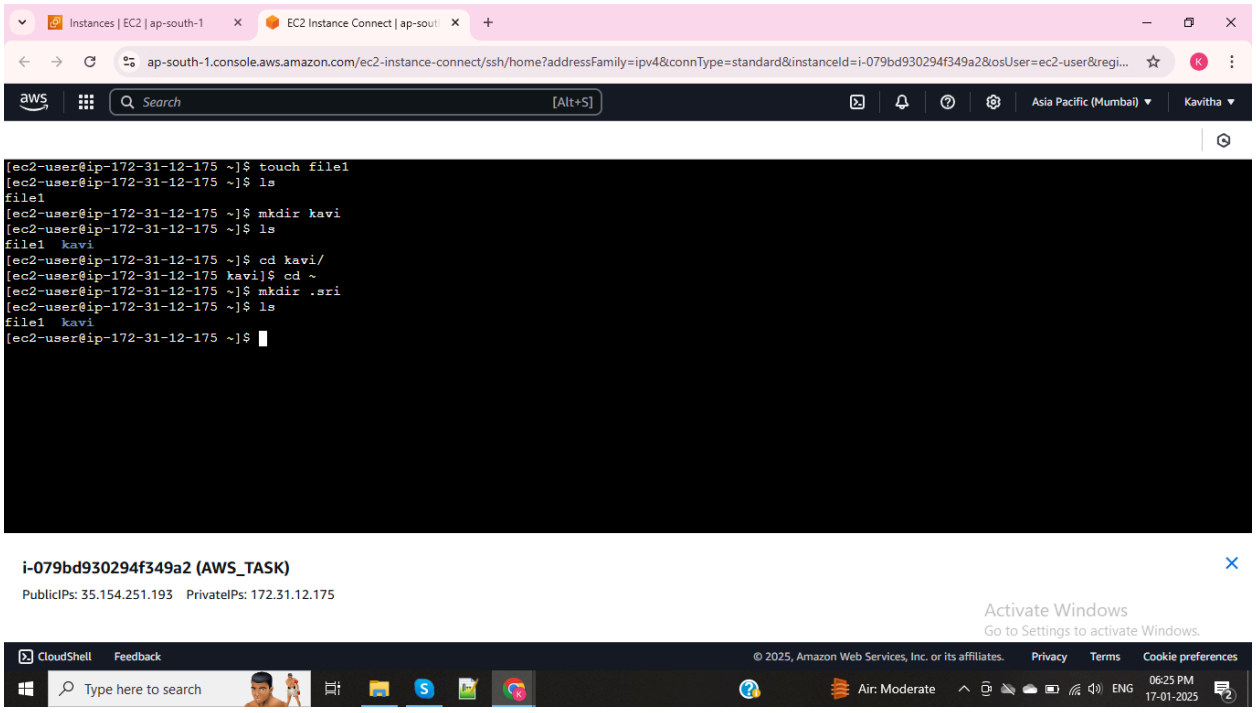
Launch instance and connect the EC2 instance



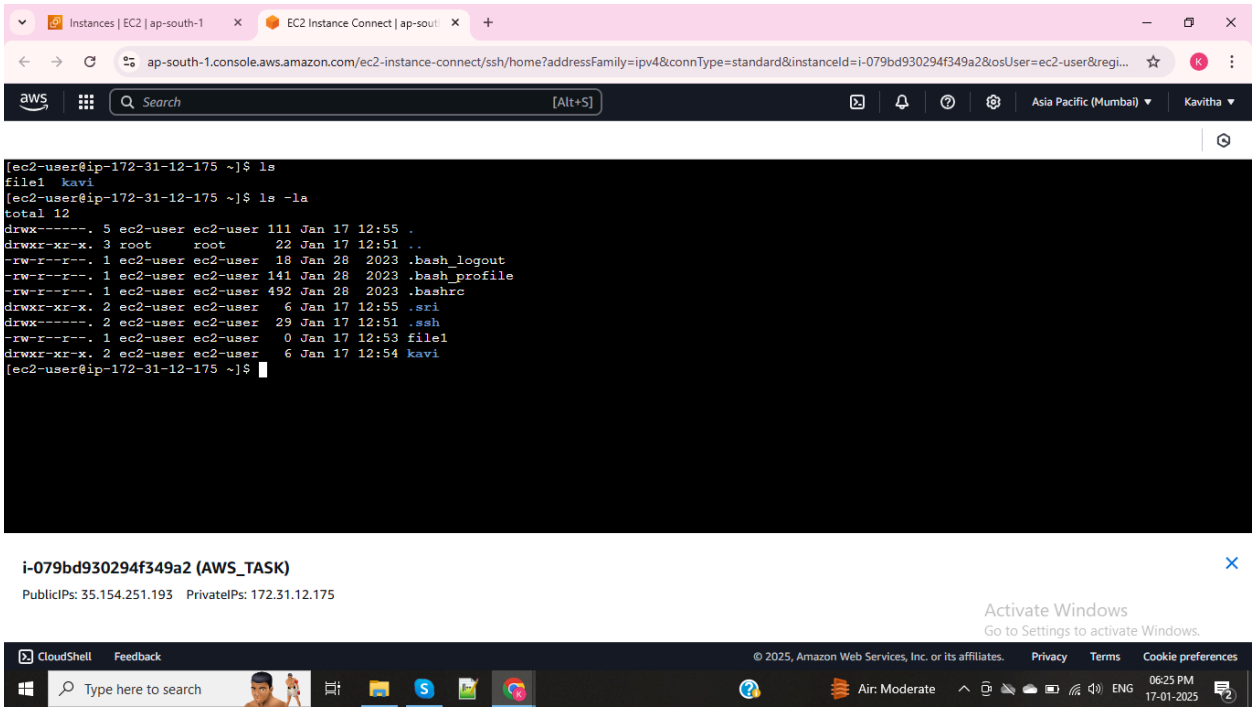
To create file = touch filename
To create folder = mkdir (folder name)



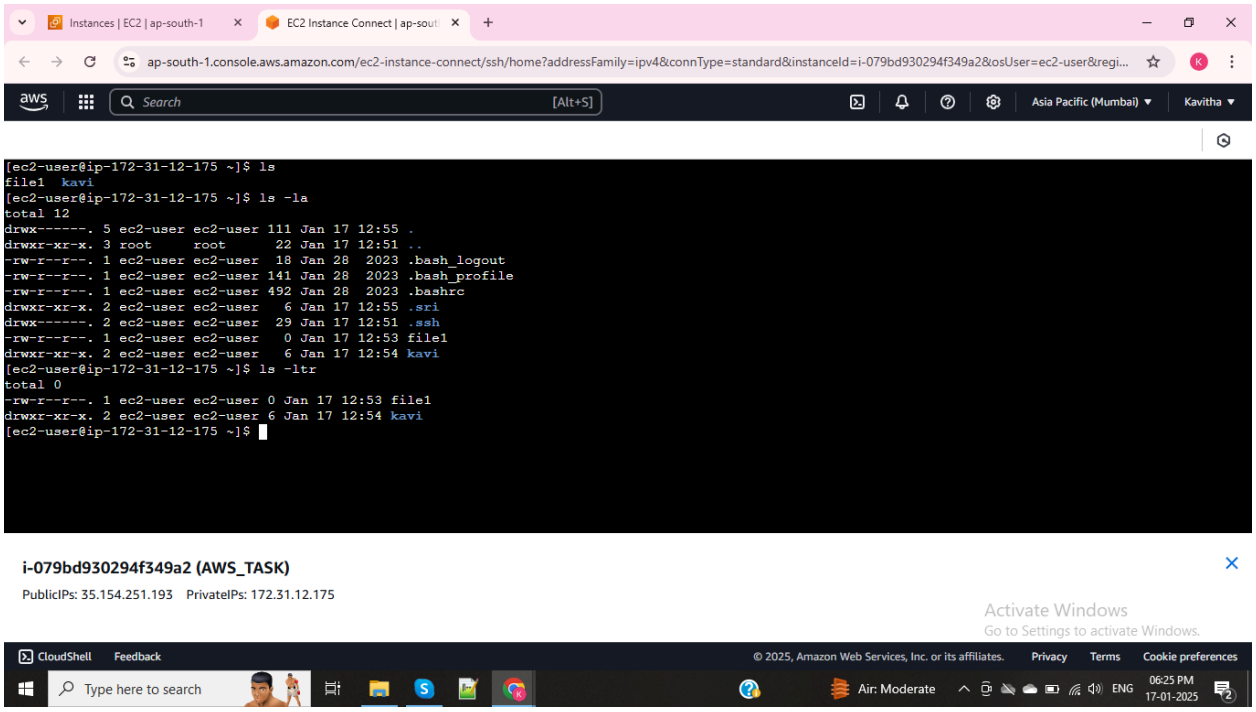
To login into folder = cd (folder name)
To come out of the folder = cd ~



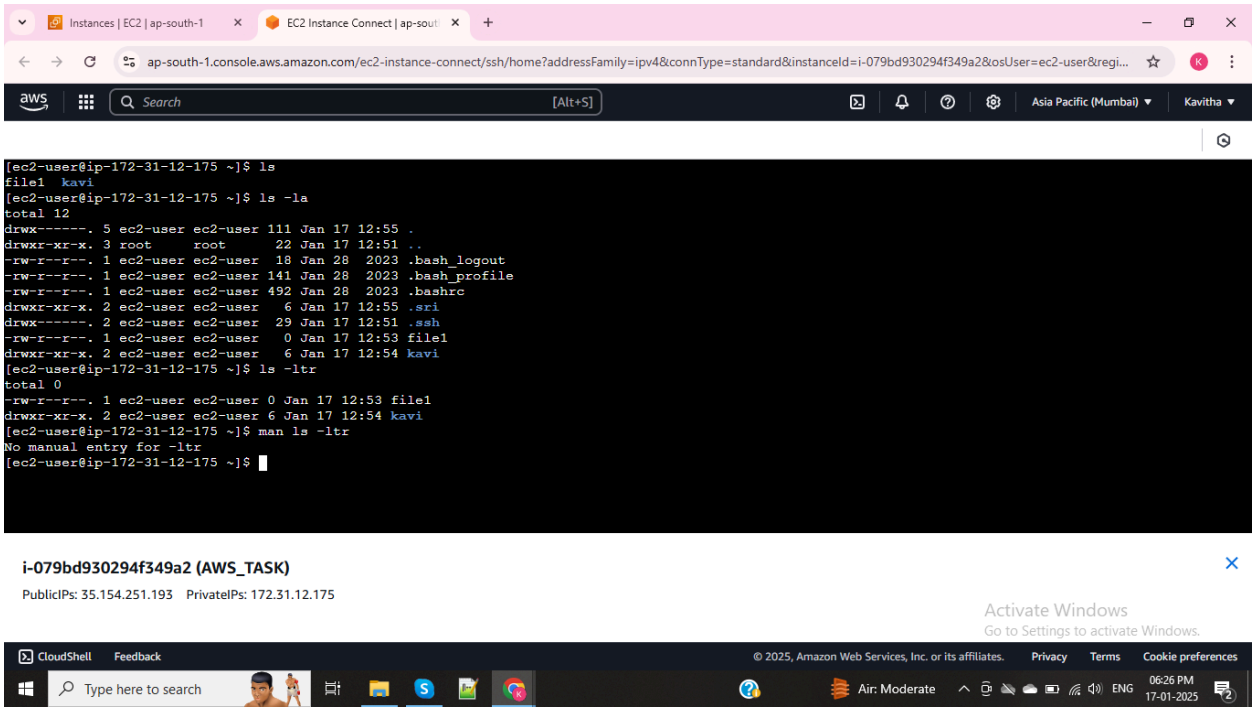
To create hidden folder = mkdir .kavi
To check the all & hidden files and folders = ls -la



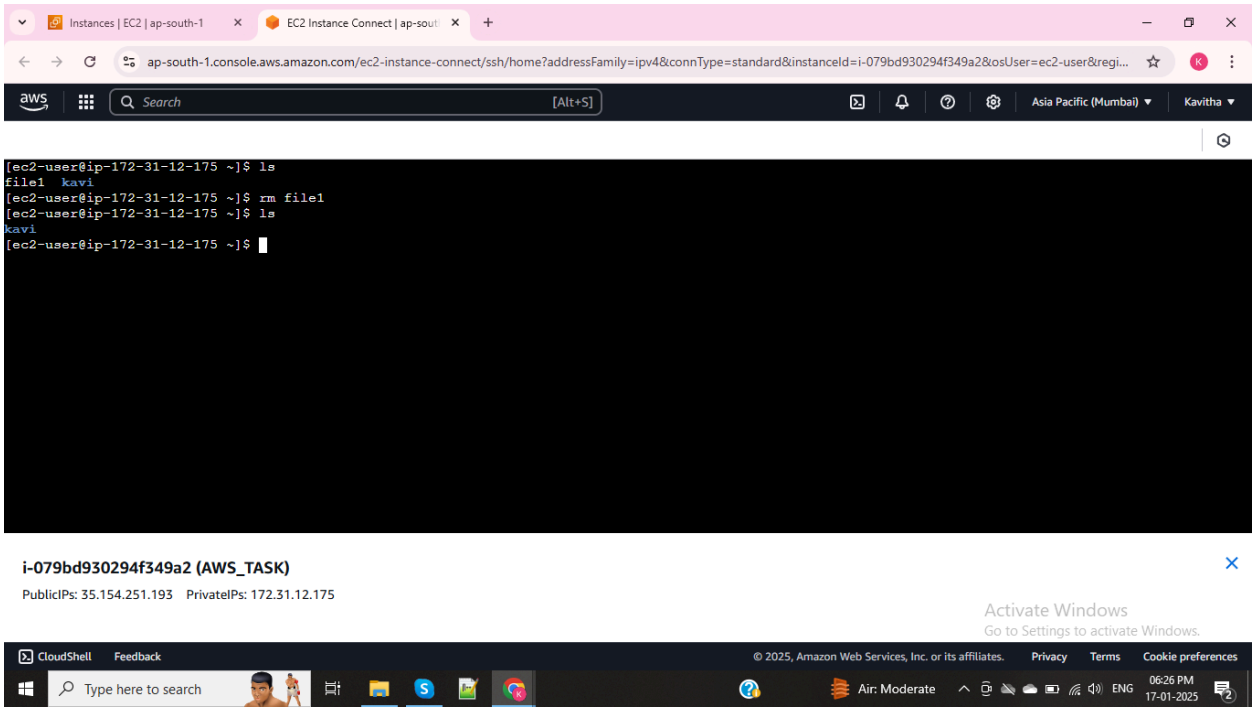
To check created date and time of the file or folder = ls -ltr



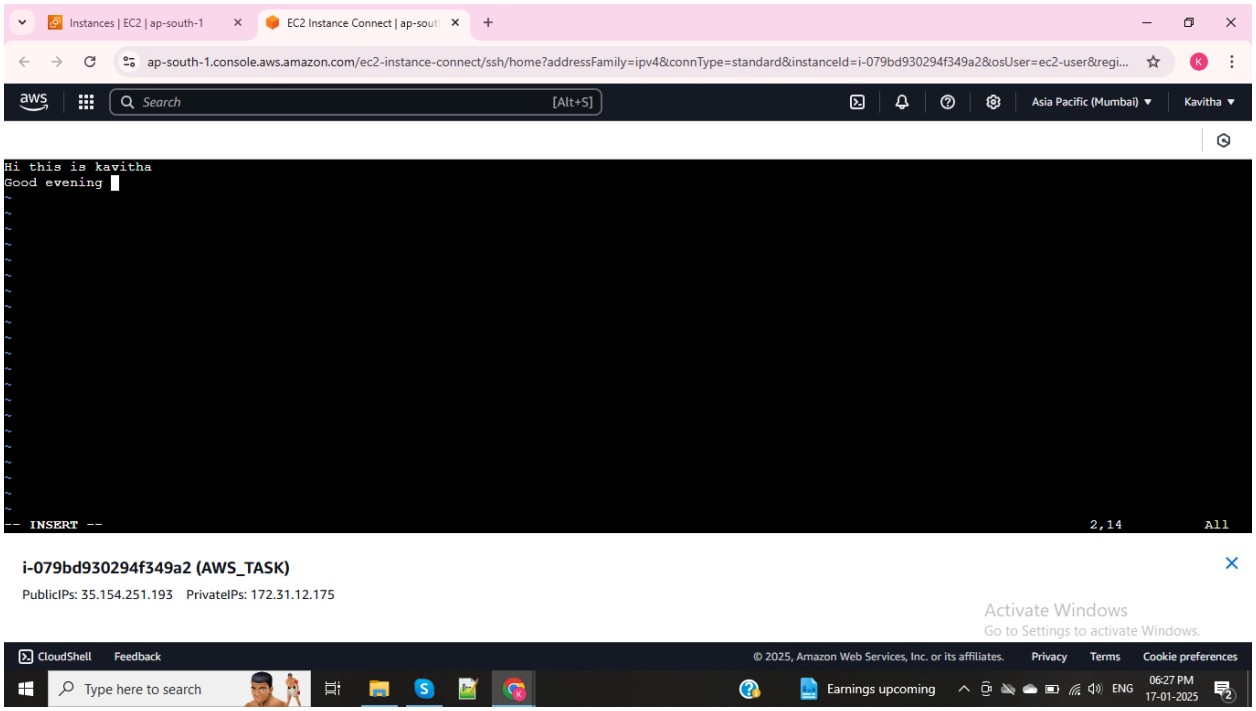
To check the meaning of unknow command = use man (manual)



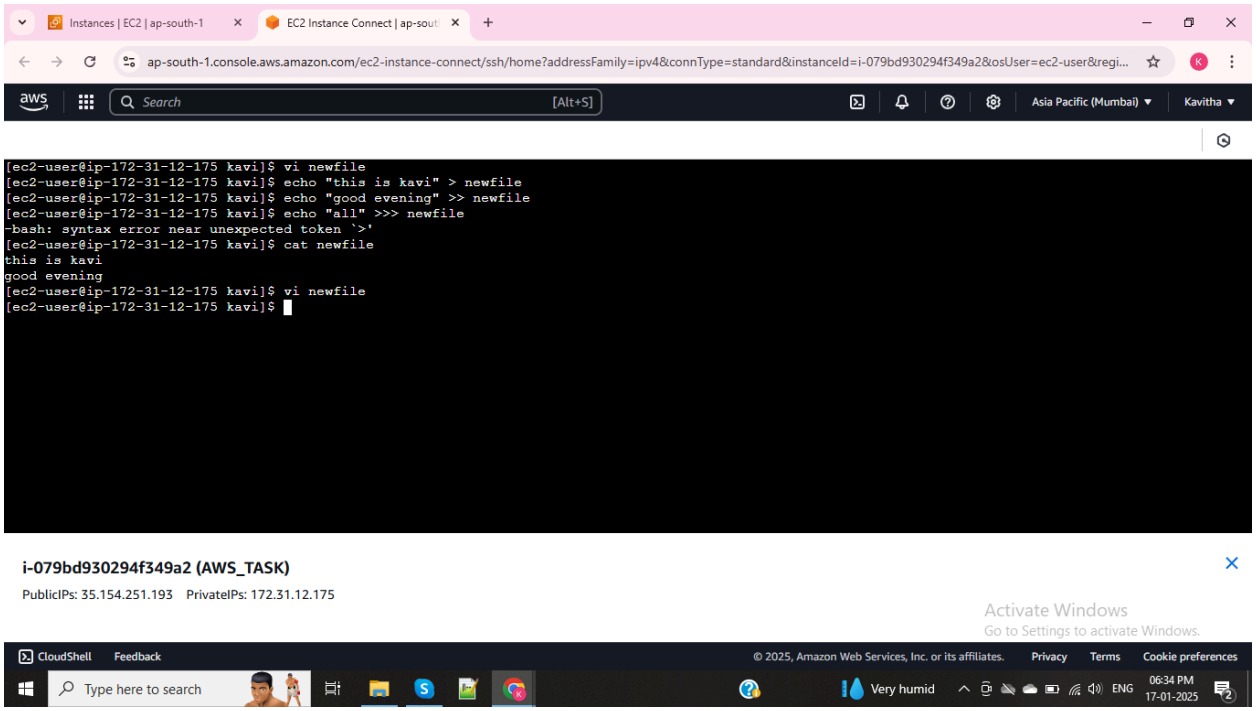
To remove the file = rm (file name)
To remove overall files = rm *(file name)



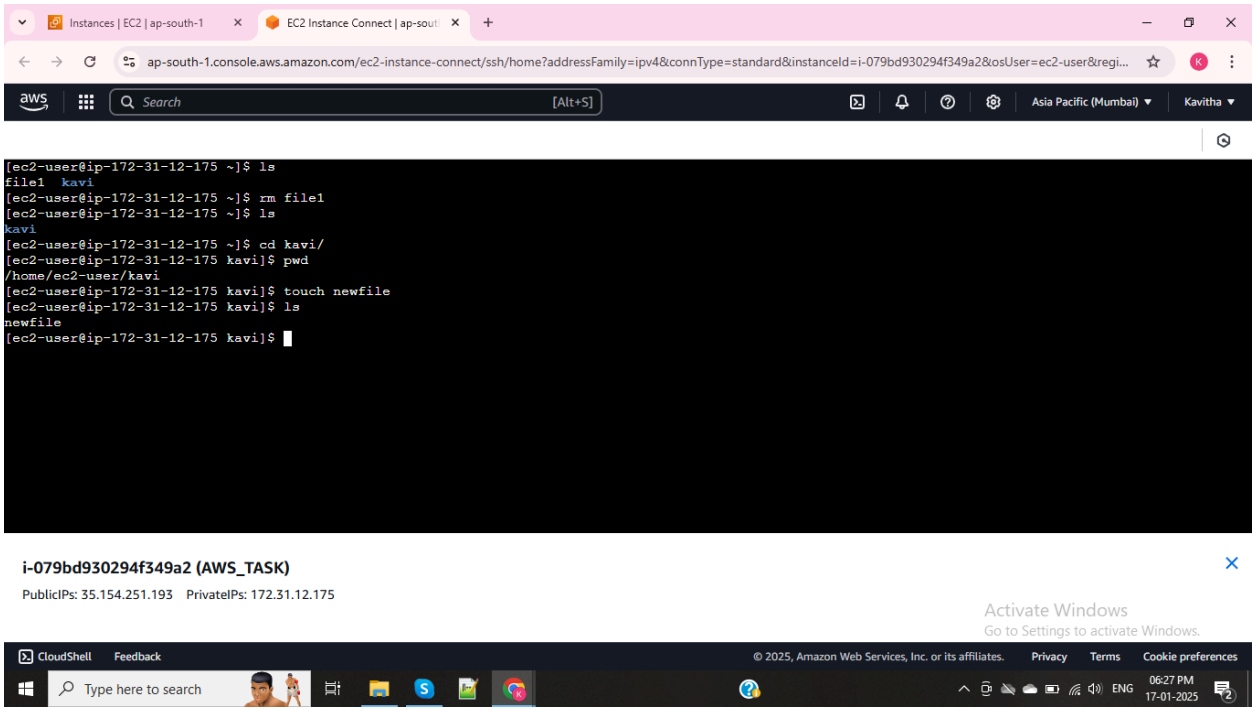
To edit the file or read the file = vi (file name)



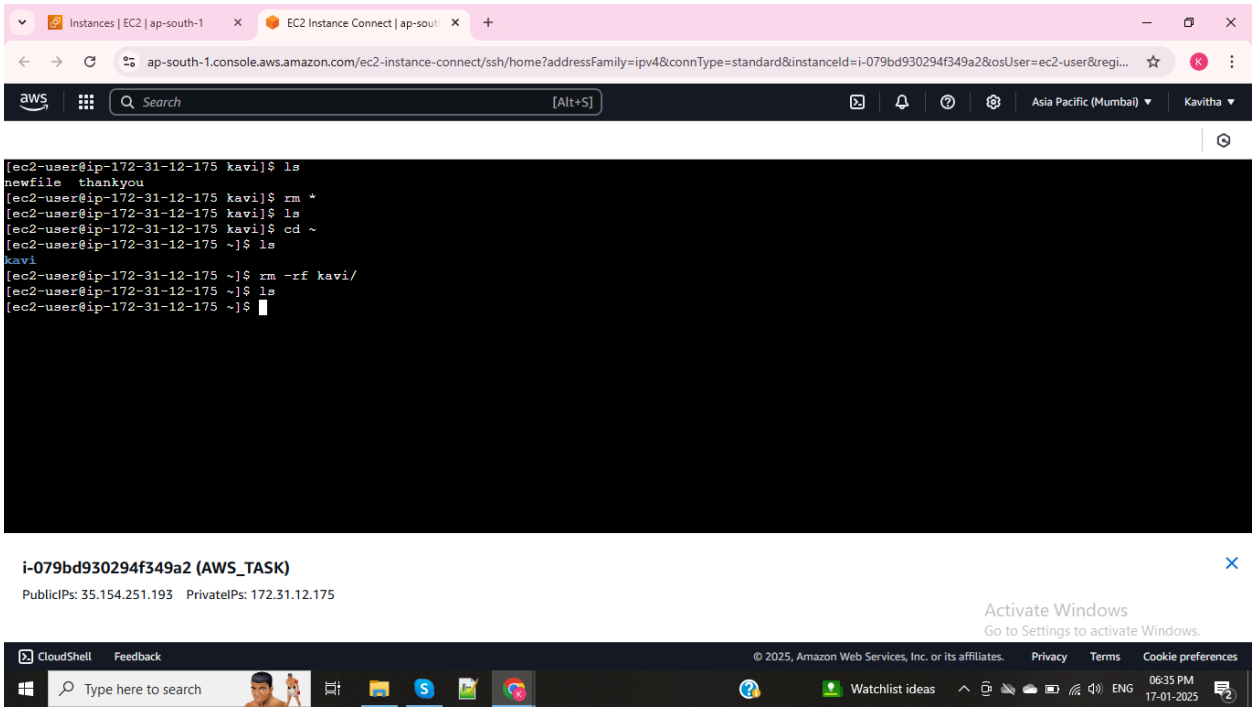
To view the text without opening the file means use **Cat (file name)**
Without open the file we have to add the text in outside = echo “kavitha” >newfile



To check the location = pwd (present working directory)



To remove folder = rm -rf(folder name)



SHELL SCRIPTING

ls = To list the files/folders
Mkdir = Make directory
Pwd = Present working directory
Cd = Change directory
Man = Manual
Rm = Remove
Cat = To view the inside text in detail
.file/folder = hidden format
Sudo = super user do (run as administrator)
Su = switch user
Echo = To print the text
History = check used commands
Clear = clear the screen