A LONG-TERM INTERNSHIP REPORT

On

Amazon Web Services

Submitted to Department of Computer Applications

By

YADLA GOWTHAMI

III BCA-A

Under the Esteemed Guidance of

K.Mounika

LECTURER

Department of Computer Applications

ADITYA DEGREE COLLEGE

Visakhapatnam

ADITYA DEGREE COLLEGE

Department of Computer Applications

CERTIFICATE

This is to certify that The Long-Term Internship entitled,

"Amazon Web Services" is a bonified work of YADLA GOWTHAMI, bearing 122127206161, III BCA, submitted to the Department of Computer Applications, Aditya Degree College, Visakhapatnam for the academic year 2022-2025.

Internship Guide

K.Mounika

Head of the Department

Sri. A. CHANDRA SEKHAR (M.Sc.)

External Examiner

Principal

ADITYA DEGREE COLLEGE

Department of Computer Applications

DECLARATION BY THE STUDENT

I hereby declare that the work described in this Longterm Internship, entitled “Amazon Web Services” which is being submitted by me in partial fulfilment of the requirements for the award of degree of Bachelor of Computer Applications (BCA) from the Department of Computer Application to Aditya Degree College, Visakhapatnam under the guidance of Ms. Mounika, Project Coordinator of Adhoc Network Tech Company, India and Canada.

Place: Visakhapatnam

Date:

ADITYA DEGREE COLLEGE

Department of Computer Applications

CERTIFICATE FROM THE SUPERVISOR

This is to certify that the Longterm Internship entitled," Amazon Web Services", that is being submitted by Karri Sushma Reddy bearing 122127206051, III BCA, which is being submitted by me in partial fulfilment of the requirements for the award of degree of Bachelor of Computer Applications from the Bachelor of Computer Applications to Aditya Degree College, bonified work carried out by her under my guidance and Supervision.

Mr. DR. Shahid Ali MSc, PhD

ACKNOWLEDGEMENT

No endeavour is completed without the valuable support of others. I would like to take this opportunity to extend my sincere gratitude to all those who have contributed to the successful completion of this Long-Term Internship Project Report.

It is privilege to thank **Dr.N.SESHA REDDY**, **Chairman Sir**, Aditya group of institutions for providing state-of-the-Art facilities, experienced and talented faculty members.

It is privilege to thank **Dr. N. SUGUNA REDDY**, **Secretary Madam**, Aditya group of institutions for providing Long-Term Internship Project Report from Adhoc.

I thank **Dr.B.E.V.L.NAIDU Sir, Academic Director**, Aditya Degree College for his continuous support and encouragement in my endeavour.

I sincerely extend my heartfelt gratitude to **CEngg Daniel Benjamin Sir, Chartered Engineer**, AMIE, B.Tech, Project Director of Adhoc Network Tech Company, India and Canada, for his invaluable guidance, timely support, and insightful contributions through his dedicated company team. His expertise and leadership have been instrumental in the successful completion of my Long-Term Internship Project Report.

At this juncture I feel deeply honoured in expressing my sincere thanks to **CEO Devika Pakruthi Mam of Adhoc Network Tech Company**,India and Canada for making the resources available at right time and providing valuable insights leading to the successful completion of my Long-Term Internship Project Report.

I express my deep sense of gratitude to **Mr. DR. Shahid Ali MSc, PhD**, Principal, for his Efforts and for giving us permission for carrying out this Long-Term Internship.

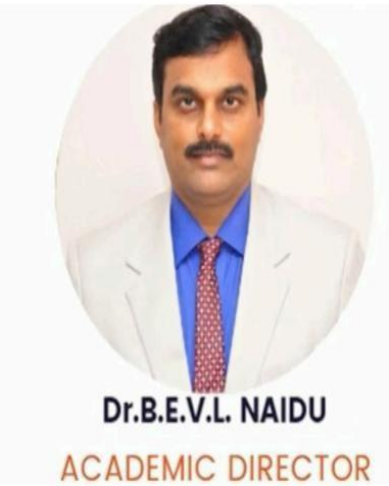
I thank **Mr. DR. Shahid Ali MSc, PhD** Head of the Department of Bachelor of Computer Applications, Aditya Degree College-Visakhapatnam, for supporting and encouraging me in completion of my Long-Term Internship.

Finally I thank all the faculty members of our Department who contributed their valuable suggestions in completion of Long-Term Internship report and I also put my sincere thanks to My Parents who stood with me during the whole Long-Term Internship.

YADLA GOWTHAMI

ABOUT ADITYA DEGREE COLLEGES


Dr. N. Suguna Reddy M.B.B.S. Secretary



Aditya Degree colleges are the precious gifts presented to the twin Godavari Districts by ADITYA. Educational group ADITYA Degree College which was established in 1998 in Kakinada fulfilled the hopes and aspirations of many graduates and had been acclaimed as the best degree college under Andhra University. Encouraged by the 100% result in 2003, ADITYA added several feathers to its cap by launching Degree Colleges in Rajahmundry in 2003, in Vizag and Palakol in 2005 and in Tatipaka in 2006.

Needless to say, in the present scenario girls excel more than boys in education and they give tough competition to boys. Owing to their diffidence and inhibition, girls find difficulty in expressing their doubts in a classroom of Co-ed College.

Moreover, parents have many objections in sending their daughters to a co-ed college. Realizing this, ADITYA successfully leads Degree colleges for girls to prove their talents in curricular, co-curricular and extra- curricular activities. ADITYA started P.G College also for Women to encourage them for higher education.

VISION

To provide inclusive education with innovative methods and strenuous efforts for inculcating human values, professionalism and scientific instillation in the realm of Degree Education to all sections of students irrespective of race, region and religion with special focus to stand independently and to emerge as centre for Research and Development.

MISSION

To provide ample scope for multifaceted development of local youth.

To provide quality higher education to student community.

To Recruit Highly Qualified and Experienced Faculty to provide Quality Education.

ABOUT ADHOC NETWORK TECH COMPANY - INDIA, CANADA.

CEO Devika Pakruthi is a highly accomplished and recognized entrepreneur who has garnered prestigious awards at various levels for her outstanding contributions to the business world.

Awards that Devika Pakruthi has won:

- Young Entrepreneur Award - City Level (Visakhapatnam)
- Best Ongoing Startup - State Level (Andhra Pradesh)
- Women Rising Star of the Year- National Level (New Delhi)
- Youngest CEO of the Year - State Representation (Karnataka)

Adhoc Network is started in the year 2020 at Visakhapatnam by an young Women entrepreneur Miss. Devika Pakruthi Founder & CEO with an intention to provide employment opportunities to the youth and also to impart the best quality training and practical exposure to the Students which enhances their employability Skills. Her journey started and collapsed with the wide spread of Covid-19 but her determination and aspirations made her journey more futuristic and she never gave up the thought to GIVE-UP. This is where Devika made her dreams come true and alive. She never expected with a sole objective of

making Profit but her determination to impart the quality training made her to reach the peaks of success at the young age.

Adhoc Network-we are proud to have been awarded a Hattrick of Awards. This Achievement is a testament to our commitment to Excellence and

Innovation in the Software development Best heading company in the market. Devika Pakruthi, a name synonymous with innovation, empowerment, and success. As the proud recipient of the

Young Entrepreneur Award, Best Women- Led Startup Award, Women Rising Star of the Year Award and Youngest CEO of the Year Award, Devika Pakruthi has etched her name into the annals of contemporary business history.

Vision, Mission and values of the Organization:-

VISION:-

Due vision is to be a leading global provider of interactive and reliable Software Solution empowering business to Thrive in the digital age.

MISSION:-

Our mission is to develop cutting-edge Software Solutions that Solve compare business challenges, enhance Operations efficiency and drive Sustainable growth for our client we strive to deliver exceptional value by leveraging emerging

technologies, fostering Strategic partnerships and maintaining a Customer, Centric approach Values

- Innovation
- Excellence
- Collaboration
- Integrity
- Customer Centricity
- Continuous Learning

ADHOC NETWORK

CERTIFICATE

OF INTERNSHIP

This Certificate is Presented To :

YADLA GOWTHAMI

From demonstrated exceptional dedication and commitment to mastering AWS CC Internship actively engaging in hands-on projects and practical learning from **December 5th 2024-March 15th-2025**.Your active participation and engagement in the Internship have equipped you with valuable technical skills and practical knowledge essential for building dynamic and scalable applications

TECHNICAL TRAINER

ABSTRACT

Cloud storage has become a popular option for storing and managing large amounts of data due to its convenience, scalability, and cost-effectiveness. However, the security and privacy of cloud-stored data remain a significant concern. Encrypting data before uploading it to the cloud is a common solution to address these concerns. However, searching over encrypted data is a challenging problem, particularly when there are multiple keywords involved. While many of the currently available ranked keyword search schemes aim to improve search efficiency or functionality, they often fail to provide both efficient access control and rigorous security analysis at the same time. This creates a gap in the available security and privacy options for such systems. To address these limitations, this paper presents a novel solution called the Multi-keyword Ranked Search scheme with Fine-grained access control (MRSF). MRSF is designed to offer both efficient and privacy-preserving search capabilities, as well as robust access control measures. This allows for highly accurate retrieval of encrypted data, while also ensuring that only authorized users are able to access it. This project proposes a practical multi-keyword ranked search with access control scheme for encrypted cloud data. The proposed scheme allows data owners to encrypt their data and upload it to the cloud while maintaining the ability to search over the data without compromising its security. The scheme also provides access control to ensure that only authorized users can access the data. The proposed scheme uses a combination of symmetric and asymmetric encryption to enable efficient multi- keyword search over the encrypted data. The scheme employs an index-based search mechanism to achieve a ranked search based on the relevance of the keywords. The access control is implemented using attribute-based encryption, which allows access to be granted or revoked based on specific attributes of the user. Experimental evaluations demonstrate the effectiveness and efficiency of the proposed scheme, making it a viable solution for practical multi-keyword search with access control over encrypted cloud data. This project contributes to the field of cloud security and privacy by providing a practical solution to address the challenges of searching over encrypted cloud data while maintaining its security and privacy.

INTRODUCTION

What is cloud computing?

Cloud computing is the use of computing resources (hardware and software) that are delivered as a service over a network (typically the Internet). The name comes from the common use of a cloud-shaped symbol as an abstraction for the complex infrastructure it contains in system diagrams. Cloud computing entrusts remote services with a user's data, software and computation. Cloud computing consists of hardware and software resources made available on the Internet as managed third- party services. These services typically provide access to advanced software applications and high-end networks of server computers.

Structure of cloud computing

How Cloud Computing Works?

The goal of cloud computing is to apply traditional supercomputing, or high-performance computing power, normally used by military and research facilities, to perform tens of trillions of computations per second, in consumer-oriented applications such as financial portfolios, to deliver personalized information, to provide data storage or to power large, immersive computer games.

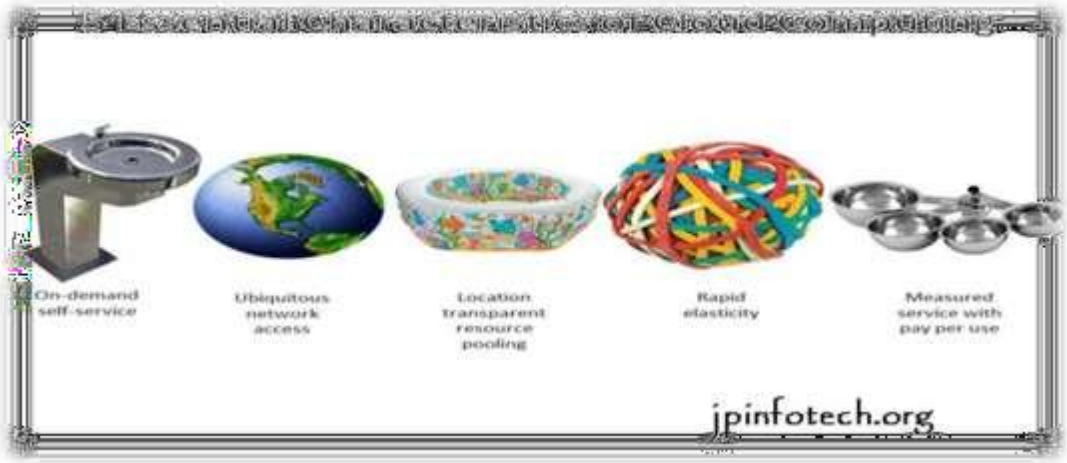
The cloud computing uses networks of large groups of servers typically running low-cost consumer PC technology with specialized connections to spread data-processing chores across them. This shared IT infrastructure contains large pools of systems that are linked together. Often, virtualization techniques are used to maximize the power of cloud computing.

Characteristics and Services Models:

The salient characteristics of cloud computing based on the definitions provided by the National Institute of Standards and Terminology (NIST) are outlined below:

- On-demand self-service: A consumer can unilaterally provision computing capabilities, such as server time and network storage, as needed automatically without requiring human interaction with each service's provider.
- Broad network access: Capabilities are available over the network and accessed through standard mechanisms that promote use by heterogeneous thin or thick client platforms (e.g., mobile phones, laptops, and PDAs).
- Resource pooling: The provider's computing resources are pooled to serve multiple consumers using a multi-tenant model, with different physical and virtual resources dynamically assigned and reassigned according to consumer demand. There is a sense of location-independence in that the customer generally has no control or knowledge over the exact location of the provided resources but may be able to specify location at a higher level of abstraction (e.g., country, state, or data center). Examples of resources include storage, processing, memory, network bandwidth, and virtual machines.
- Rapid elasticity: Capabilities can be rapidly and elastically provisioned, in some cases automatically, to quickly scale out and rapidly released to quickly scale in. To the consumer, the capabilities available for provisioning often appear to be unlimited and can be purchased in any quantity at any time.
- Measured service: Cloud systems automatically control and optimize resource use by leveraging a metering capability at some level of abstraction appropriate to the type of service

(e.g., storage, processing, bandwidth, and active user accounts). Resource usage can be managed, controlled, and reported providing transparency for both the provider and consumer of the utilized service.



Characteristics of cloud computing

Services Models:-Cloud Computing comprises three different service models, namely Infrastructure-as-a-Service (IaaS), Platform-as-a-Service (PaaS), and Software-as-a-Service (SaaS). The three service models or layer are completed by an end user layer that encapsulates the end user perspective on cloud services. The model is shown in figure below. If a cloud user accesses services on the infrastructure layer, for instance, she can run her own applications on the resources of a cloud infrastructure and remain responsible for the support, maintenance, and security of these applications herself. If she accesses a service on the application layer, these tasks are normally taken care of by the cloud service provider.

Structure of service models

Benefits of cloud computing:

1. Achieve economies of scale – increase volume output or productivity with fewer people. Your cost per unit, project or product plummets.
2. Reduce spending on technology infrastructure. Maintain easy access to your information with minimal upfront spending. Pay as you go (weekly, quarterly or yearly), based on demand.
3. Globalize your workforce on the cheap. People worldwide can access the cloud, provided they have an Internet connection.
4. Streamline processes. Get more work done in less time with less people.
5. Reduce capital costs. There's no need to spend big money on hardware, software or licensing fees.
6. Improve accessibility. You have access anytime, anywhere, making your life so much easier!
7. Monitor projects more effectively. Stay within budget and ahead of completion cycle times.
8. Less personnel training is needed. It takes fewer people to do more work on a cloud, with a minimal learning curve on hardware and software issues.
9. Minimize licensing new software. Stretch and grow without the need to buy expensive software licenses or programs.
10. Improve flexibility. You can change direction without serious "people" or

"financial" issues at stake.

11. Advantages:

    1. Price:Pay for only the resources used.
    2. Security: Cloud instances are isolated in the network from other instances for improved security.
    3. Performance: Instances can be added instantly for improved performance. Clients have access to the total resources of the Cloud's core hardware.
    4. Scalability: Auto-deploy cloud instances when needed.
    5. Uptime: Uses multiple servers for maximum redundancies. In case of server failure, instances can be automatically created on another server.
    6. Control: Able to login from any location. Server snapshot and a software library lets you deploy custom instances.
    7. Traffic: Deals with spike in traffic with quick deployment of additional instances to handle the load.

LITERATURE SURVEY

1. **Secure ranked keyword search over encrypted cloud data AUTHORS: C. Wang, N. Cao, J. Li, K. Ren, and W. Lou**

As Cloud Computing becomes prevalent, sensitive information are being increasingly centralized into the cloud. For the protection of data privacy, sensitive data has to be encrypted before outsourcing, which makes effective data utilization a very challenging task. Although traditional searchable encryption schemes allow users to securely search over encrypted data through keywords, these techniques support only boolean search, without capturing any relevance of data files. This approach suffers from two main drawbacks when directly applied in the context of Cloud Computing. On the one hand, users, who do not necessarily have pre- knowledge

of the encrypted cloud data, have to postprocess every retrieved file in order to find ones most matching their interest; On the other hand, invariably retrieving all files containing the queried keyword further incurs unnecessary network traffic, which is absolutely undesirable in today's pay-as-you- use cloud paradigm. In this paper, for the first time we define and solve the problem of effective yet secure ranked keyword search over encrypted cloud data. Ranked search greatly enhances system usability by returning the matching files in a ranked order regarding to certain relevance criteria (e.g., keyword frequency), thus making one step closer towards practical deployment of privacy-preserving data hosting services in Cloud Computing. We first give a straightforward yet ideal construction of ranked keyword search under the state-of-the-art searchable symmetric encryption (SSE) security definition, and demonstrate its inefficiency. To achieve more practical performance, we then propose a definition for ranked searchable symmetric encryption, and give an efficient design by properly utilizing the existing cryptographic primitive, order-preserving symmetric encryption (OPSE). Thorough analysis shows that our proposed solution enjoys "as-strong-aspossible" security guarantee compared to previous SSE schemes, while correctly realizing the goal of ranked keyword search. Extensive experimental results demonstrate the efficiency of the proposed solution.

2. Privacy-preserving and dynamic multi-attribute conjunctive keyword search over encrypted cloud data

AUTHORS: L. Zhang, Y. Zhang, and H. Ma

With the increasing popularity of cloud computing, a growing data owners are motivated to outsource their huge data to cloud servers in order to facilitate access and save data management cost. To protect user privacy and data security,

sensitive data should be encrypted before outsourced to the cloud server, which obsoletes data utilization like efficient search over encrypted data. In this paper, we present a privacy-preserving conjunctive keyword search scheme over encrypted cloud data, which simultaneously supports dynamic update operations. Specifically, we construct an index structure based on Multi-Attribute Tree (MAT) and present an efficient search algorithm over the index tree, named as thesearchMAT algorithm. We propose a multi-attribute conjunctive keyword search scheme based on MAT, named as the MCKS-MAT scheme, which can achieve equality conjunction, subset conjunction and range conjunction, as well as satisfy privacy requirements under the known background attack model. In addition, this paper is accompanied by an adequate of experiments for evaluating the effectiveness of the proposed scheme. Experiments demonstrate that, compared to the linear search, the proposed scheme needs the slightly higher preprocessing cost on account of constructing the tree-based index, however, it achieves lower computational overhead in initialization, trapdoor generation and queries. OAPA

3. Privacy-preserving multi-keyword ranked search over encrypted cloud data

AUTHORS: N. Cao, C. Wang, M. Li, K. Ren, and W. Lou,

With the advent of cloud computing, data owners are motivated to outsource their complex data management systems from local sites to the commercial public cloud for great flexibility and economic savings. But for protecting data privacy, sensitive data have to be encrypted before outsourcing, which obsoletes traditional data utilization based on plaintext keyword search. Thus, enabling an encrypted cloud data search service is of paramount importance.

Considering the large number of data users and documents in the cloud, it is necessary to allow multiple keywords in the search request and return documents in the order of their relevance to these keywords. Related works on searchable encryption focus on single keyword search or Boolean keyword search, and rarely sort the search results. In this paper, for the first time, we define and solve the challenging problem of privacy-preserving multi- keyword ranked search over encrypted data in cloud computing (MRSE). We establish a set of strict privacy requirements for such a secure cloud data utilization system. Among various multi-keyword semantics, we choose the efficient similarity measure of "coordinate matching," i.e., as many matches as possible, to capture the relevance of data documents to the search query. We further use "inner product similarity" to quantitatively evaluate such similarity measure. We first propose a basic idea for the MRSE based on secure inner product computation, and then give two significantly improved MRSE schemes to achieve various stringent privacy requirements in two different threat models. To improve search experience of the data search service, we further extend these two schemes to support more

search semantics. Thorough analysis investigating privacy and efficiency guarantees of proposed schemes is given.

Experiments on the real-world data set further show proposed schemes indeed introduce low overhead on computation and communication.

4. Practical techniques for searches on encrypted data AUTHORS: D. X. Song, D. Wagner, and A. Perrig

It is desirable to store data on data storage servers such as mail servers and file servers in encrypted form to reduce security and privacy risks. But this usually implies that one has to sacrifice

functionality for security. For example, if a client wishes to retrieve only documents containing certain words, it was not previously known how to let the data storage server perform the search and answer the query, without loss of data confidentiality. We describe our cryptographic schemes for the problem of searching on encrypted data and provide proofs of security for the resulting crypto systems. Our techniques have a number of crucial advantages. They are provably secure: they provide provable secrecy for encryption, in the sense that the untrusted server cannot learn anything about the plaintext when only given the ciphertext; they provide query isolation for searches, meaning that the untrusted server cannot learn anything more about the plaintext than the search result; they provide controlled searching, so that the untrusted server cannot search for an arbitrary word without the user's authorization; they also support hidden queries, so that the user may ask the untrusted server to search for a secret word without revealing the word to the server. The algorithms presented are simple, fast (for a document of length n, the encryption and search algorithms only need O(n) stream cipher and block cipher operations), and introduce almost no space and communication overhead, and hence are practical to use today

5. Privacy preserving keyword searches on remote encrypted data, AUTHORS: Y.-C. Chang and M. Mitzenmacher

We consider the following problem: a user U wants to store his files in an encrypted form on a remote file server S. Later the user U wants to efficiently retrieve some of the encrypted files containing (or indexed by) specific keywords, keeping the keywords themselves secret and not jeopardizing the security of the remotely stored files. For example, a user may want to store old e-mail messages encrypted on a server managed by Yahoo or another large vendor,

and later retrieve certain messages while travelling with a mobile device. In this paper, we offer solutions for this problem under well-defined security requirements. Our schemes are efficient in the sense that no public-key cryptosystem is involved. Indeed, our approach is independent of the encryption method chosen for the remote files. They are also incremental, in that U can submit new files which are secure against previous queries but still searchable against future queries.

SYSTEM STUDY

FEASIBILITY STUDY

The feasibility of the project is analyzed in this phase and business proposal is put forth with a very general plan for the project and some cost estimates.

During system analysis the feasibility study of the proposed system is to be carried out. This is to ensure that the proposed system is not a burden to the company. For feasibility analysis, some understanding of the major requirements for the system is essential.

Three key considerations involved in the feasibility analysis are:

- ECONOMICAL FEASIBILITY
- TECHNICAL FEASIBILITY
- SOCIAL FEASIBILITY

ECONOMICAL FEASIBILITY

This study is carried out to check the economic impact that the system will have on the organization. The amount of fund that the company can pour into the research and development of the system

is limited. The expenditures must be justified. Thus the developed system as well within the budget and this was achieved because most of the technologies used are freely available. Only the customized products had to be purchased.

TECHNICAL FEASIBILITY

This study is carried out to check the technical feasibility, that is, the technical requirements of the system. Any system developed must not have a high demand on the available technical resources. This will lead to high demands on the available technical resources. This will lead to high demands being placed on the client. The developed system must have a modest requirement, as only minimal or null changes are required for implementing this system.

SOCIAL FEASIBILITY

The aspect of study is to check the level of acceptance of the system by the user. This includes the process of training the user to use the system efficiently. The user must not feel threatened by the system, instead must accept it as a necessity. The level of acceptance by the users solely depends on the methods that are employed to educate the user about the system and to make him familiar with it. His level of confidence must be raised so that he is also able to make some constructive criticism, which is welcomed, as he is the final user of the system.

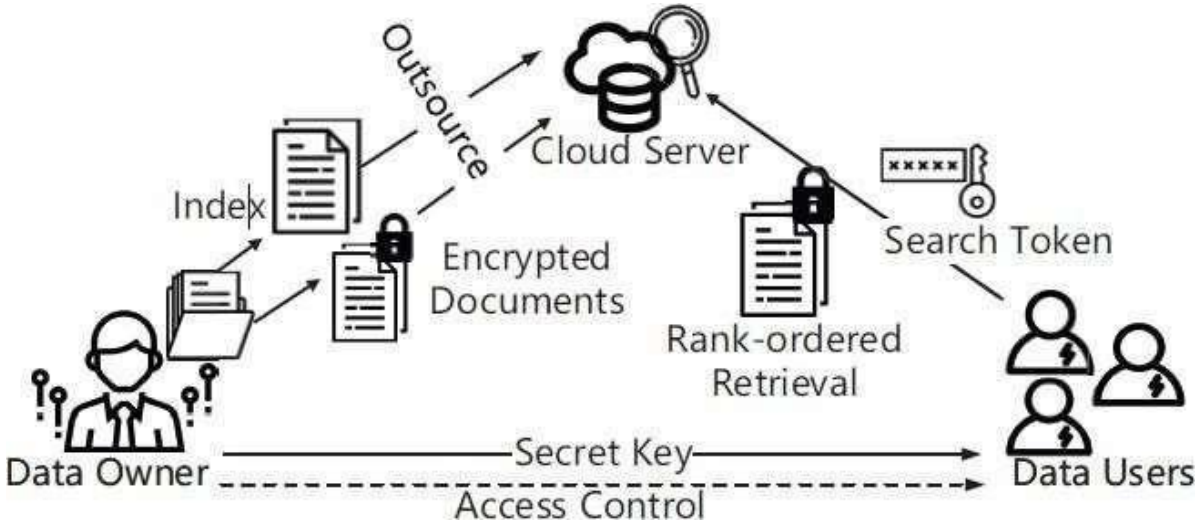
SYSTEM REQUIREMENTS

HARDWARE REQUIREMENTS:

- System : Pentium i3 Processor
- Hard Disk : 500 GB.
- Monitor : 15'' LED
- Input Devices : Keyboard, Mouse
- Ram : 2 GB

SYSTEM DESIGN

SYSTEM ARCHITECTURE

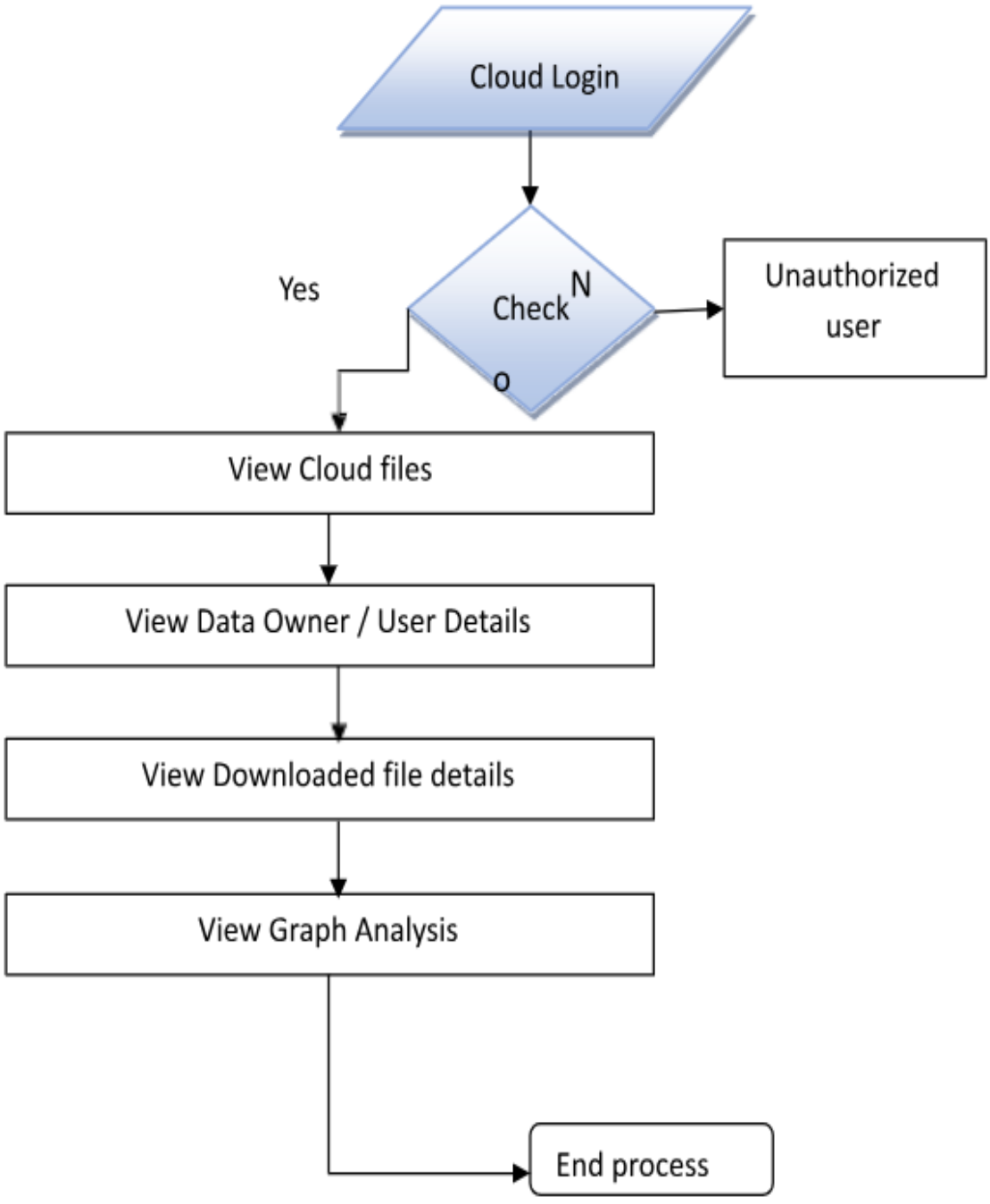


DATA FLOW DIAGRAM:

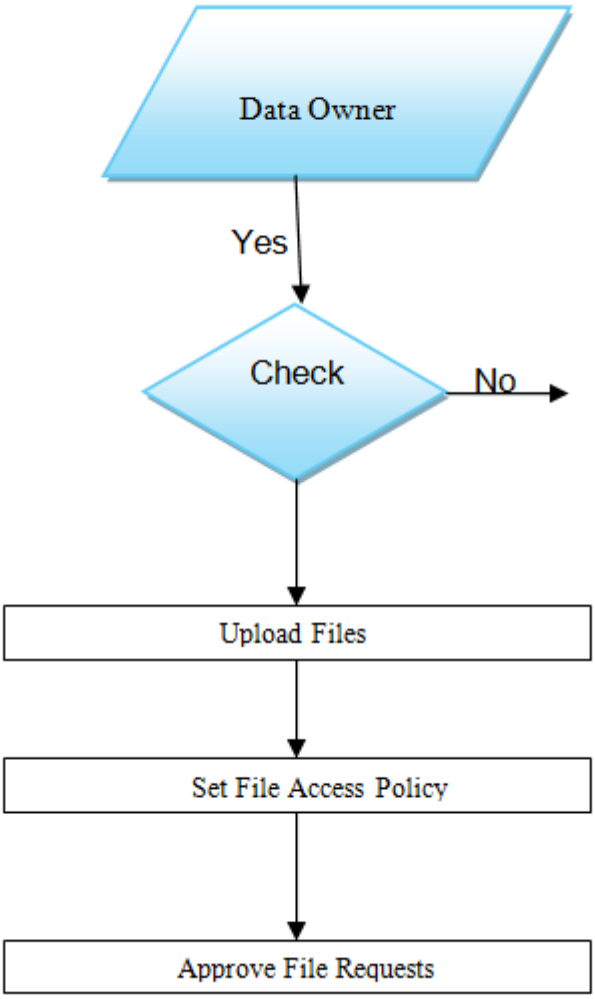
1. The DFD is also called as bubble chart. It is a simple graphical formalism that can be used to represent a system in terms of input data to the system, various processing carried out on this data, and the output data is generated by this system.
2. The data flow diagram (DFD) is one of the most important modeling tools. It is used to model the system components. These components are the system process, the data used by the process, an external entity that interacts with the system and the information flows in the system.

3. DFD shows how the information moves through the system and how it is modified by a series of transformations. It is a graphical technique that depicts information flow and the transformations that are applied as data moves from input to output.
4. DFD is also known as bubble chart. A DFD may be used to represent a system at any level of abstraction. DFD may be partitioned into levels that represent increasing information flow and functional detail.

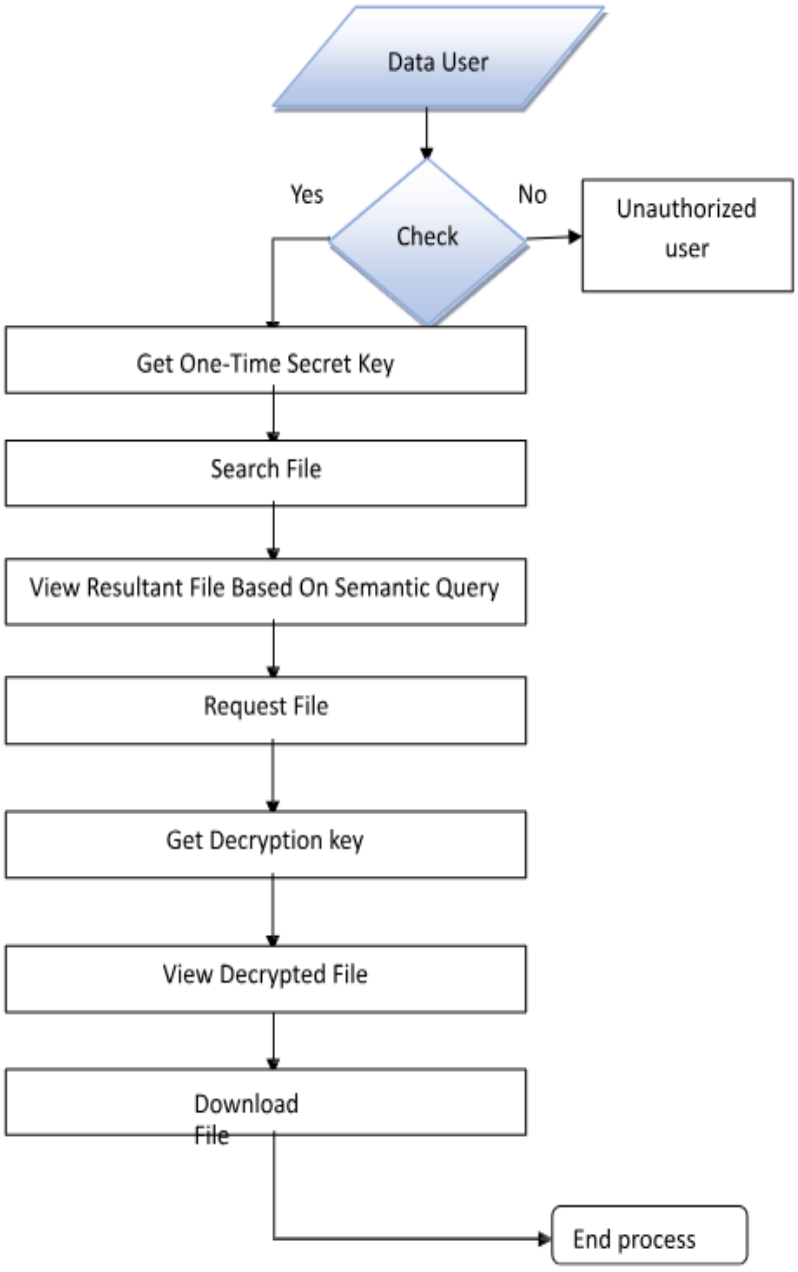
Cloud Server:



Data Owner:


Data Owner
Yes
Check
No
Upload Files
Set File Access Policy
Approve File Requests

Data User:


Data User
Yes
Check
No
Unauthorized user
Get One-Time Secret Key
Search File
View Resultant File Based On Semantic Query
Request File
Get Decryption key
View Decrypted File
Download File
End process

UML DIAGRAMS

UML stands for Unified Modeling Language. UML is a standardized general-purpose modeling language in the field of object-oriented software engineering. The standard is managed, and was created by, the Object Management Group.

The goal is for UML to become a common language for creating models of object oriented computer software. In its current form UML is comprised of two major components: a Meta-model and a notation. In the future, some form of method or process may also be added to; or associated with, UML.

The Unified Modeling Language is a standard language for specifying, Visualization, Constructing and documenting the artifacts of software system, as well as for business modeling and other non-software systems.

The UML represents a collection of best engineering practices that have proven successful in the modeling of large and complex systems.

The UML is a very important part of developing objects oriented software and the software development process. The UML uses mostly graphical notations to express the design of software projects.

GOALS:

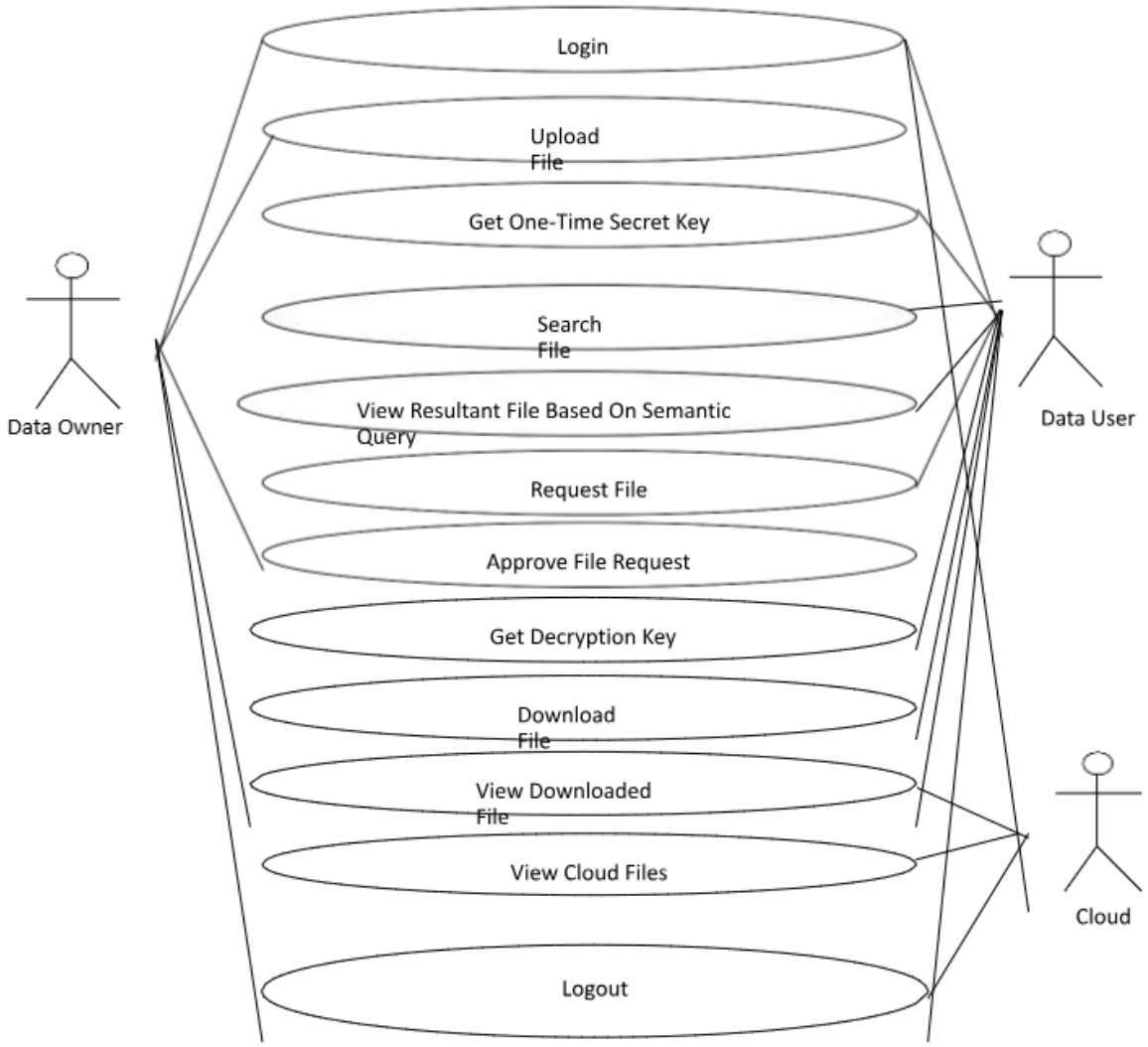
The Primary goals in the design of the UML are as follows:

1. Provide users a ready-to-use, expressive visual modeling Language so that they can develop and exchange meaningful models.

2. Provide extendibility and specialization mechanisms to extend the core concepts.
3. Be independent of particular programming languages and development process.
4. Provide a formal basis for understanding the modeling language.
5. Encourage the growth of OO tools market.
6. Support higher level development concepts such as collaborations, frameworks, patterns and components.
7. Integrate best practices.

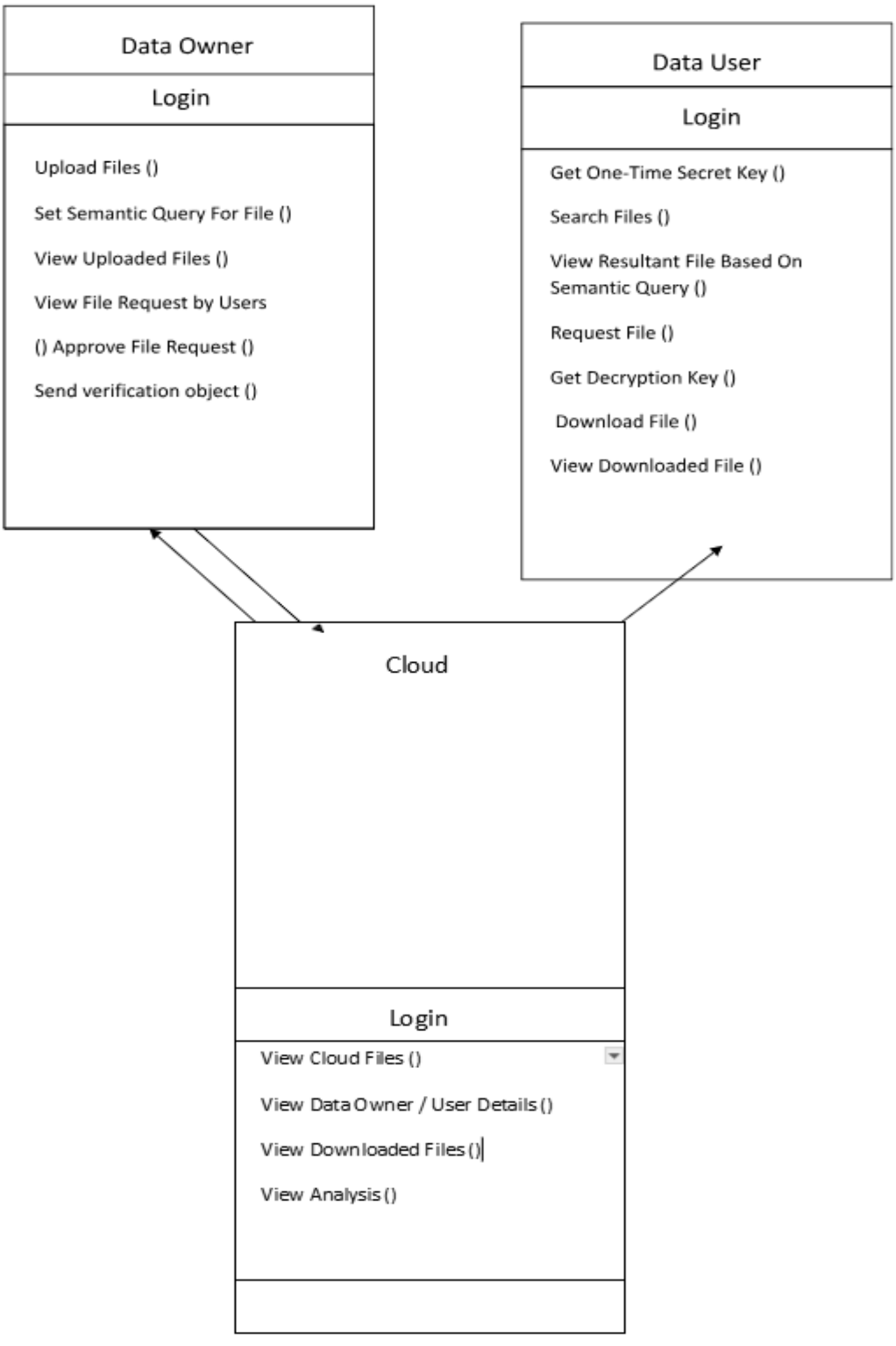
USE CASE DIAGRAM:

A use case diagram in the Unified Modeling Language (UML) is a type of behavioral diagram defined by and created from a Use-case analysis. Its purpose is to present a graphical overview of the functionality provided by a system in terms of actors, their goals (represented as use cases), and any dependencies between those use cases. The main purpose of a use case diagram is to show what system functions are performed for which actor. Roles of the actors in the system can be depicted.



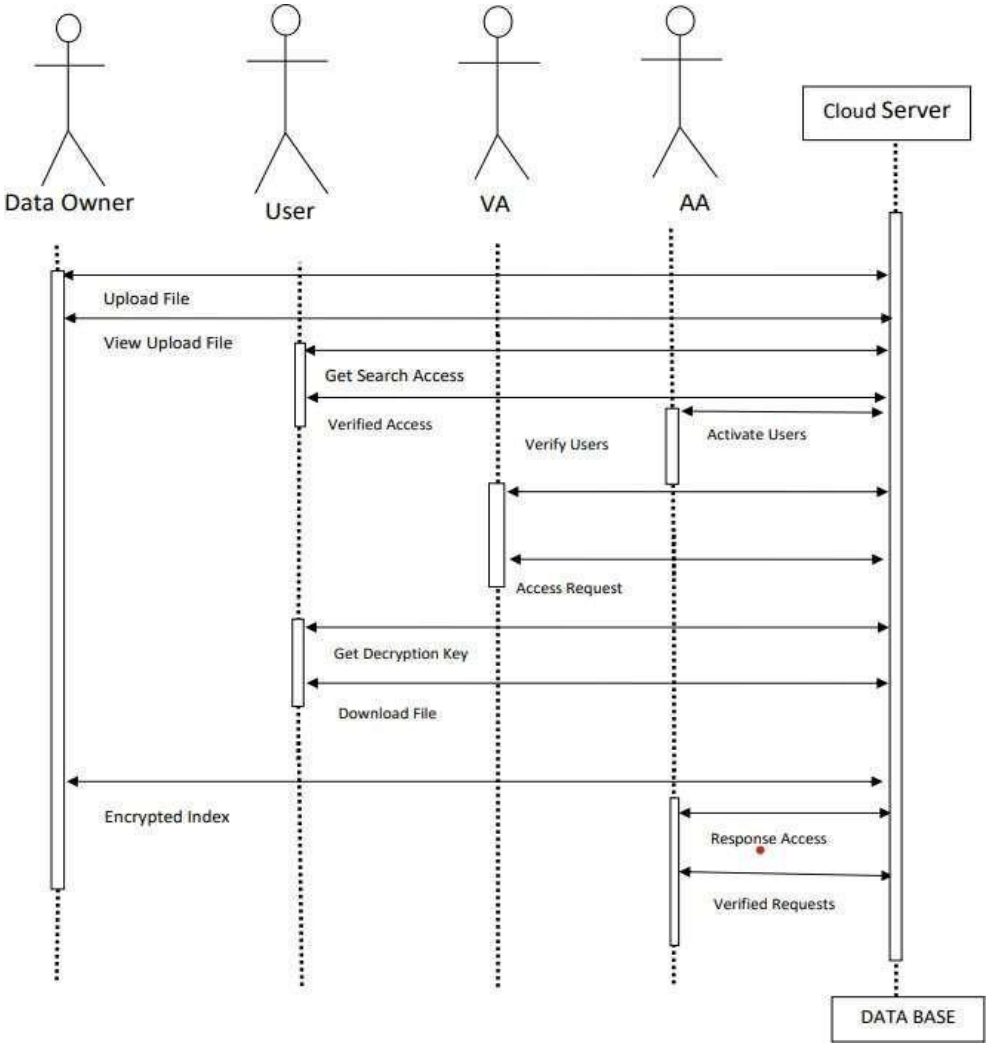
CLASS DIAGRAM:

In software engineering, a class diagram in the Unified Modeling Language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, operations (or methods), and the relationships among the classes. It explains which class contains information.


Data Owner
Login
Upload Files ()
Set Semantic Query For File ()
View Uploaded Files ()
View File Request by Users
() Approve File Request ()
Send verification object ()
Data User
Login
Get One-Time Secret Key ()
Search Files ()
View Resultant File Based On Semantic Query ()
Request File ()
Get Decryption Key ()
Download File ()
View Downloaded File ()
Cloud
Login
View Cloud Files ()
View Data Owner / User Details ()
View Downloaded Files ()
View Analysis ()

SEQUENCE DIAGRAM:

A sequence diagram in Unified Modeling Language (UML) is a kind of interaction diagram that shows how processes operate with one another and in what order. It is a construct of a Message Sequence Chart. Sequence diagrams are sometimes called event diagrams, event scenarios, and timing diagrams



INDEX

AWS CLOUD COMPUTING

Project-1

Computing:

It is a broad term refers to usage of computers and other technologies to perform tasks.

Cloud computing:

Cloud computing is a technology that enables users to access and use computer resources such as servers, storage, databases, networks, software, analytics and intelligence over the internet. AWSCC (Amazon web service cloud computing)

- Cloud computing is provide servers.

Service model (Major):

1. AWS(CC)
2. Google cloud platform provider(GCP)
3. Microsoft Azure

Key Characteristics:

1)**On demand self service**: It allows users to access and manage, cloud resources without needing to interact with a service provider.

2) **Broad network access**: It allows users to access the cloud from any device or location.

3) **Resource pooling**: This concept allows users to access and assign the resources from a pool such as storage, networking and computation.

4) **Rapid elasticity**: it allows users to quickly adjust their cloud resources to meet demand.

5)**Measured service**: It is the ability to track and manage the usage of computing resources. It behaves like monitoring. It provides transparency for both the provider and user.

Cloud Service Model:

1)SAAS(software as a service)
2)PAAS(platform as a service)
3)IAAS(infrastructure as a service)

1)IAAS:

A-pay-as-you go service that provides computers storage and networking resources on demand.

2)PAAS:

A service that allows you to quickly create customized application without managing the underlying infrastructure. It's cost effective because you pay per use.

3)SAAS:

software as a service is a cloud computing model that allows users to access and use cloud based application over the internet.

Cloud Deployment Models:

Cloud deployment model defines who can access the cloud resources and how the cloud is located.

- **Types:**
  1) Public cloud
  2) Private cloud
  3) Hybrid cloud

1)Public cloud:

It allows everyone can access the cloud with the help of internet connection. In public cloud resources are free.

* Advantages:

1) Low cost
2) Reliable
3) Low maintainance.
4) Access from anytime and anywhere
5)Flexible

***Disadvantages:**

1) Low security
2) less customizable

2)Private cloud:

The resources allows only within an organisation. It is operated only within particular organisation. It allows for increasing,security,reliability, performance & services. It is only pay for use.

Example: Microsoft

*Advantages:

1) High security & privacy
2) More control

* Disadvantages:

1) More Cost
2) Contains restrictions
3) Less scalability

3)Hybrid cloud:

It is the combination of both public and private cloud.

*Advantages:

1)Flexible and secure

2)Cost effective

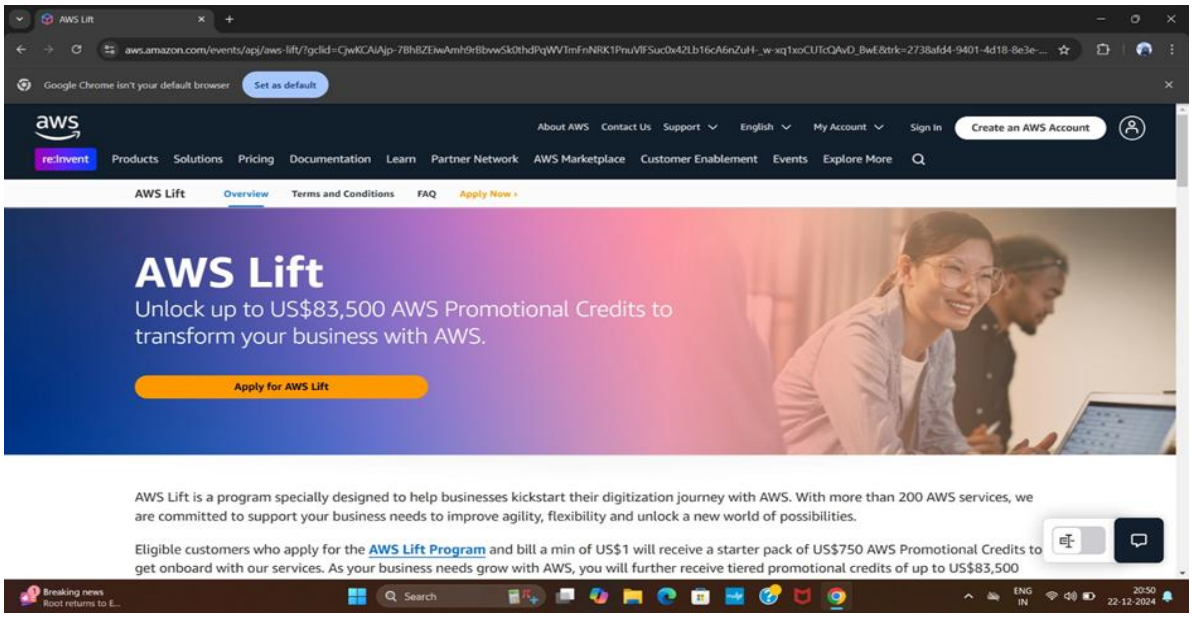
* Disadvantage:

1) Network issuses

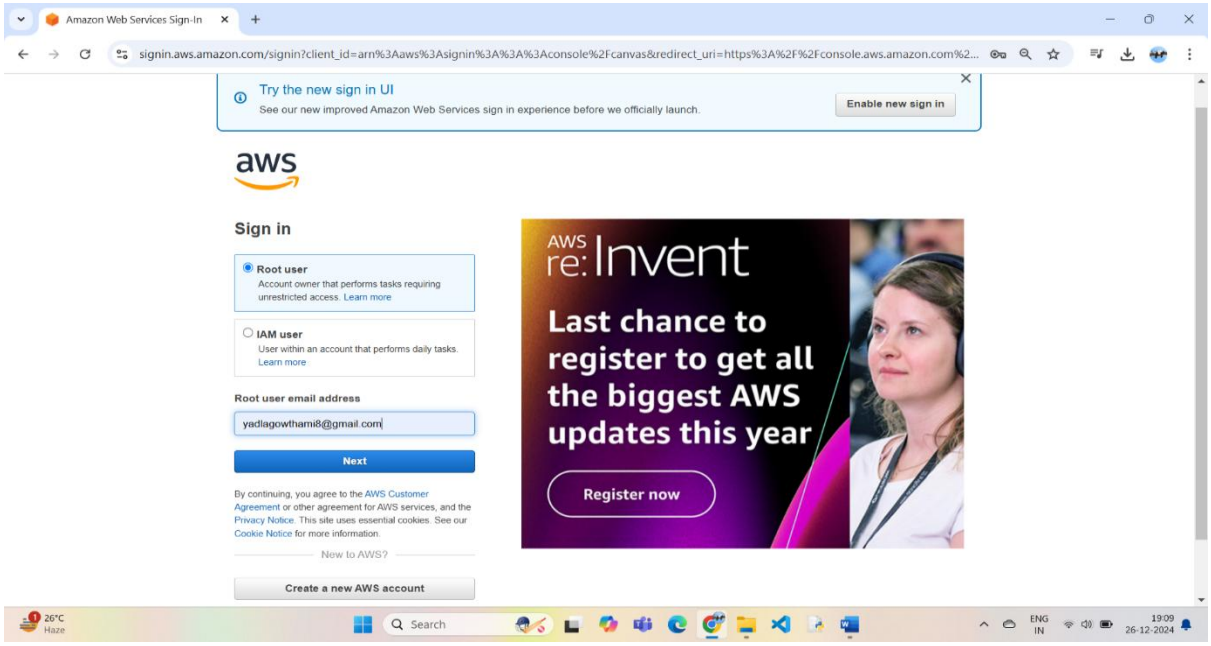
Steps to create Aws account:

Step-1:

Visit the Aws website: Go to Aws homepage https://aws. amazon.com/

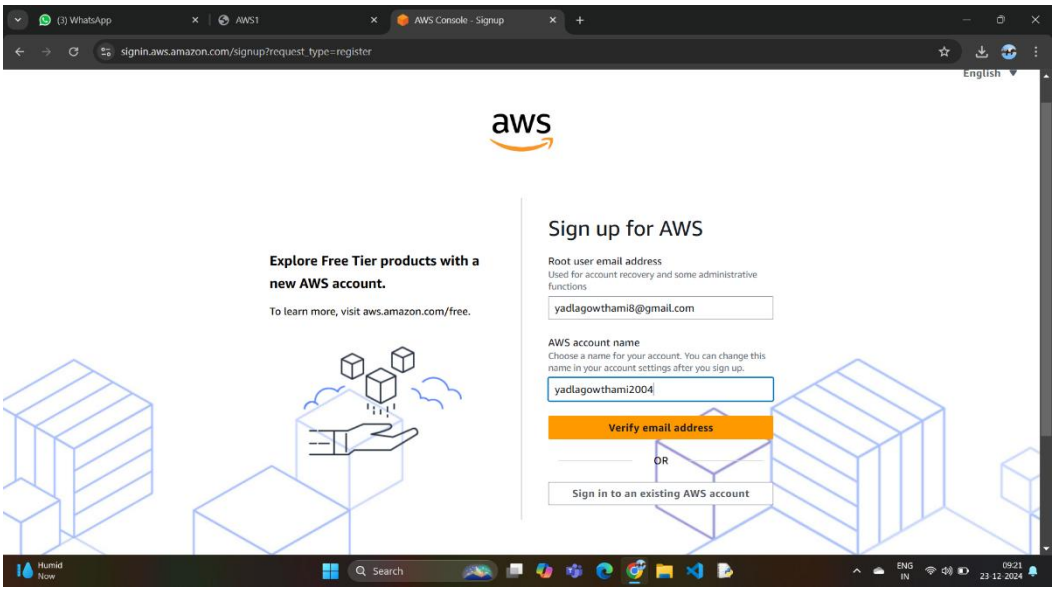


Step-2: Click on "create AWS account'': click on the "create AWS'' account button.



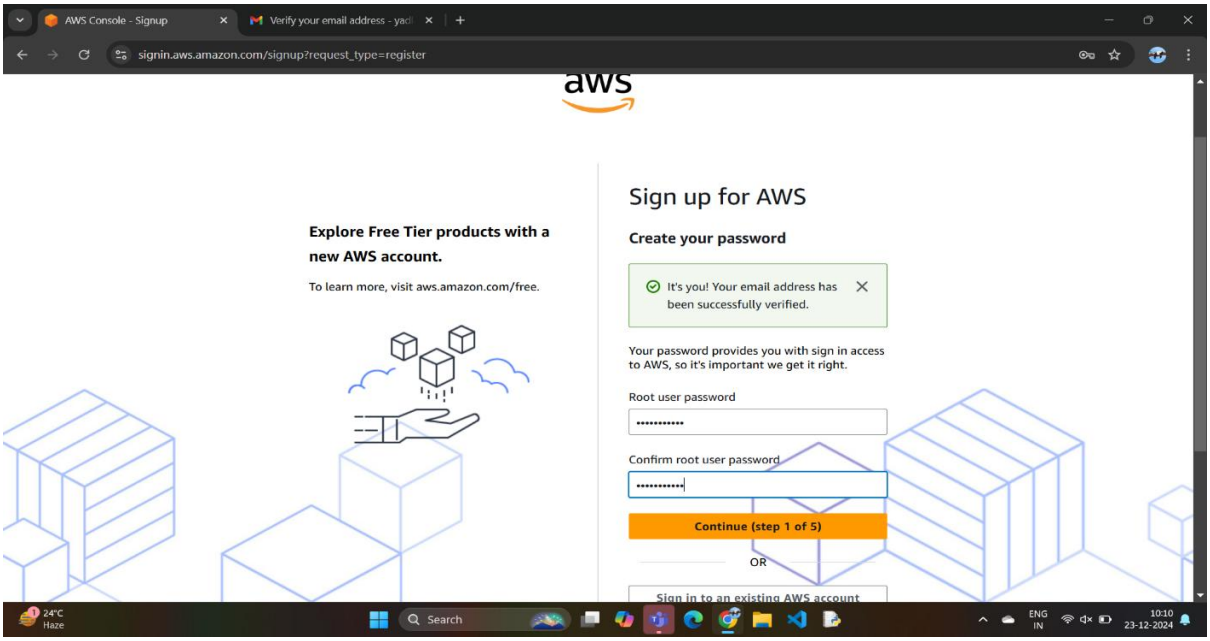
Step-3:

Sign in or create an amazon account: If you already have an amazon.com account, sign in using your existing credentials. If not, you'll need to create a new account.

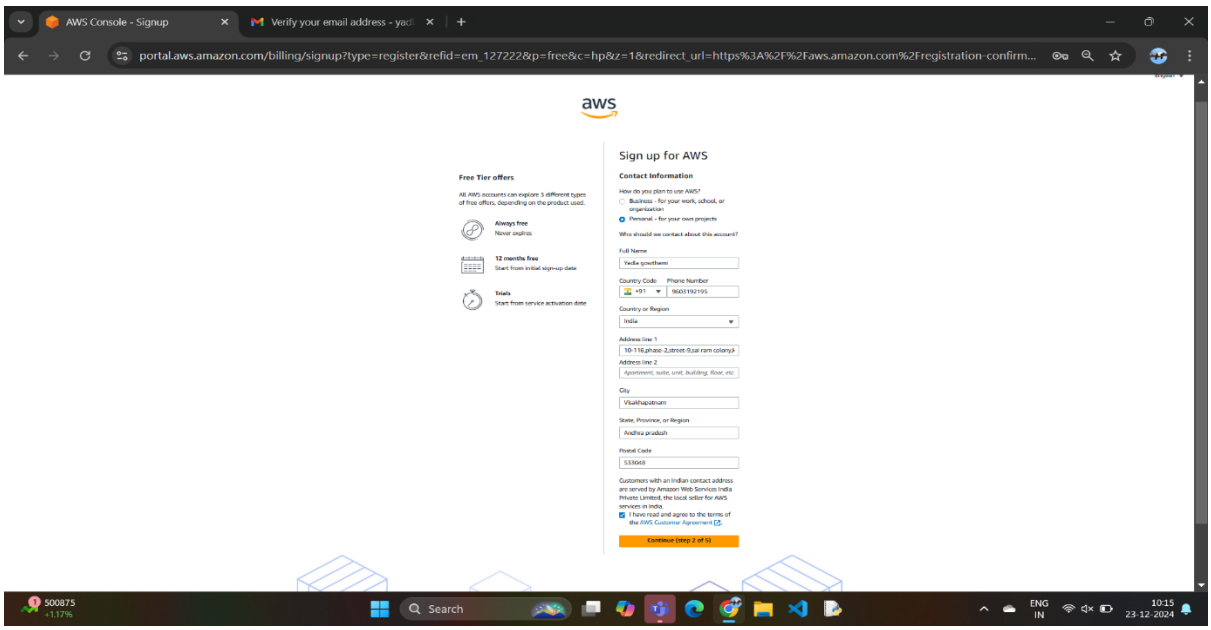


Step-4:

Provide account information: Fill in the required information, including your mail address and a secure password.

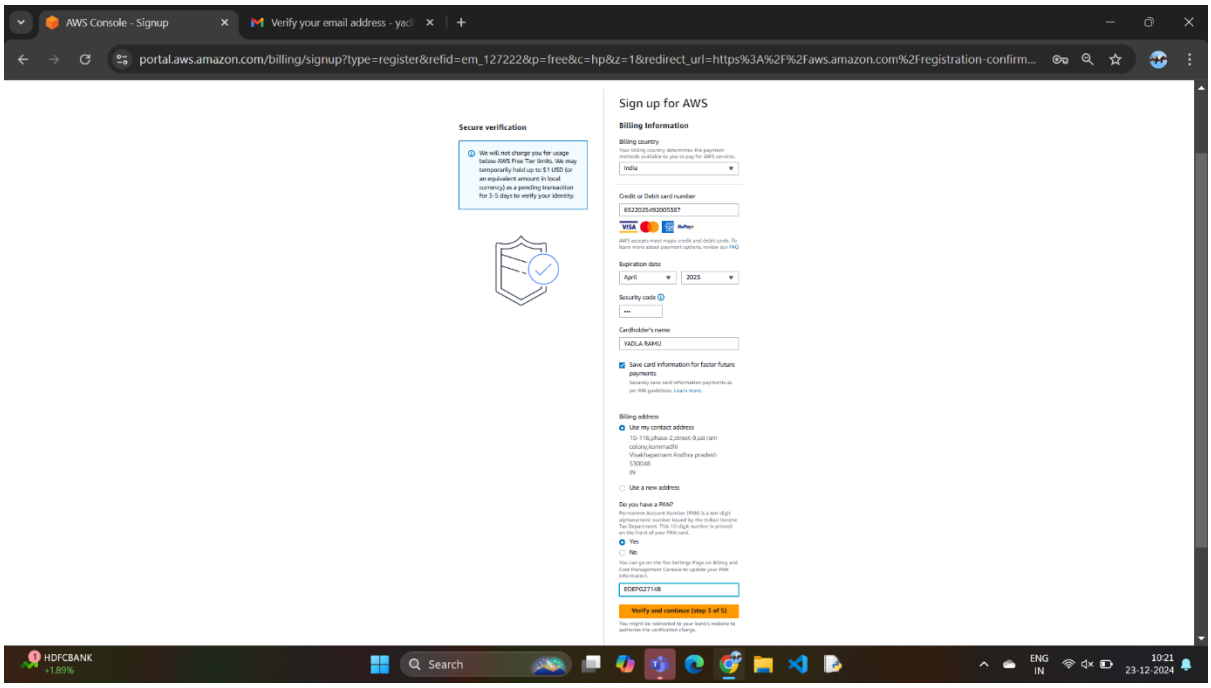


Step-5: Contact Information: Enter your name, company name and phone number.



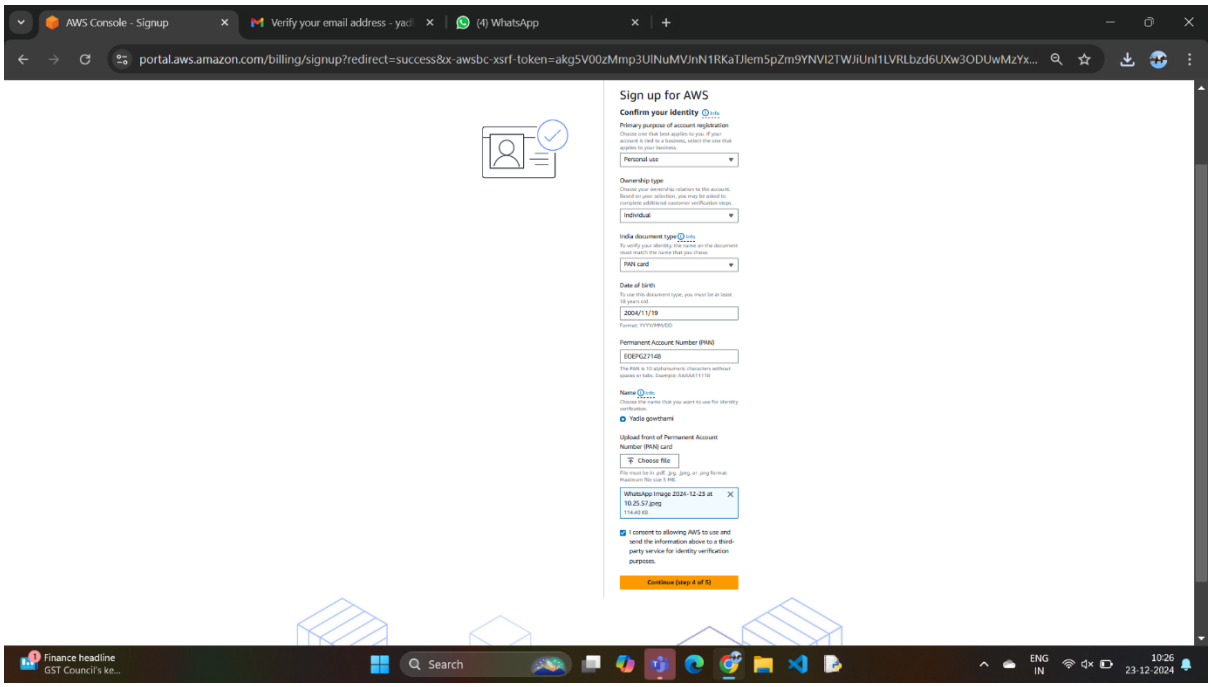
Step-6:

Payment information: Provide valid credit card details. AWS may charge a small amount to verify the authenticity of the card charge will be refunded.



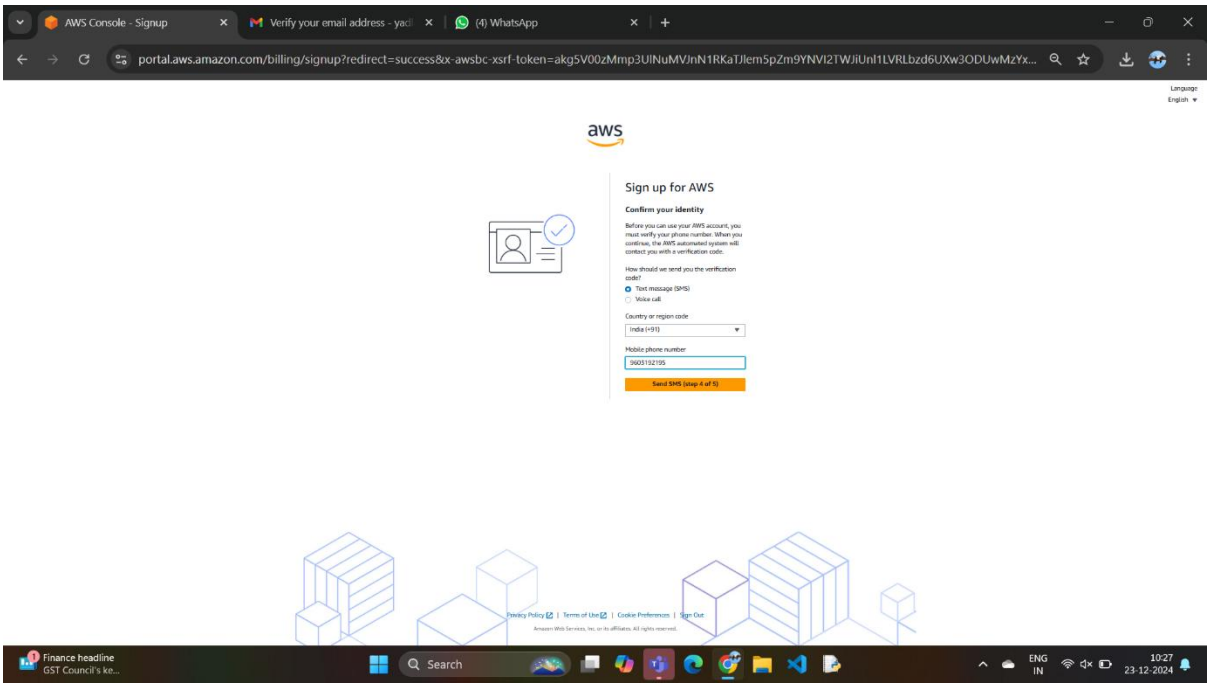
Step-7:

Identity Verification: You may need to verify your identity through a phone call or by entering a code sent to you via SMS.



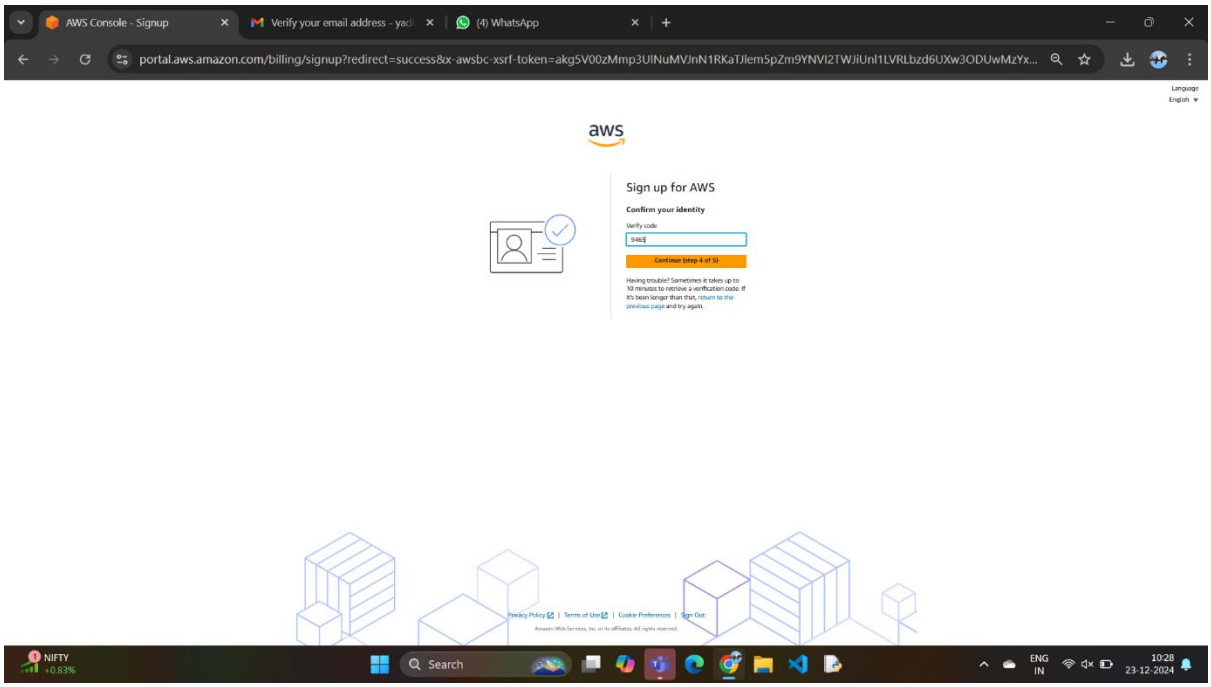
Step-8:

Confirm Identity verification: select a support plan based on your requirements. AWS offers a free support plan, but you can choose a paid plan if needed.



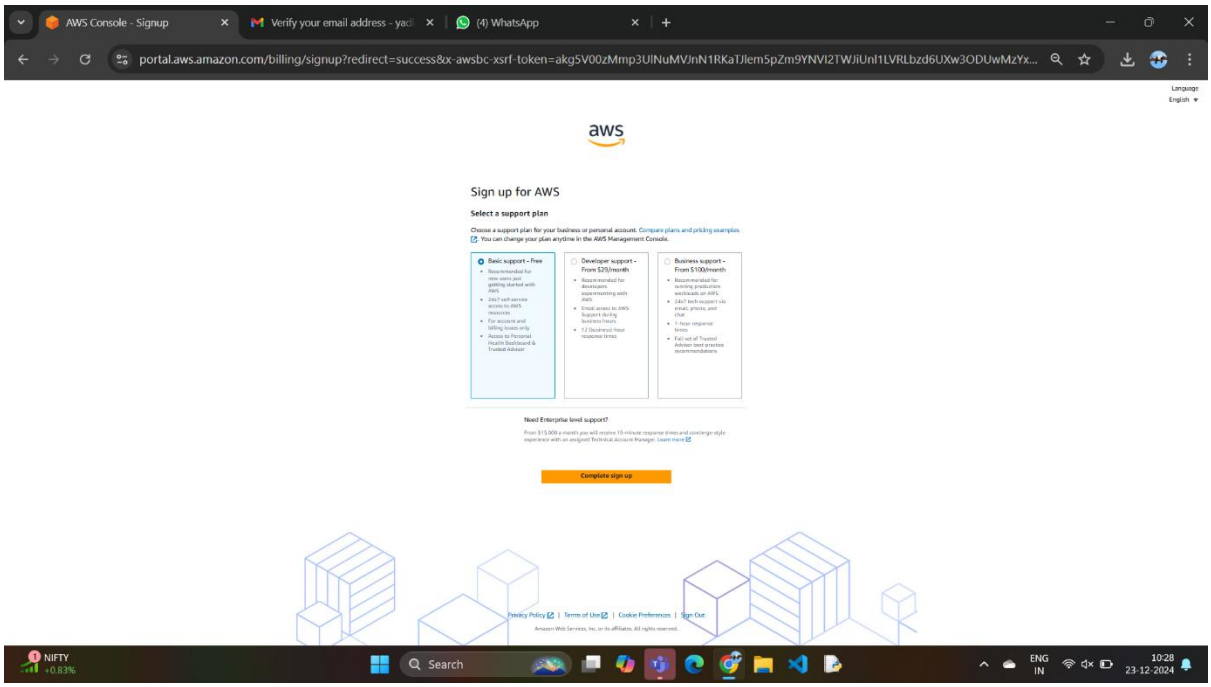
Step-9:

Confirmation Email: AWS will send a confirmation email to the address you provided. Click the link in the mail to verify the email address**.**



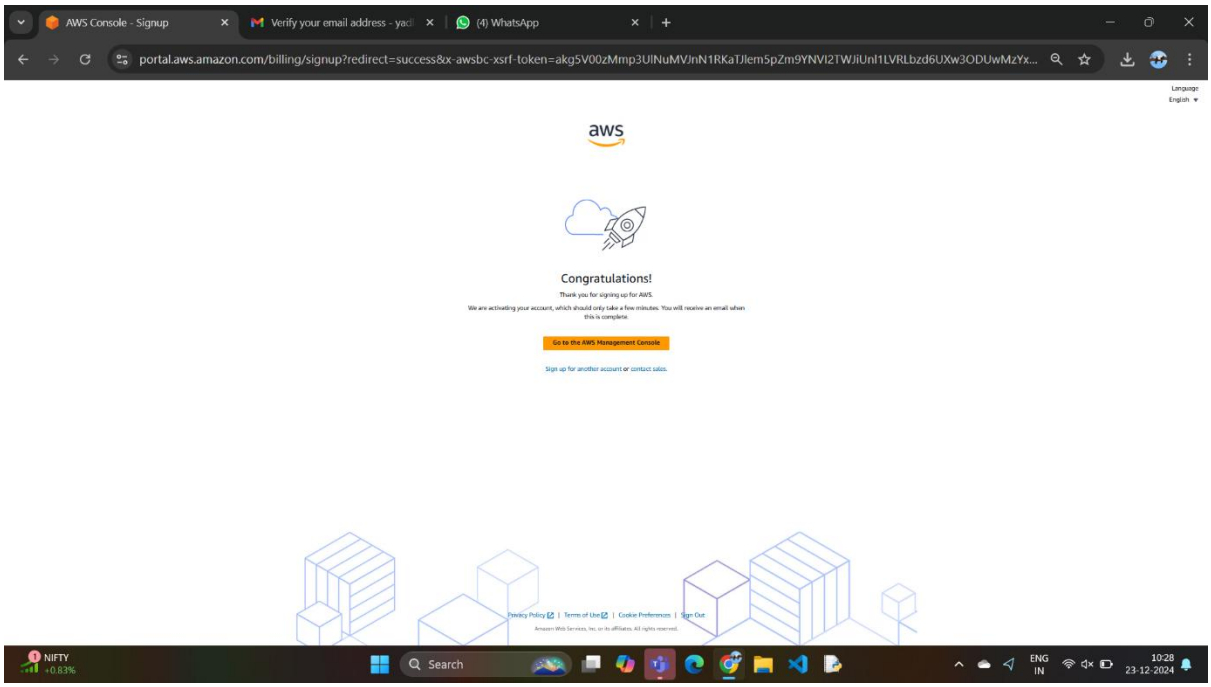
Step-10:

Set up AWS management console: Sign in to the AWS management console using your new credentials**.**



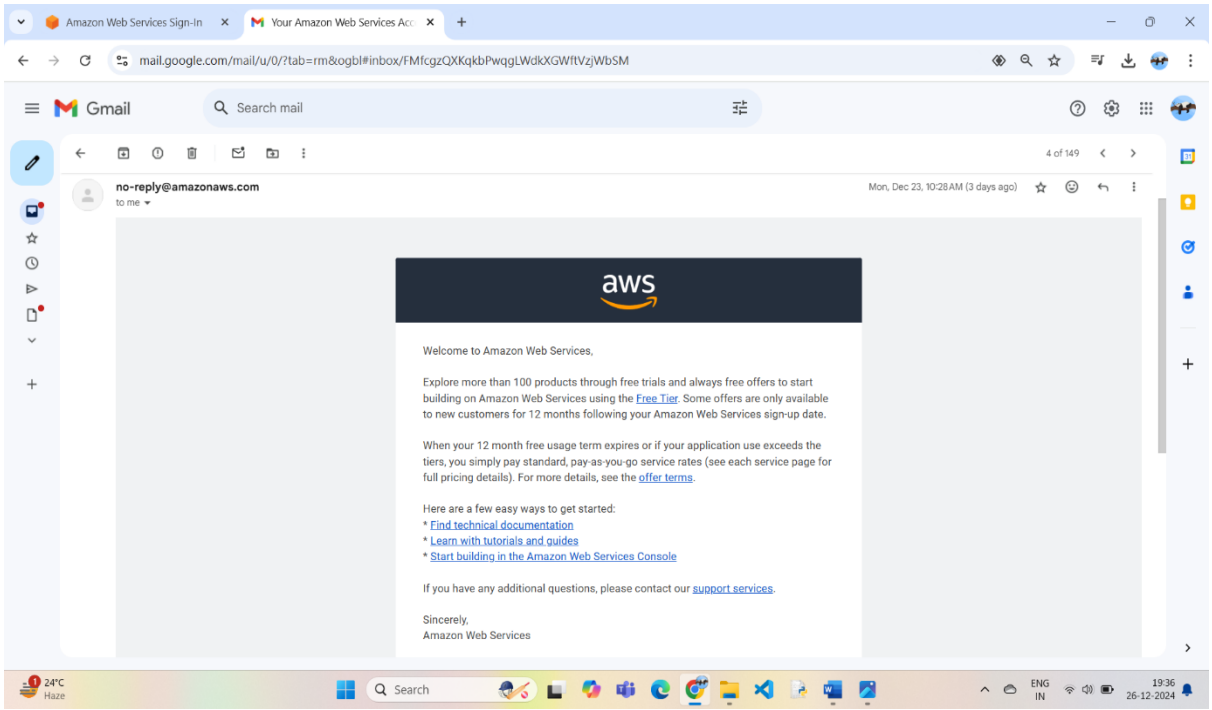
Step-11:

Explore AWS services: You can start exploring and using various AWS services.



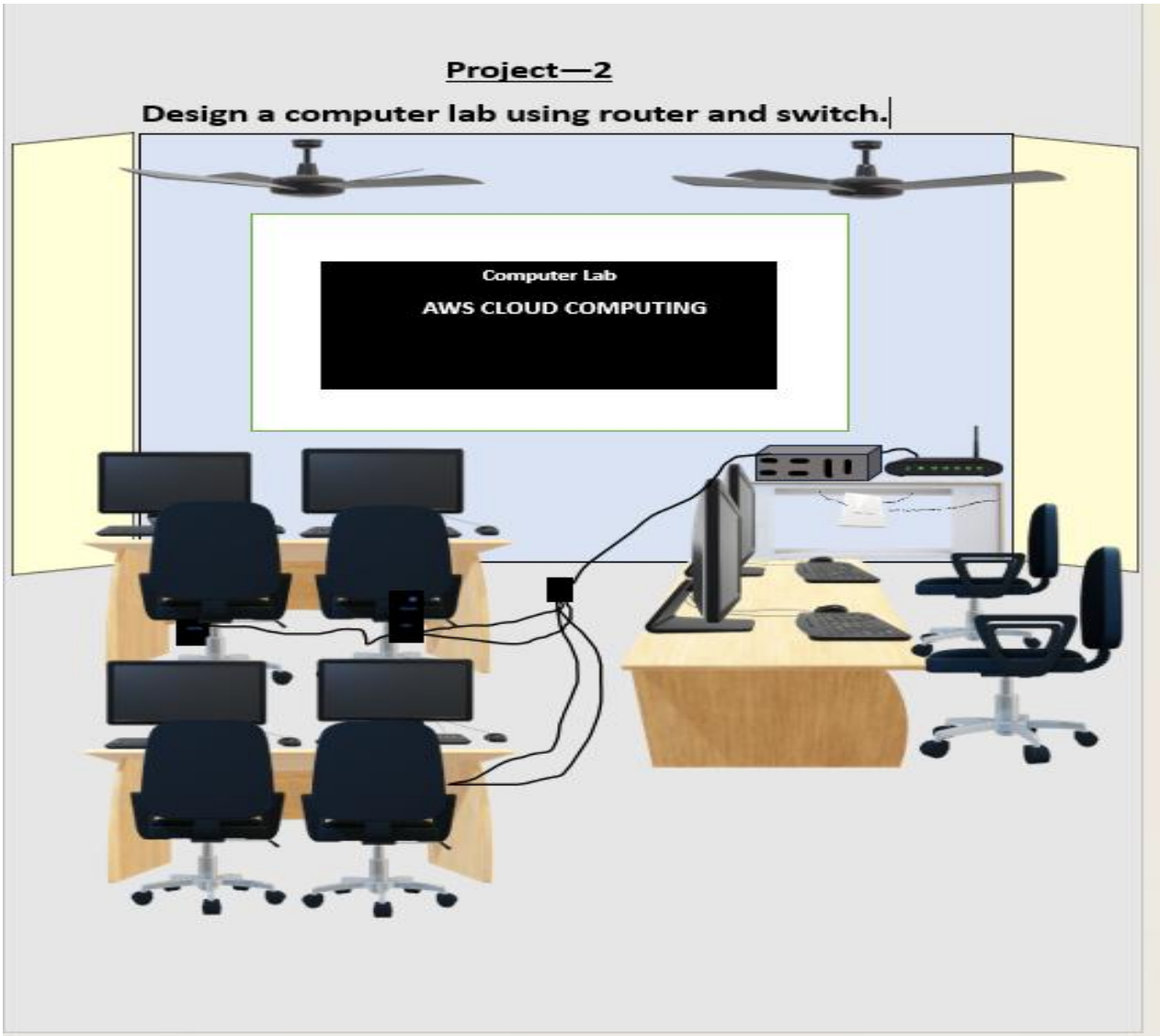
Step-12:

Successfully got a mail from Aws services.



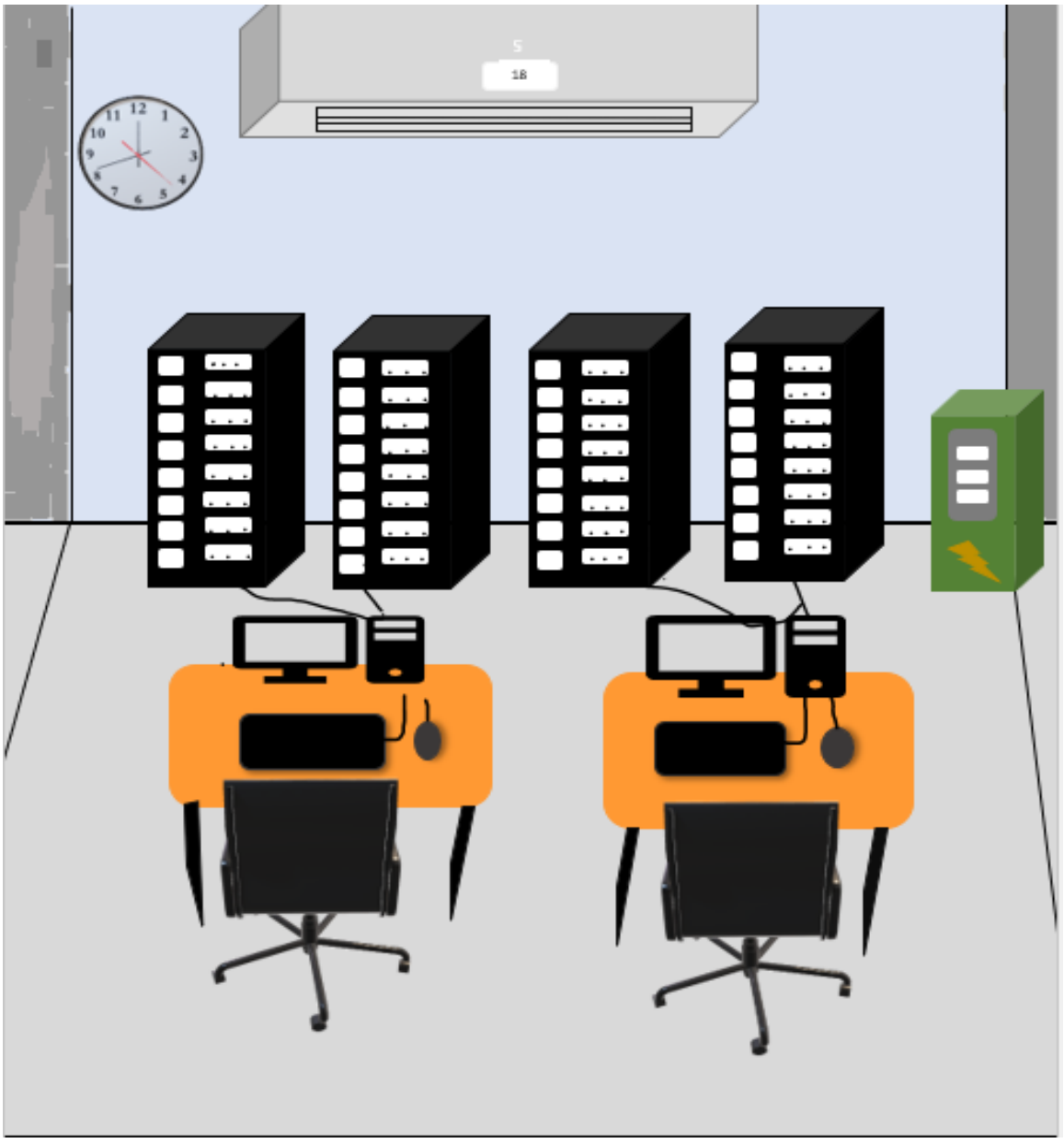
Project-2

Design a computer lab using router and switch



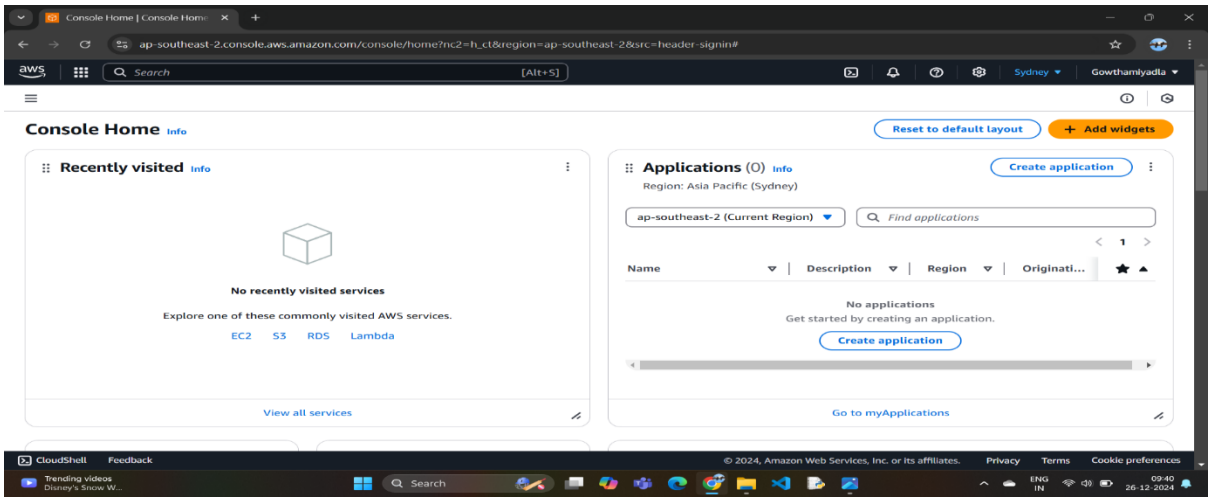
Project-3:

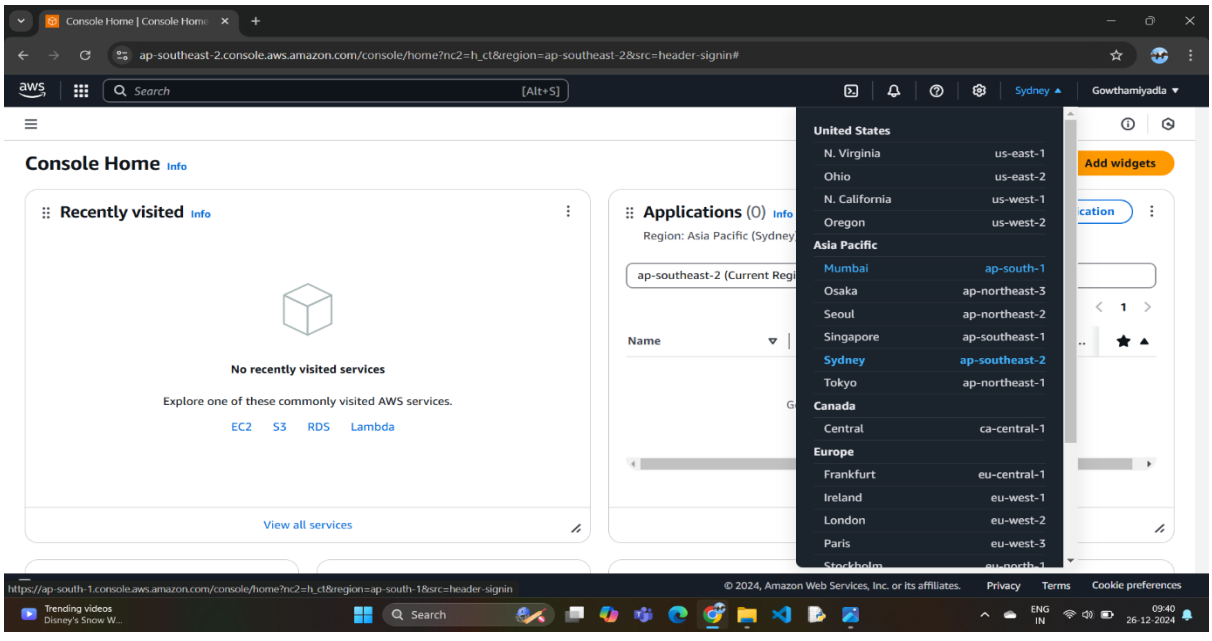
Creating a server block

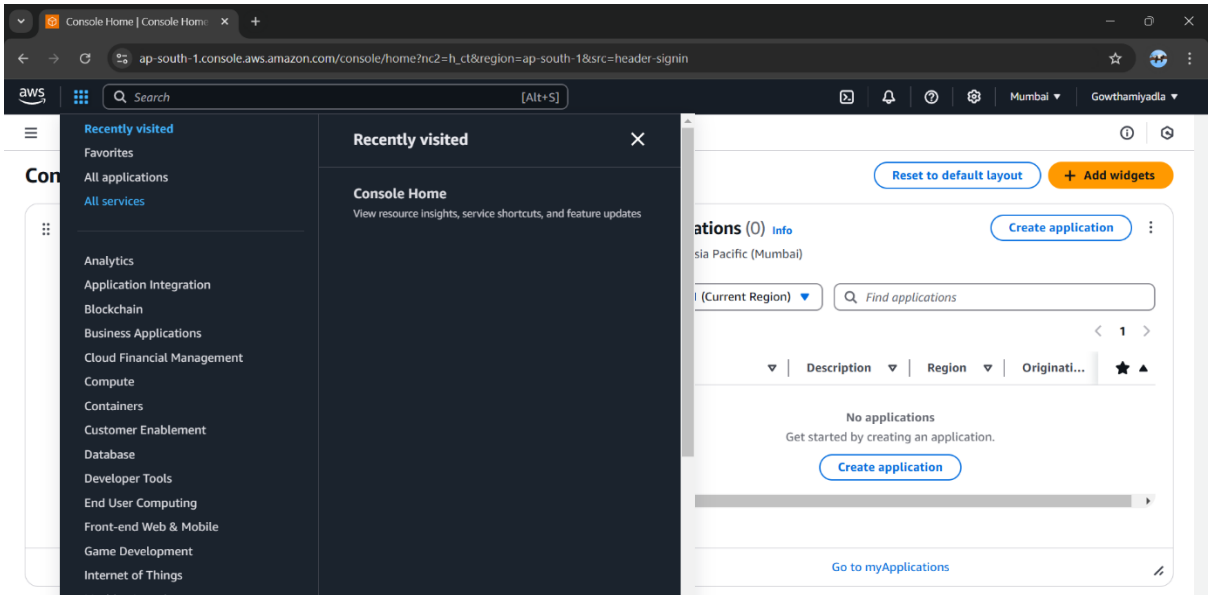


Project-4:

Aws console services

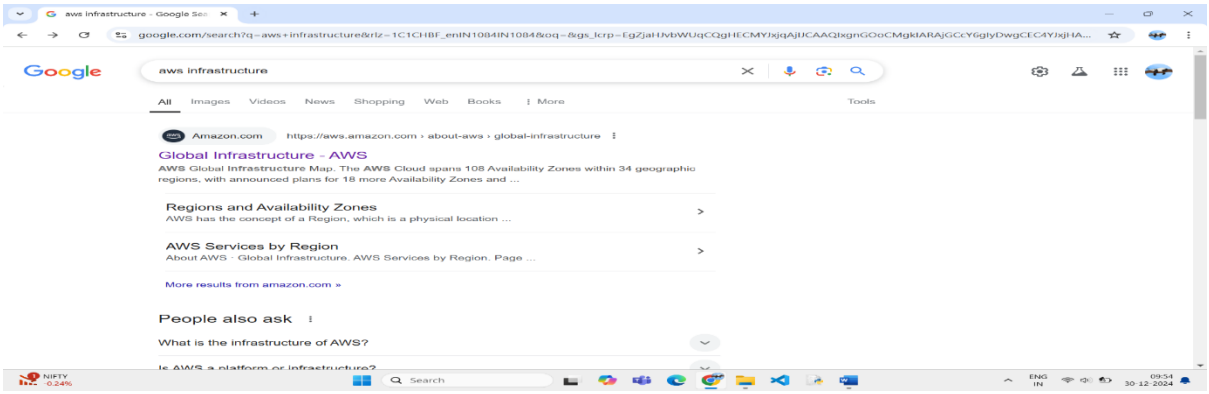


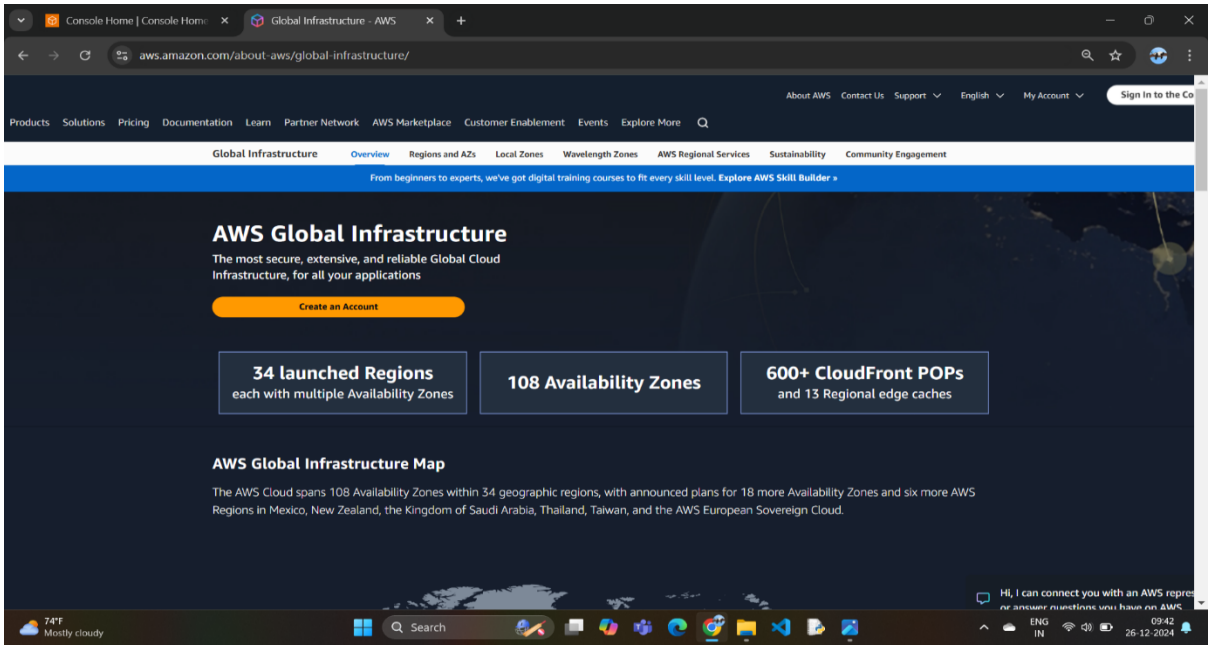




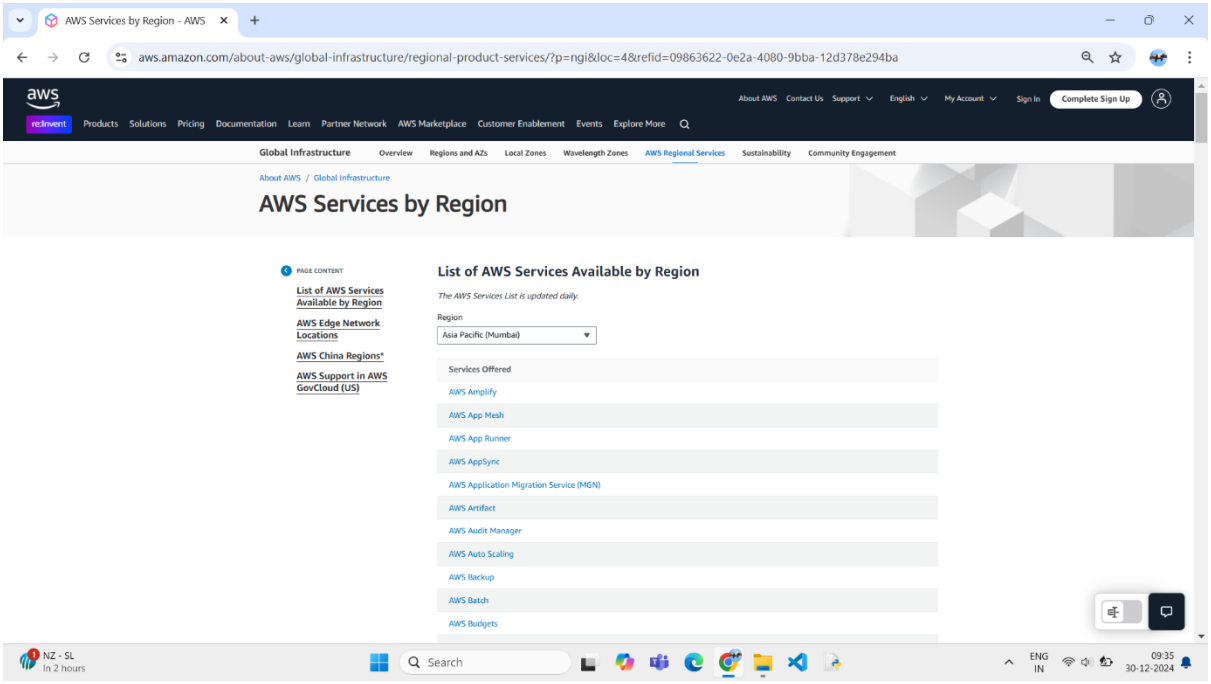
Project-5:

AWS Global Infrastructure





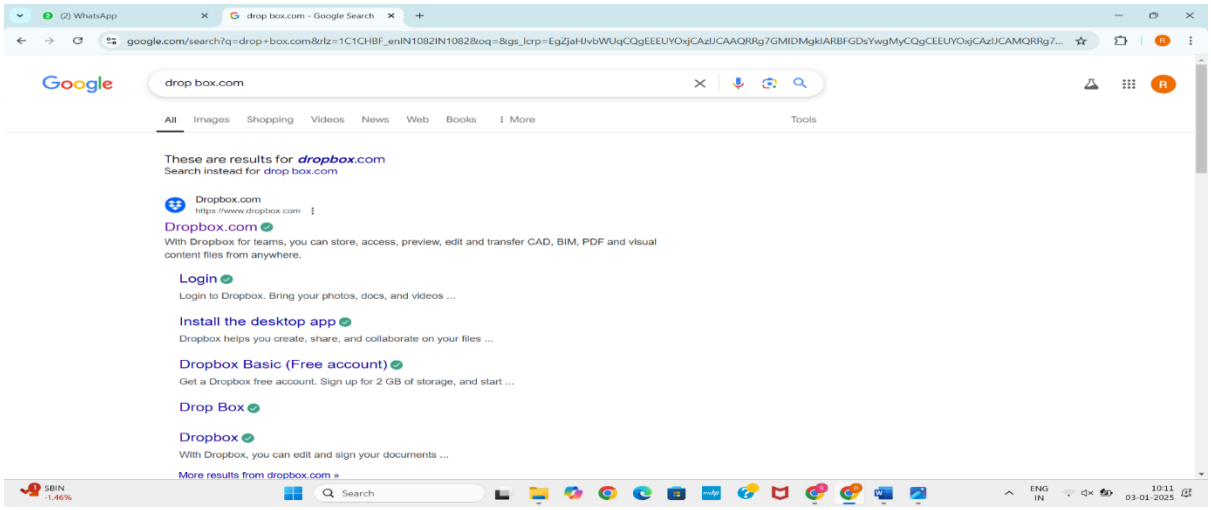
AWS regional services:



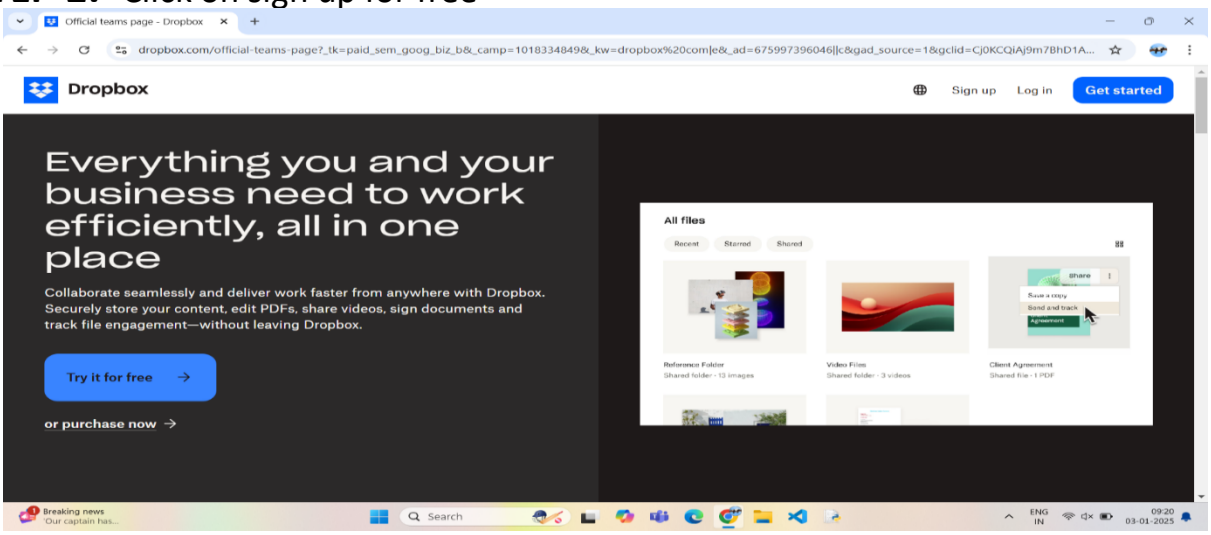
Project:6

Drop Box

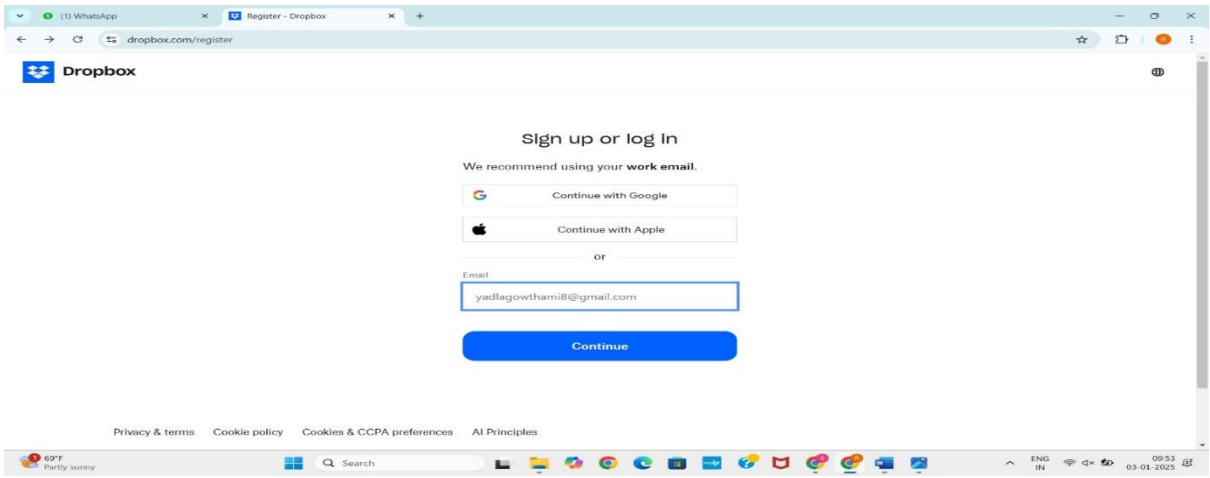
STEP-1: Open web browser, click dropbox.com



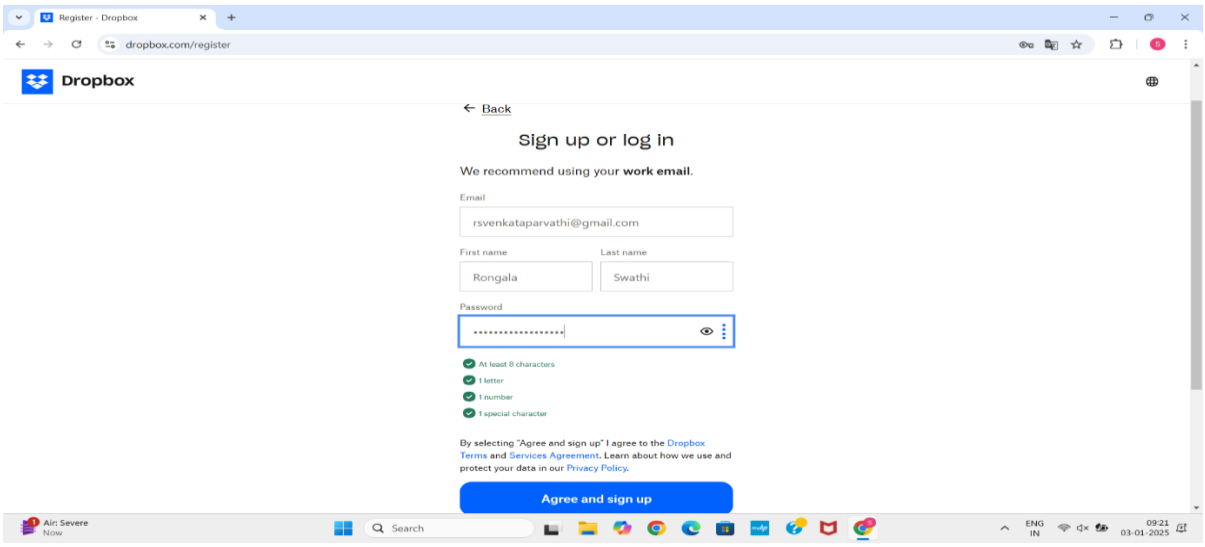
STEP-2: Click on sign up for free



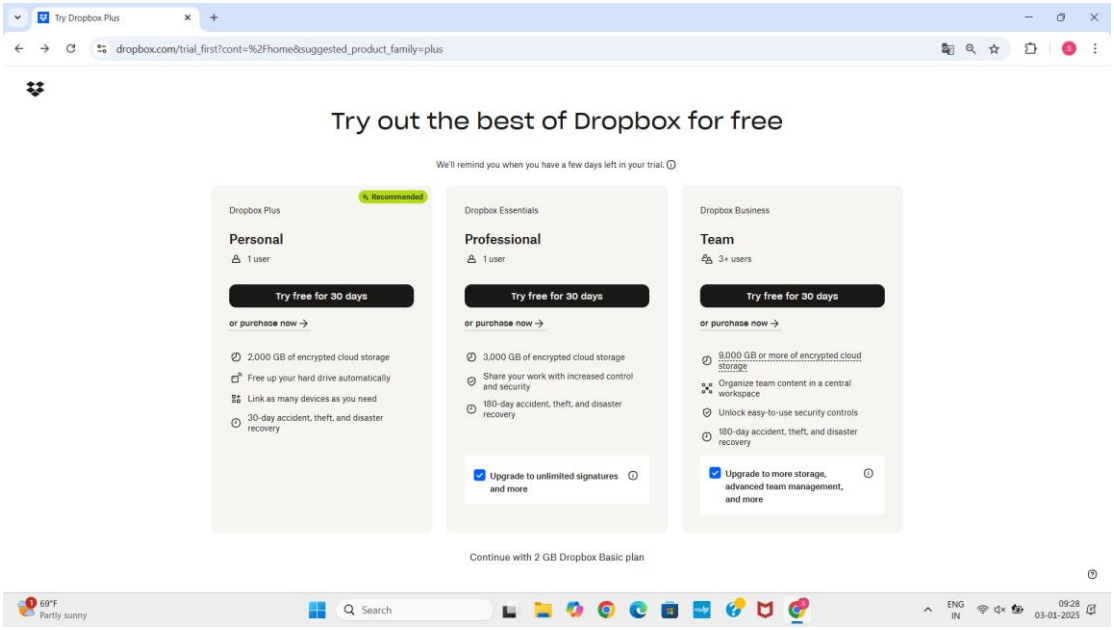
STEP-3: Sign in with email address



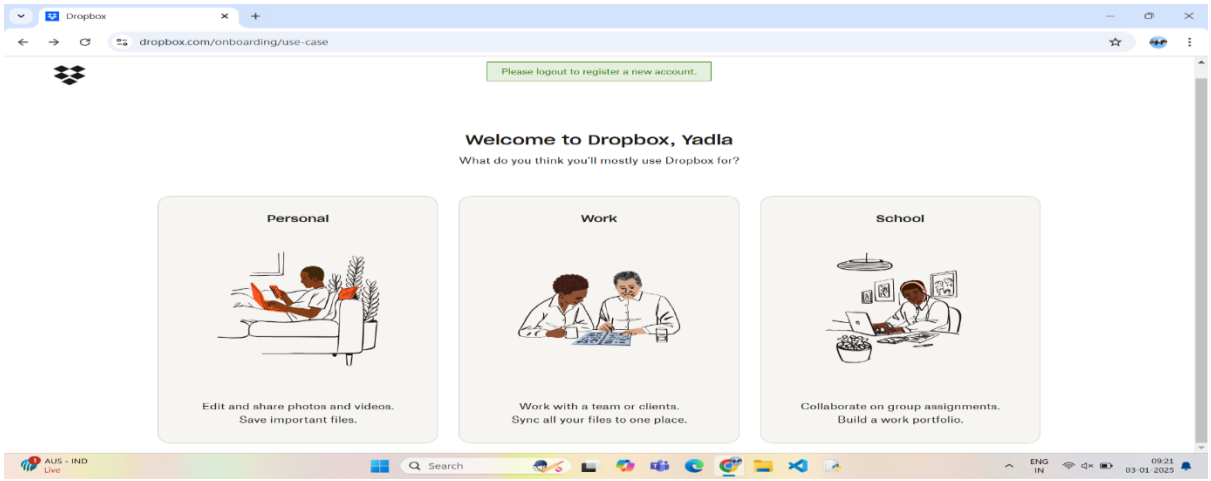
STEP-4: Give a user name and password



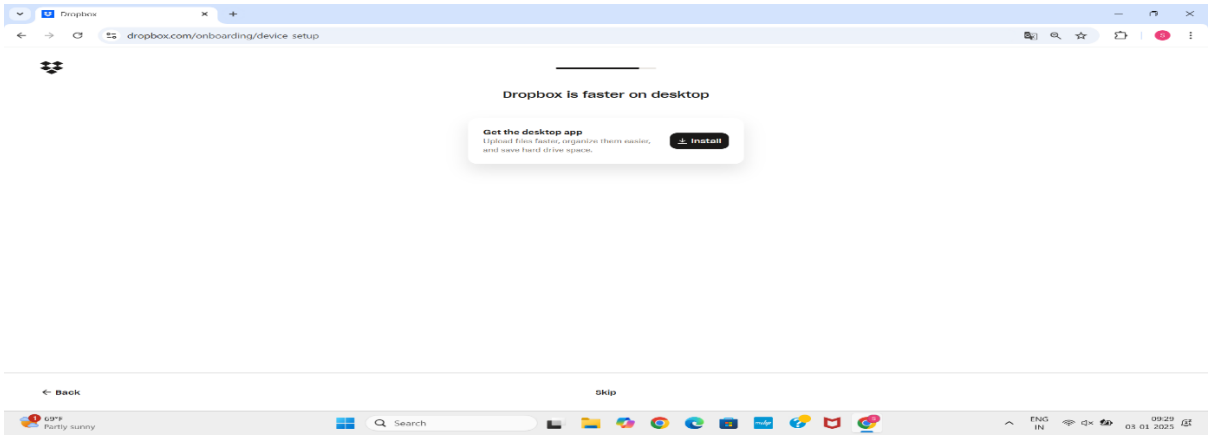
STEP-5: Click on 2GB drop box basic



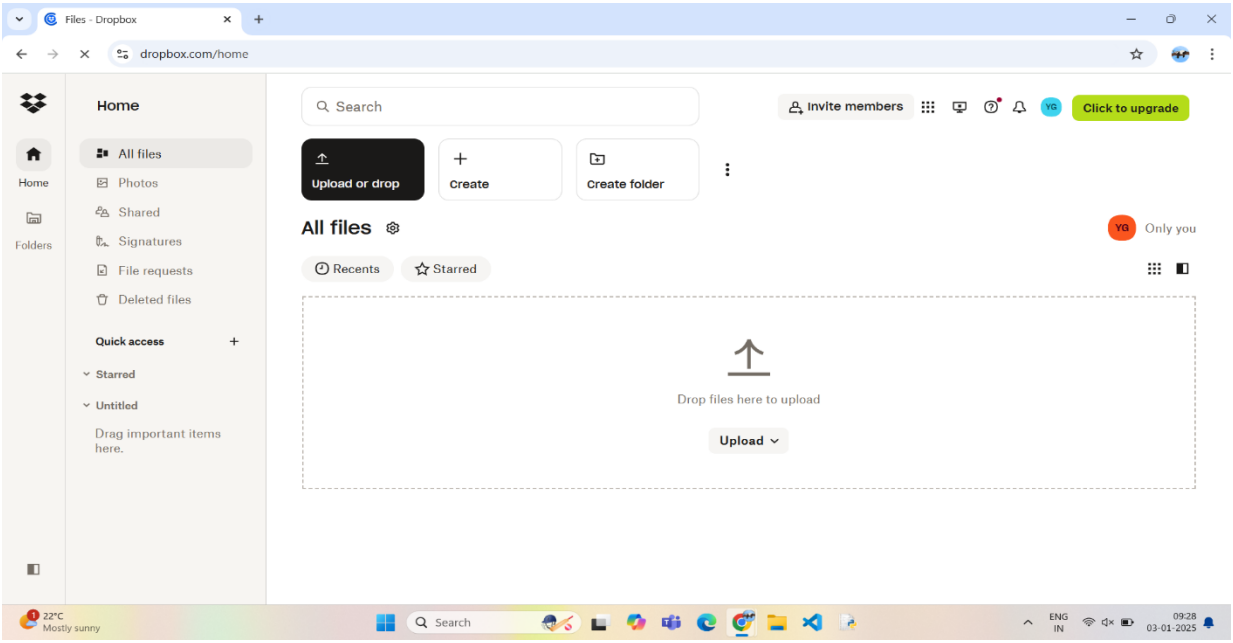
STEP-6: Then click on personal use



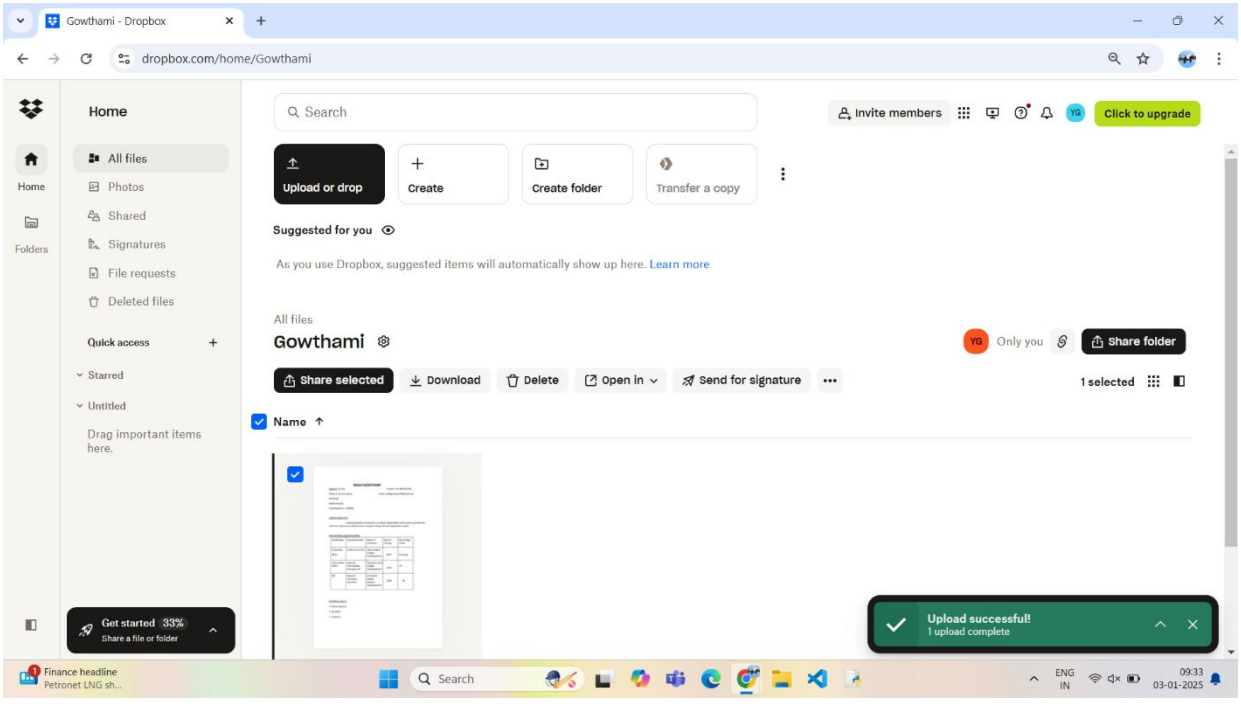
STEP-7: In step we have to click on skip



STEP-8: Create a new folder with your name and upload the resume.



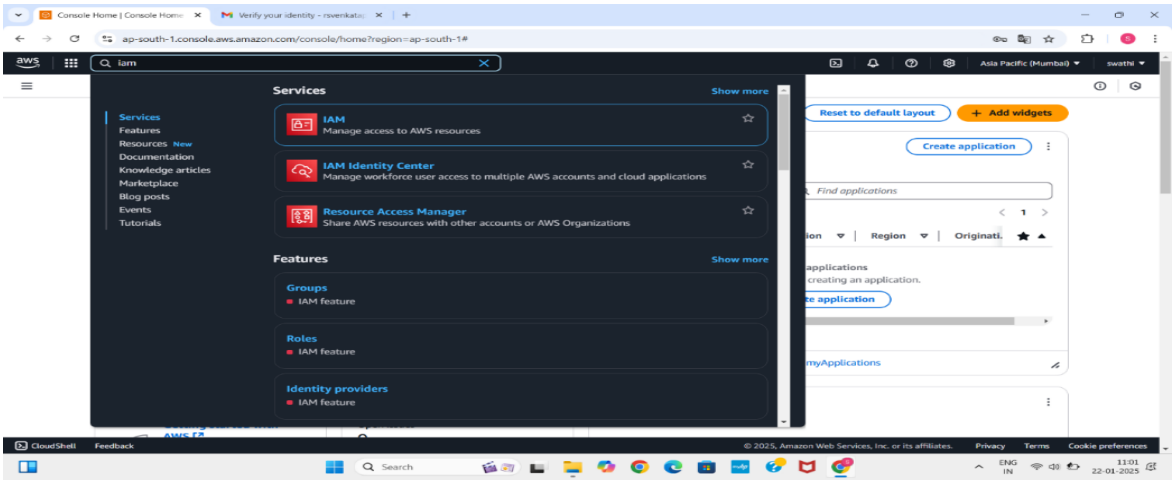
STEP-9: The resume will be stored in drop box successfully.



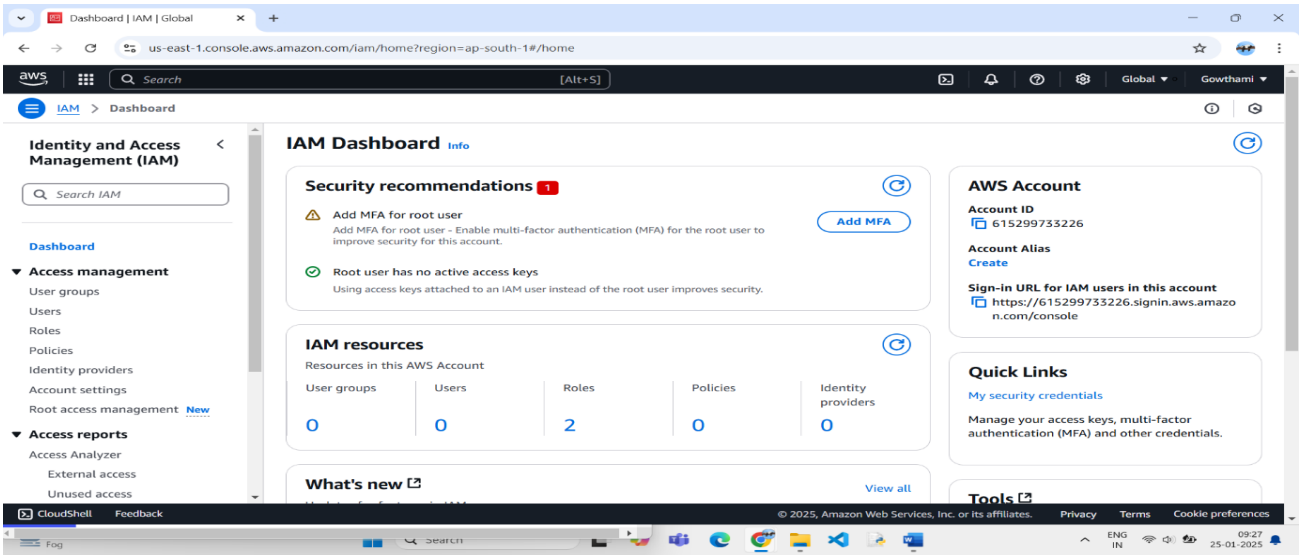
PROJECT: 7

IAM

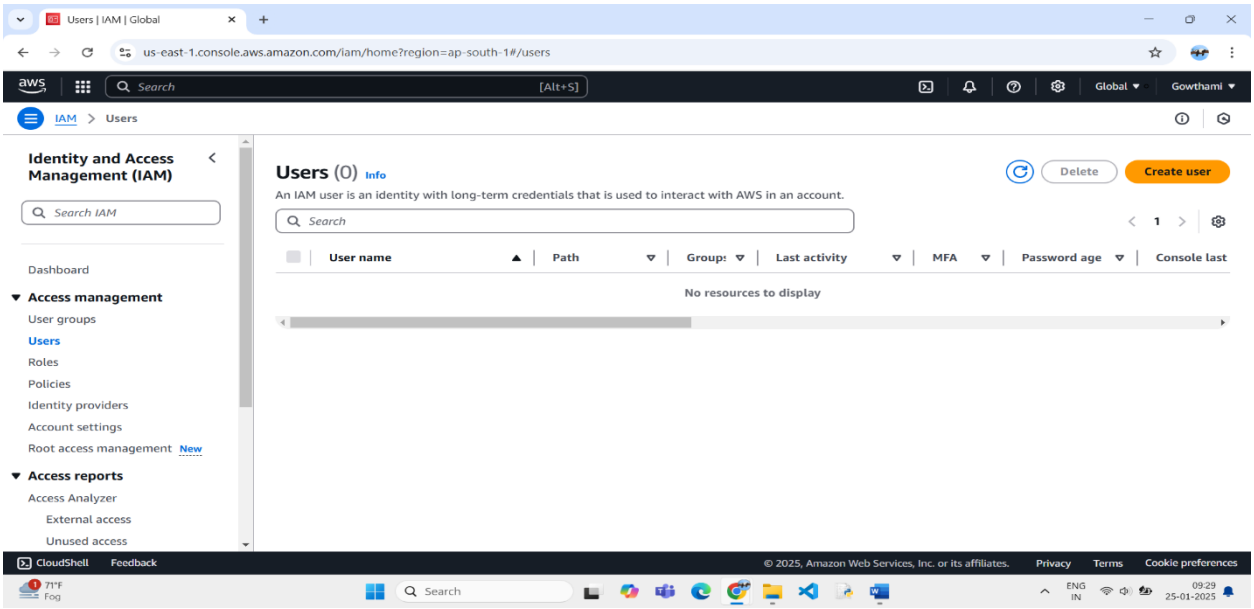
STEP-1: Go to the search bar and click IAM



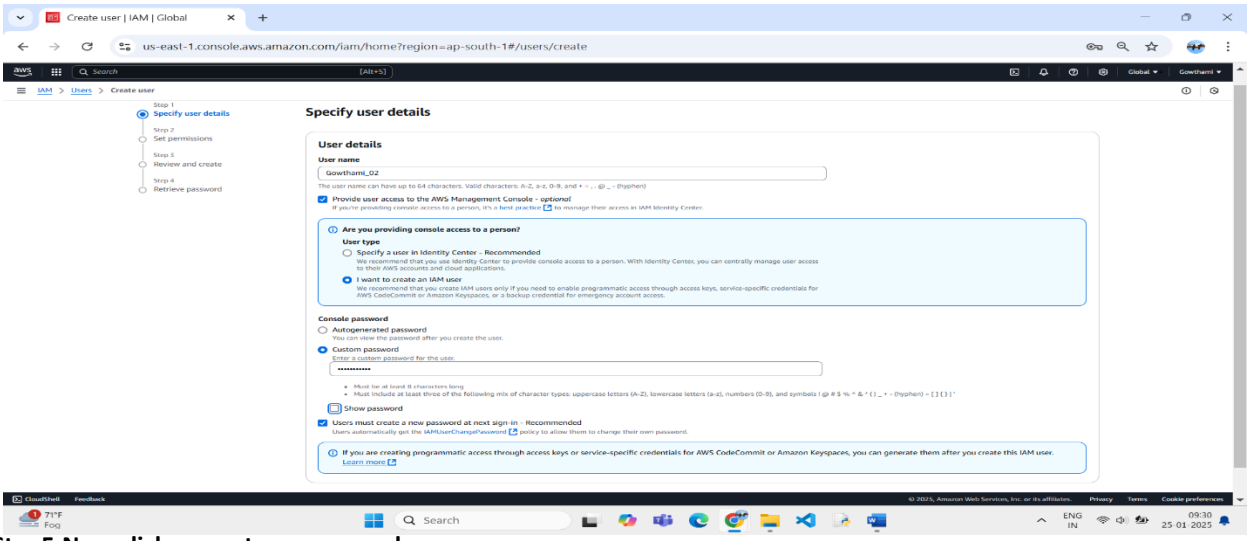
STEP-2: The IAM dashboard appear



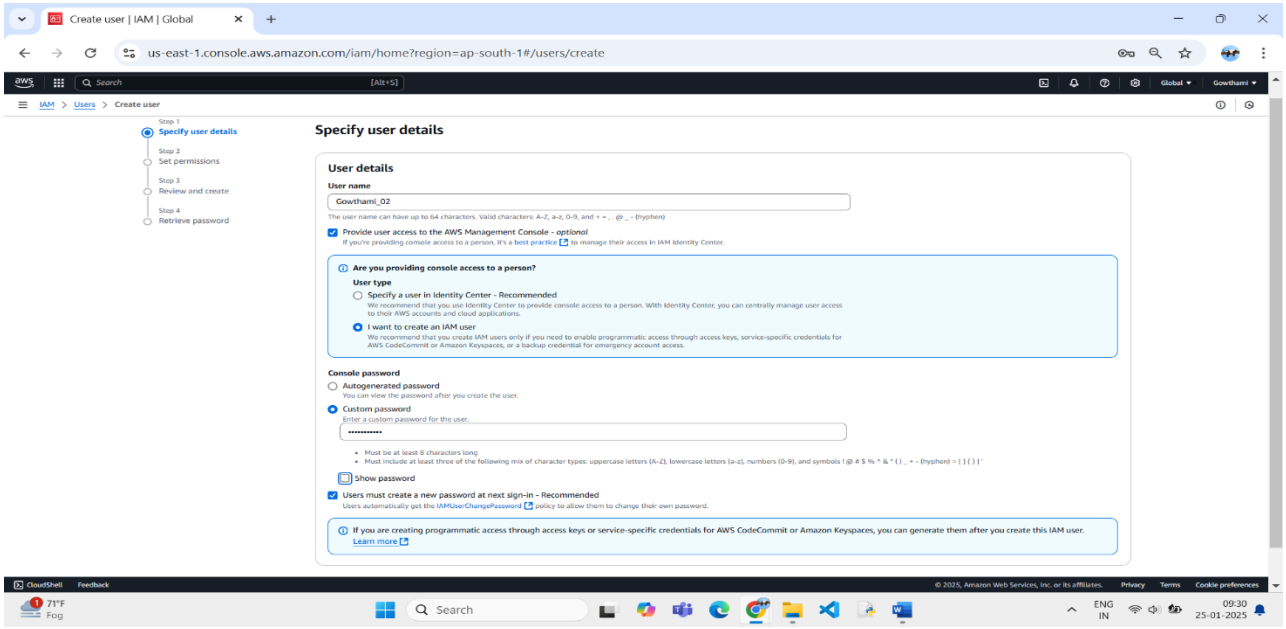
Step3: Click on the Global then several regions will be present



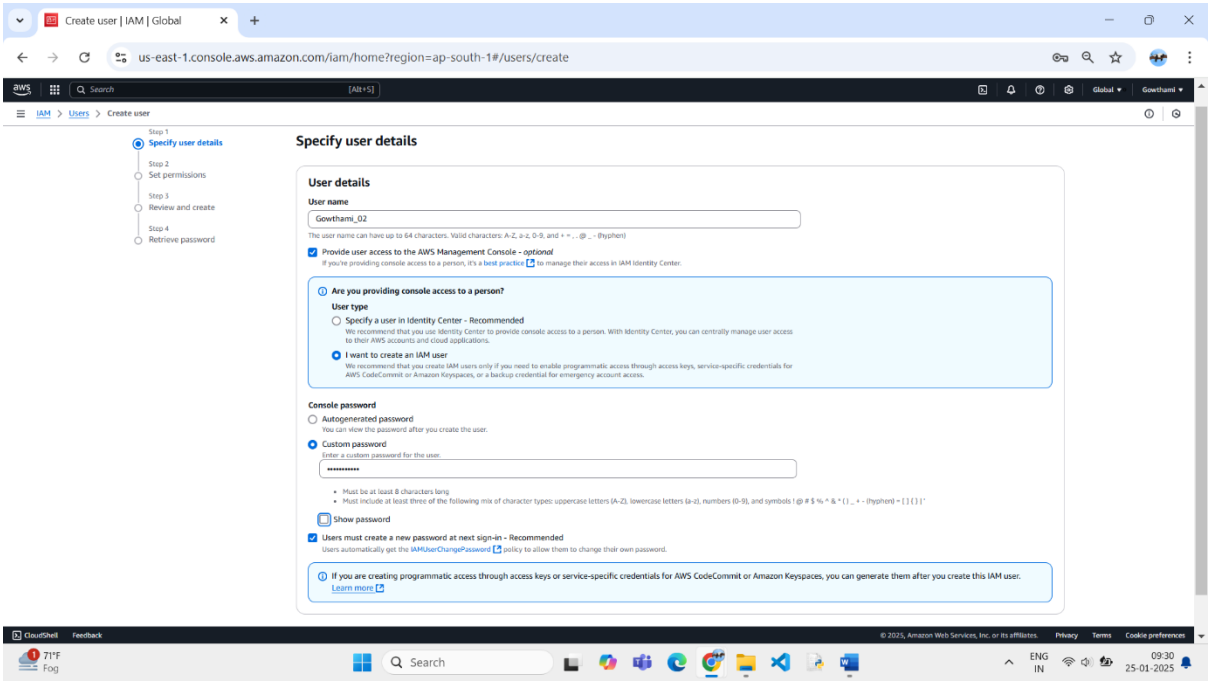
Step4: Click on create user and give a user name



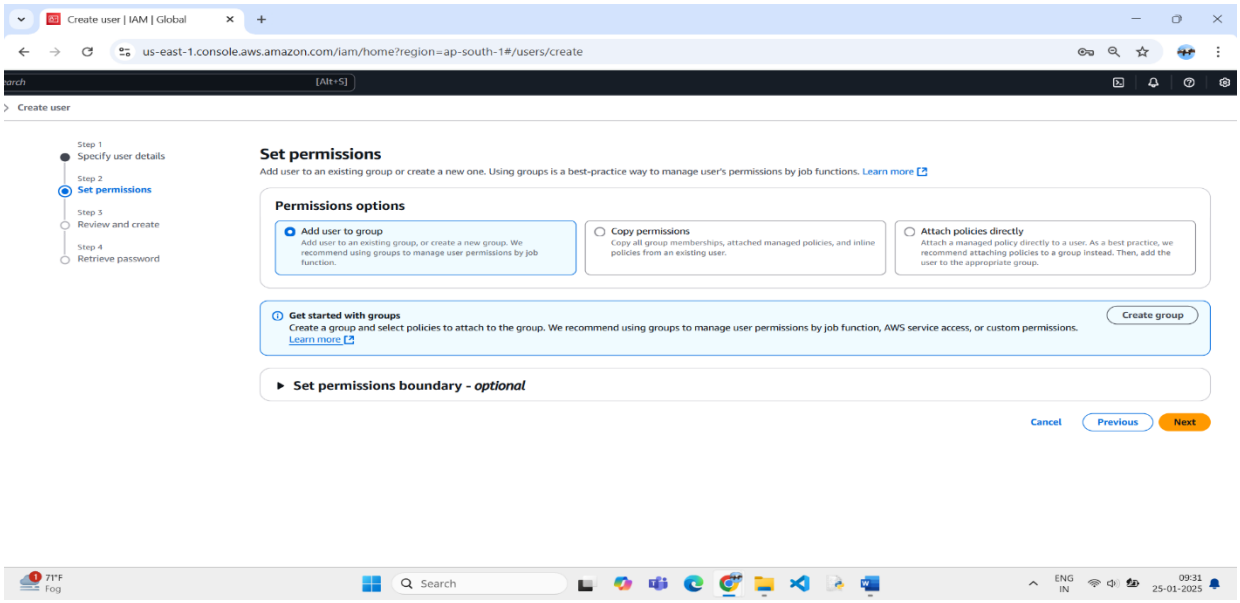
Step5:Now click on custom password



Step6: Create your own password



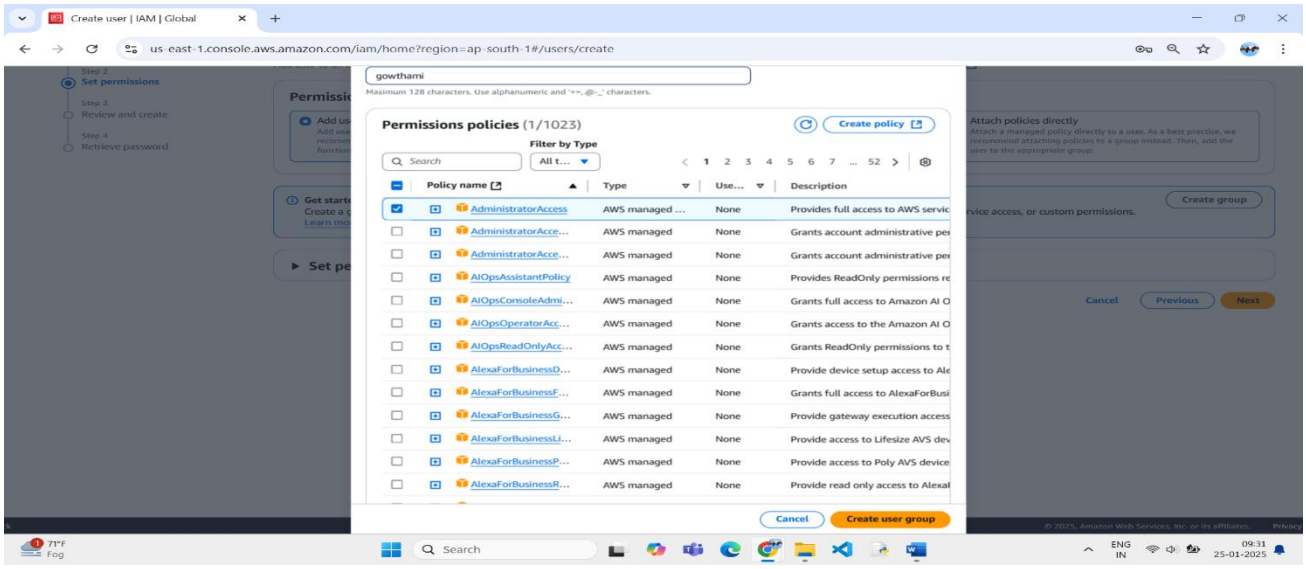
Step7:Click on create group



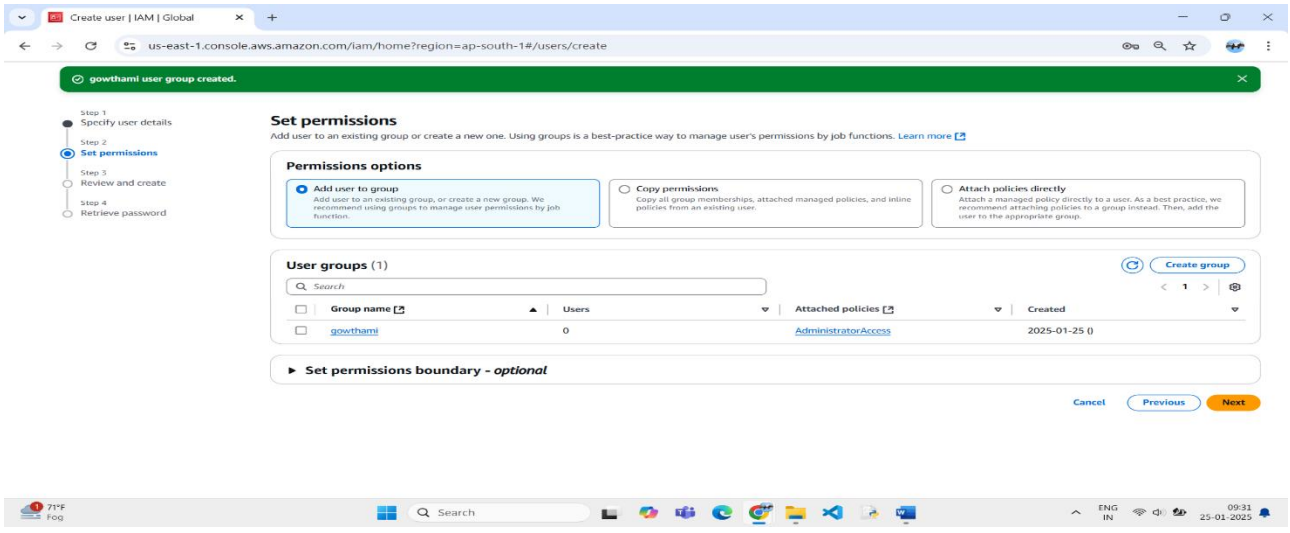
PROJECT 8

Creating groups

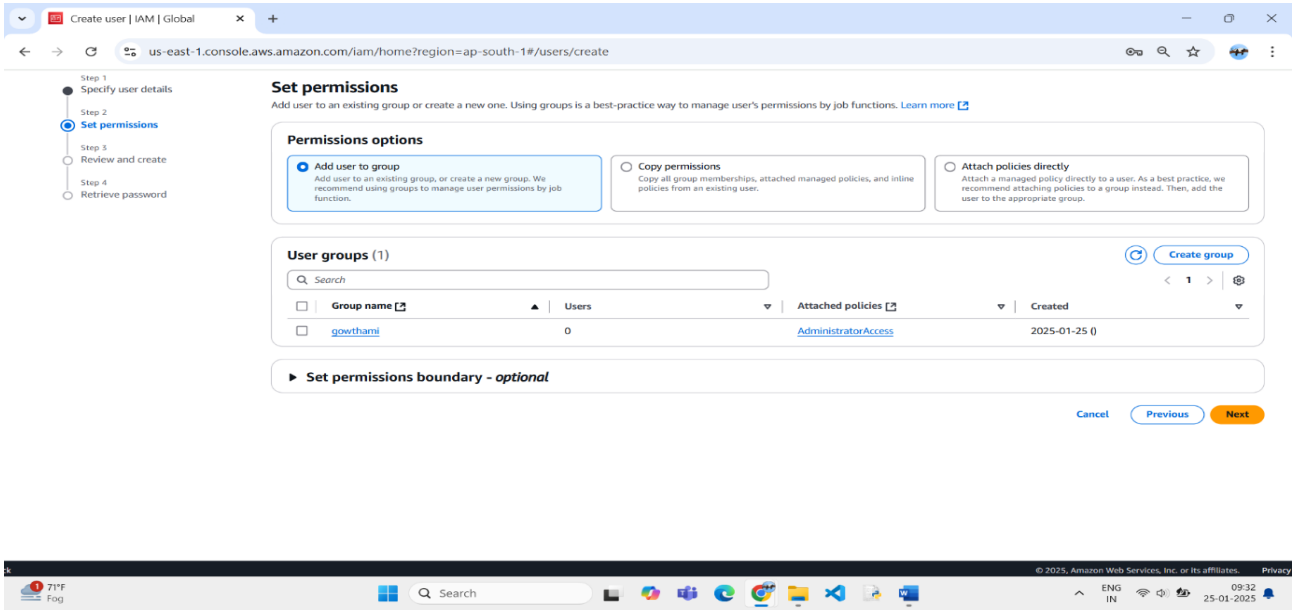
Step1:Now click on the first box and create a group



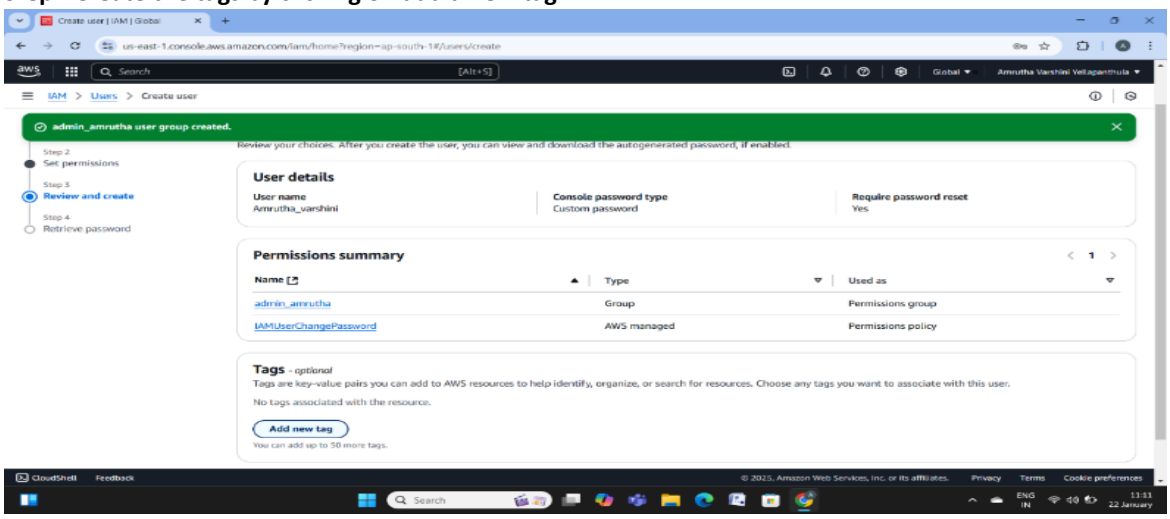
Step2:Now the group is created with the name



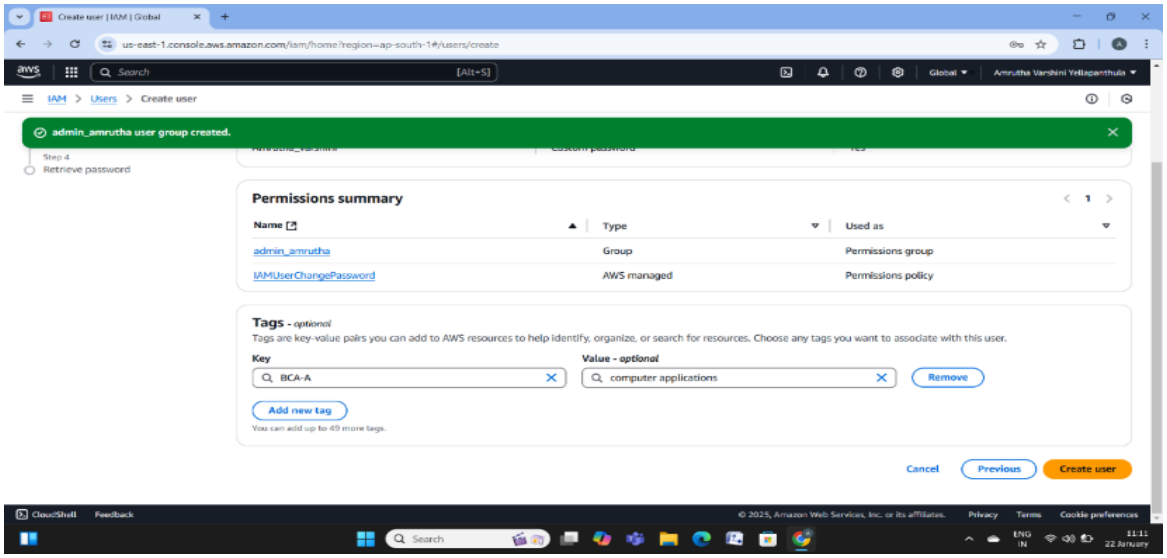
Step3:AS the group is created click on next



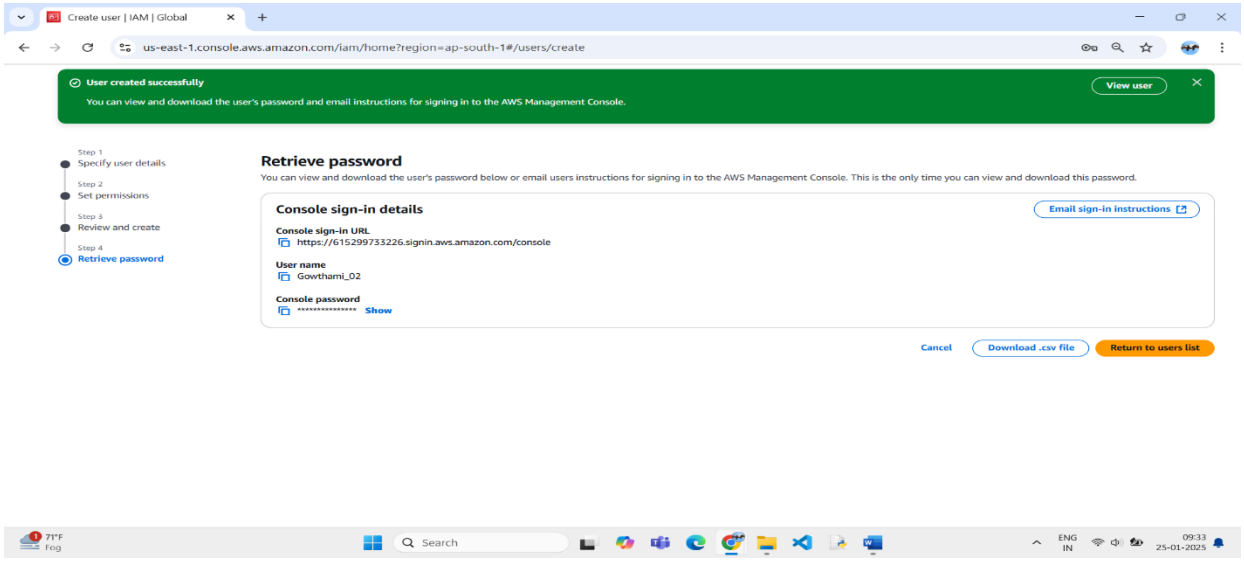
Srep4:Create the tags by clicking on add a new tag



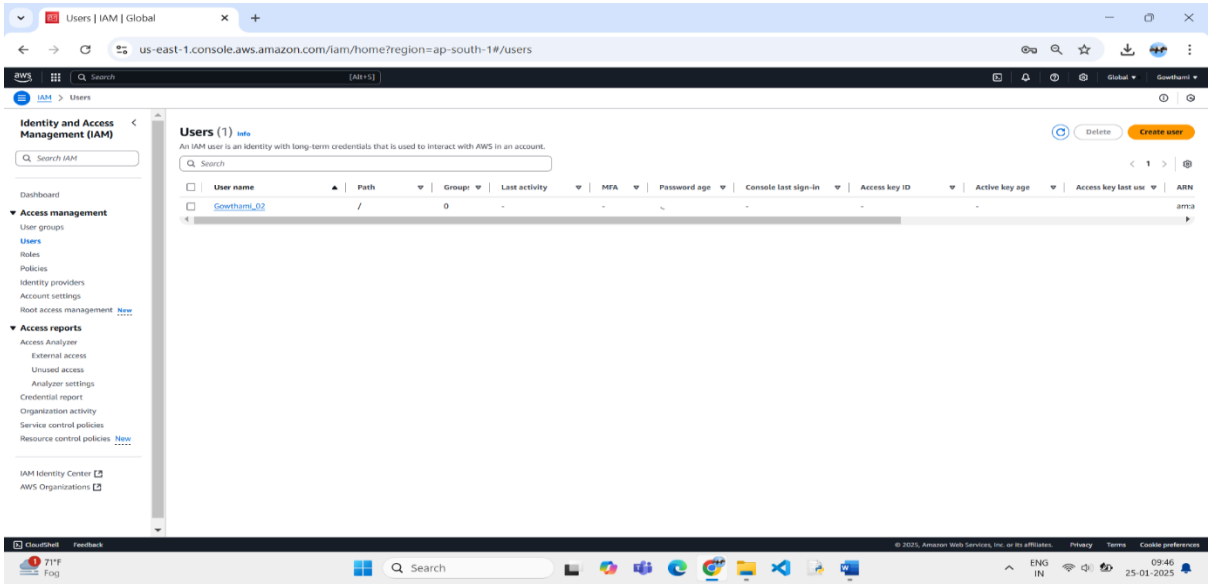
Step5:Enter key and value and create the tags



Step6:Now download the .csvfile



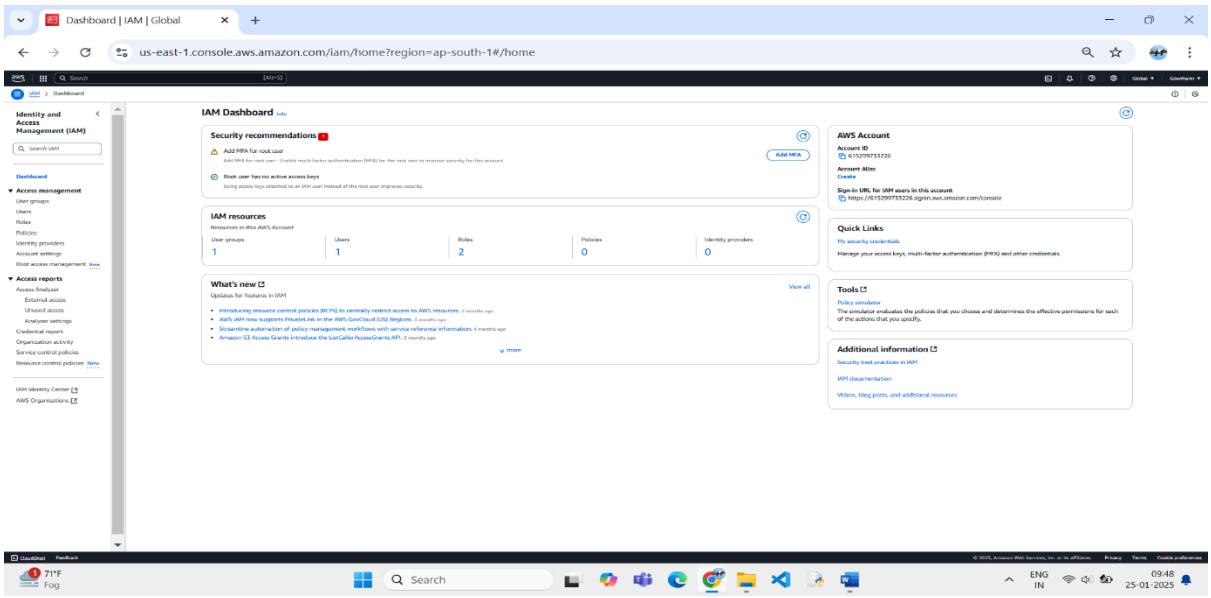
Step7:Now the user has successfully created



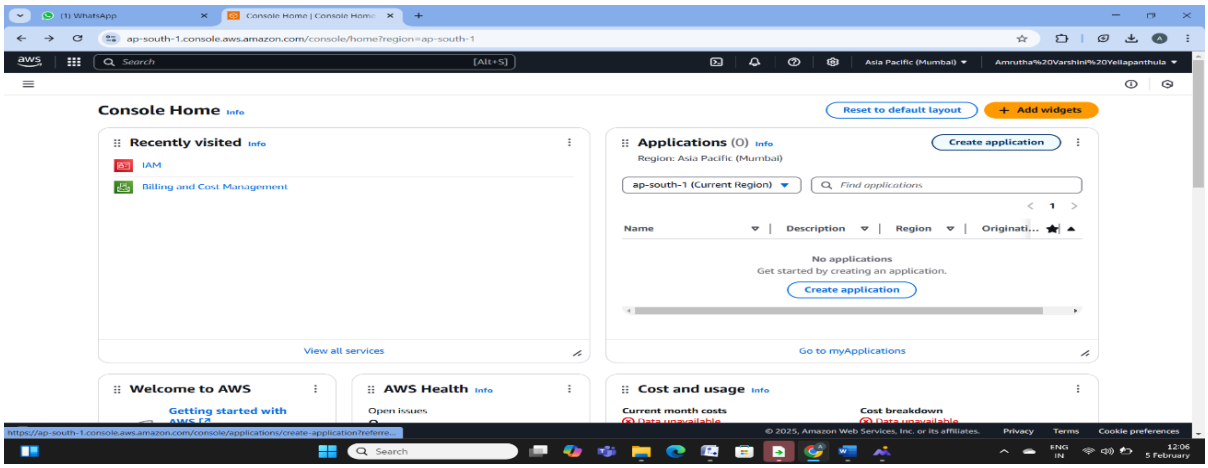
PROJECT 9

Create alias for IAM User Account

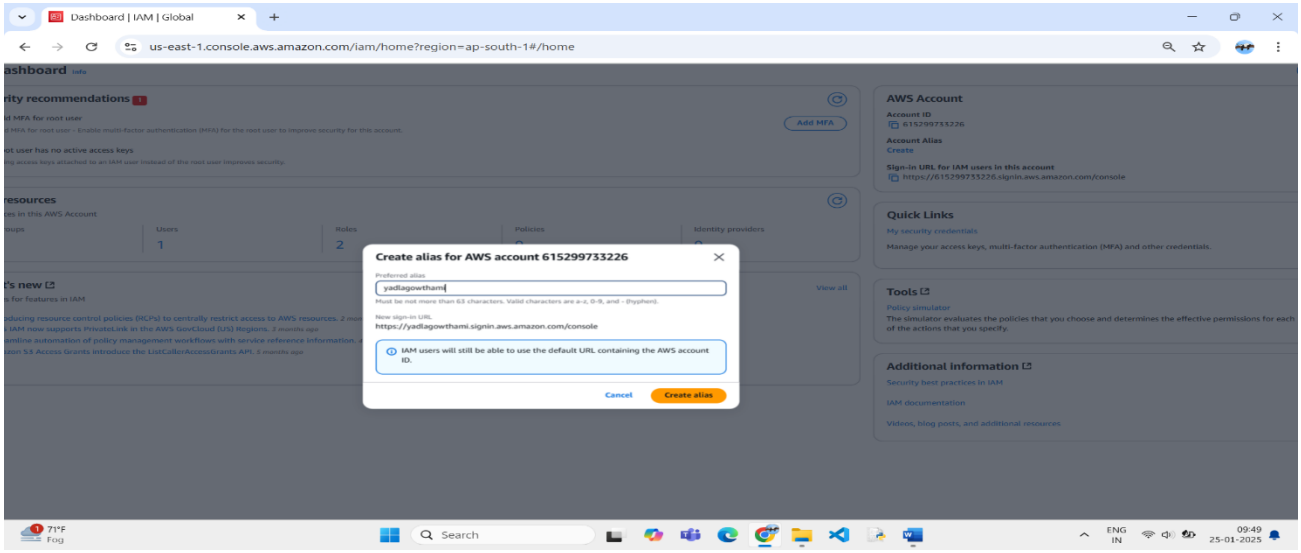
Step1:Click on IAM user



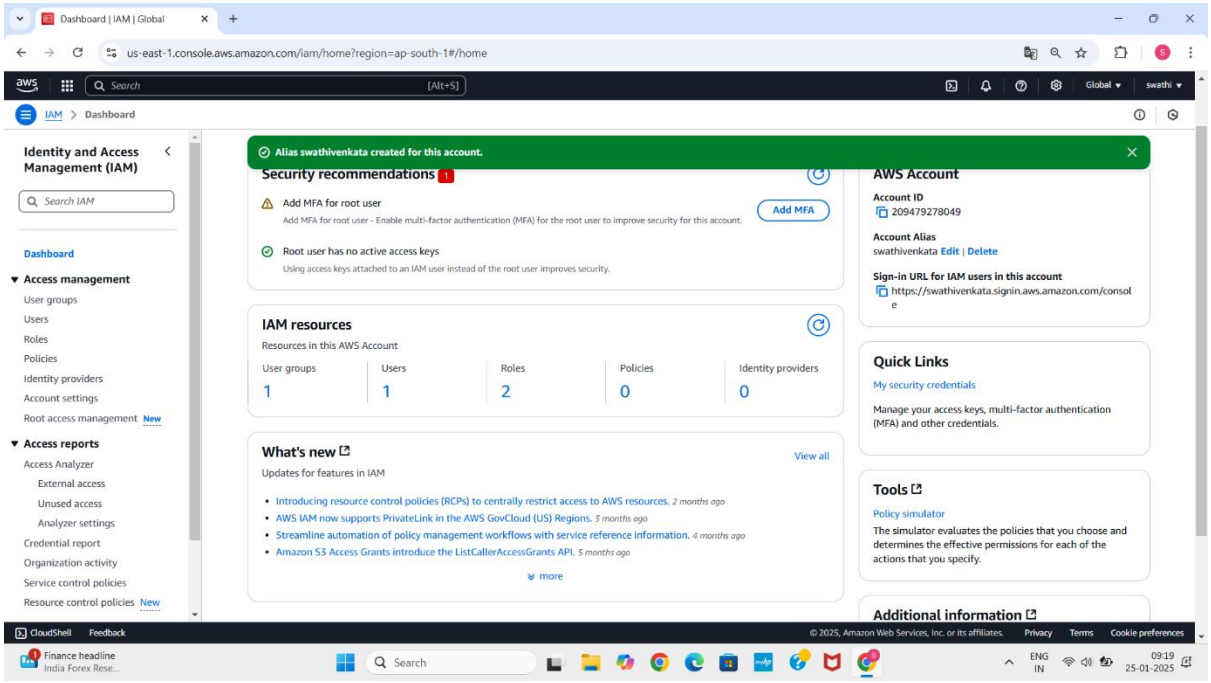
Step2:Click on IAM and create alias



Step3: Now give a username



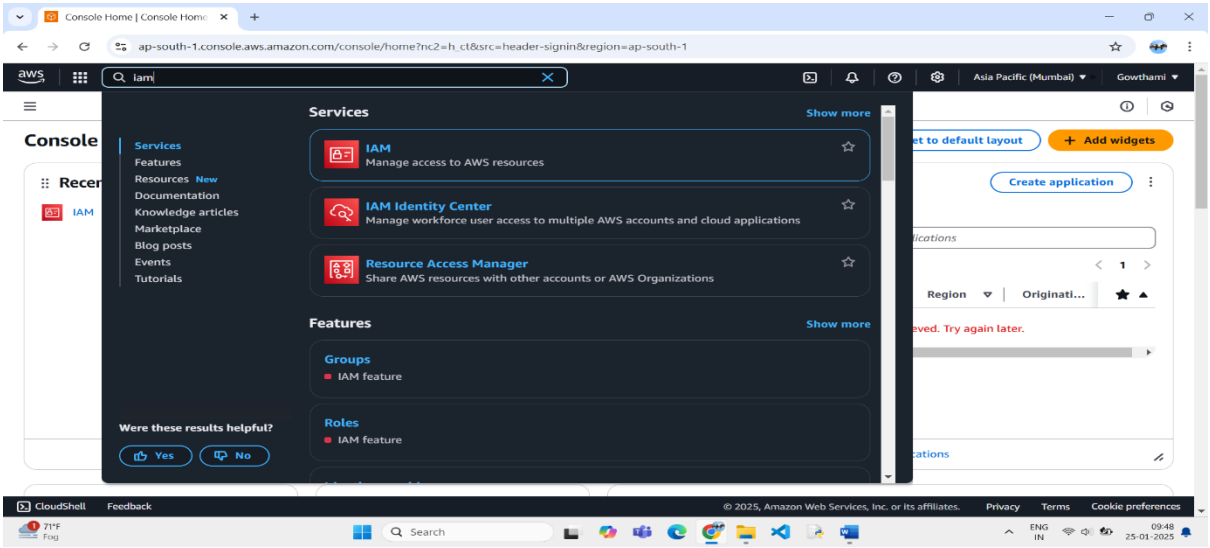
STEP-4: Alias account created successfully



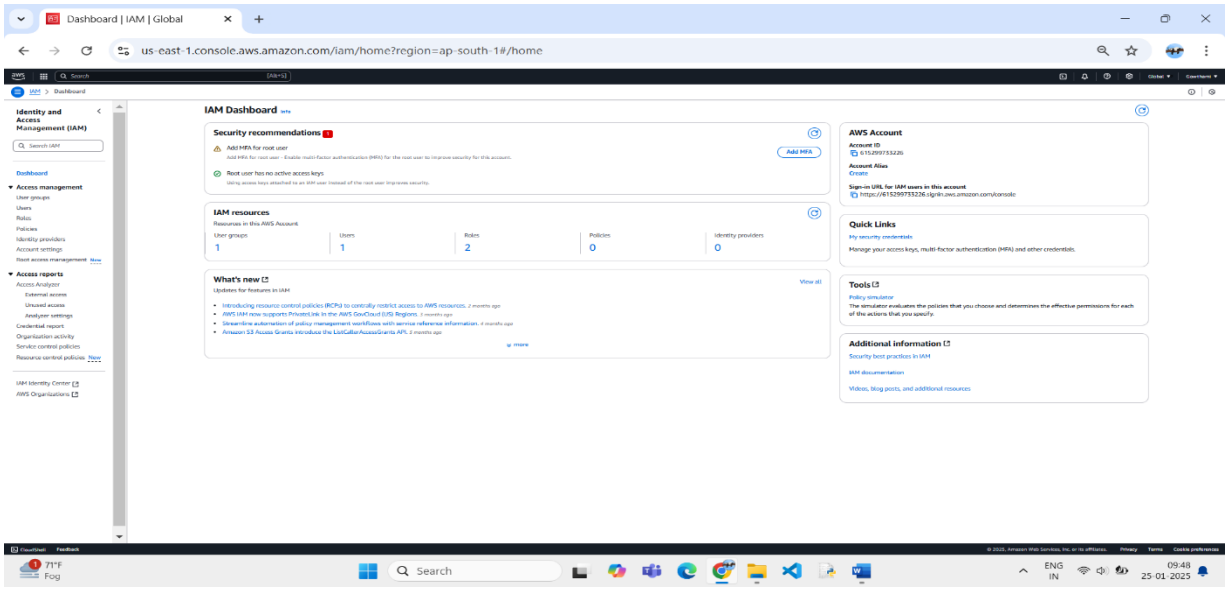
PROJECT 10

Login into IAM users

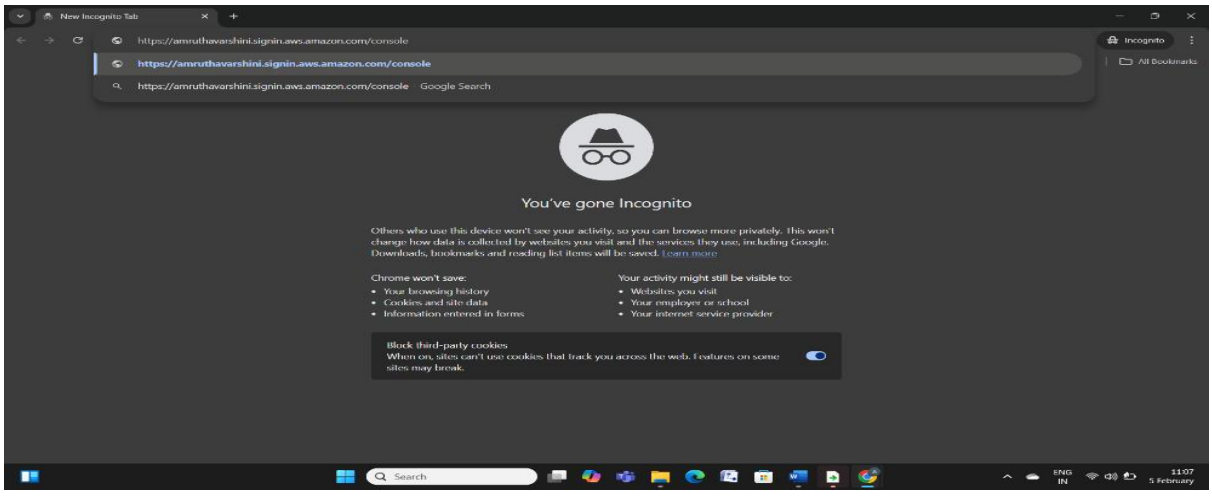
Step1:Click on IAM user



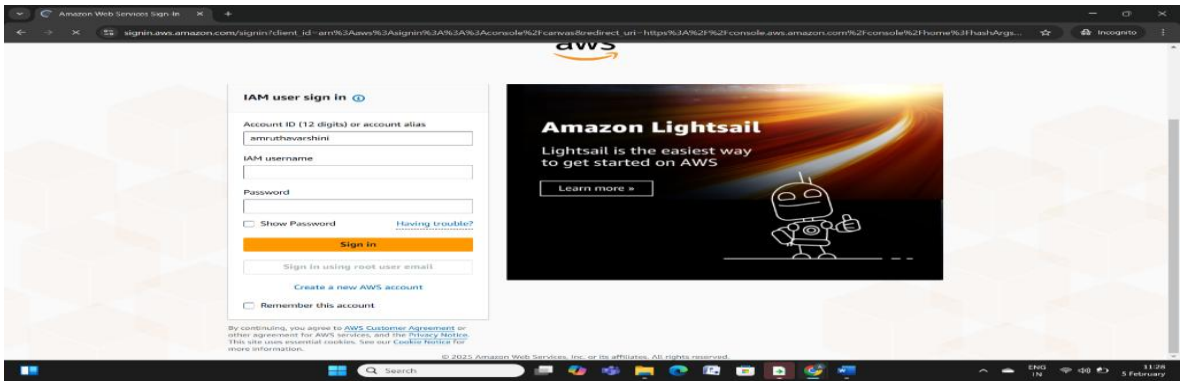
Step2:Copy the URL link



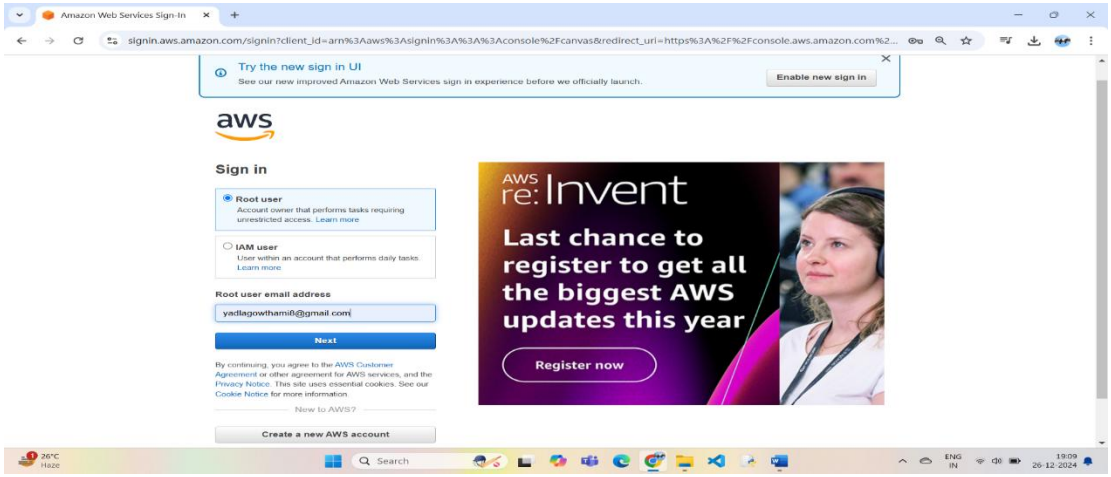
Step3:Paste the link in incognito window



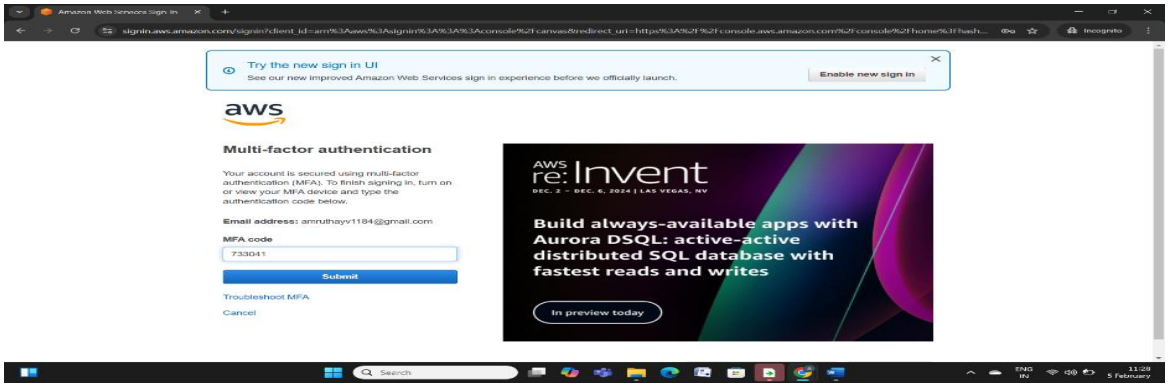
Step4:Now it opens a new window



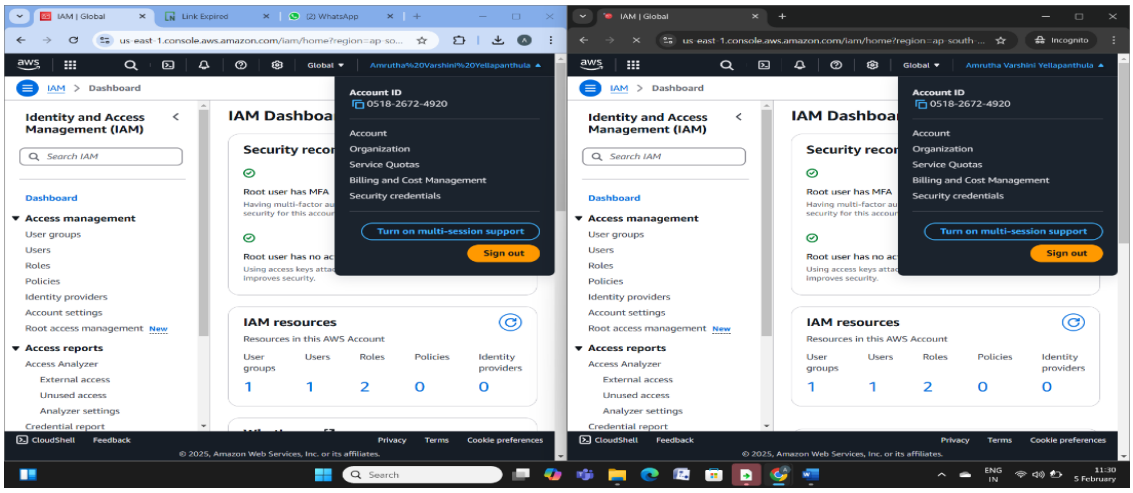
Step5: Sign in using the root user



Step6:Enter the MFA code

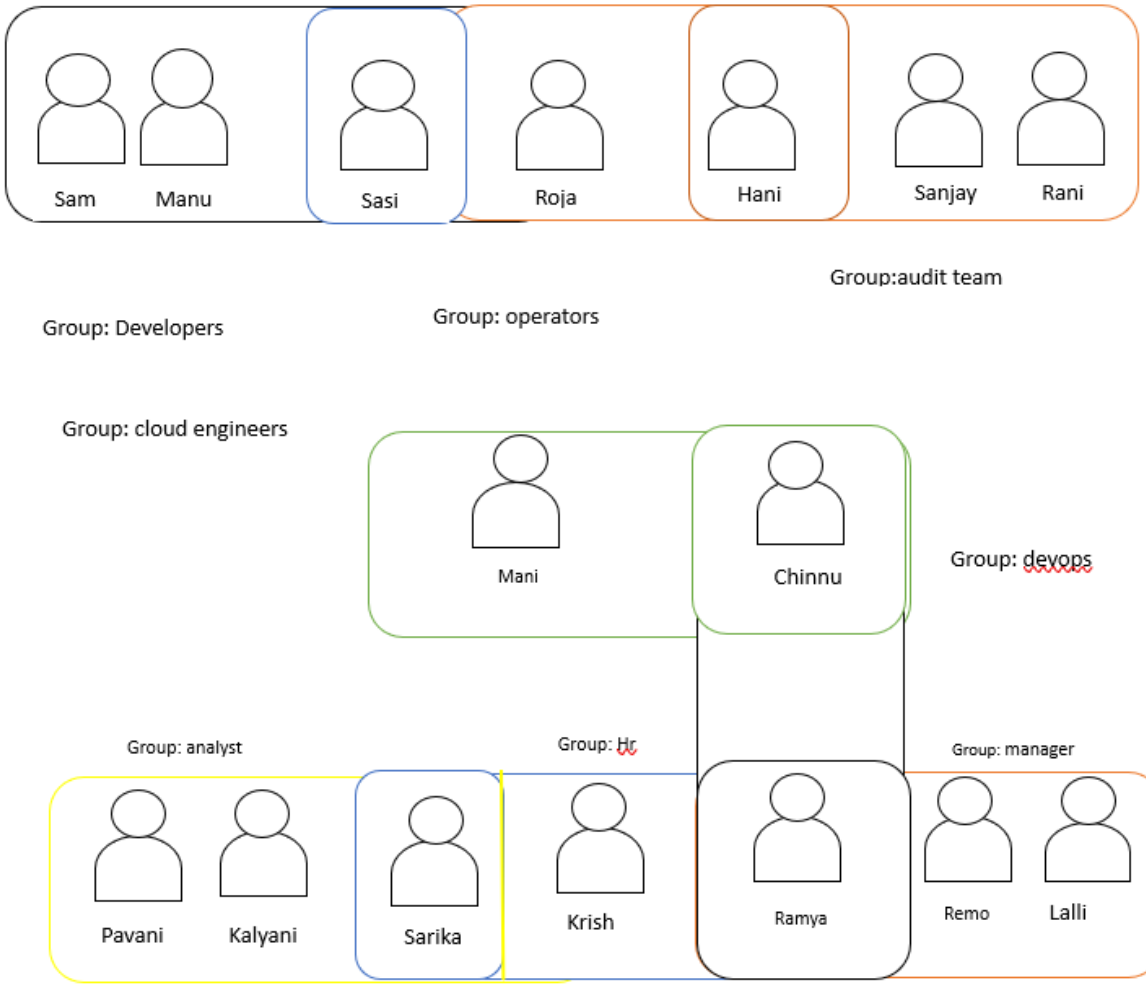


Step7:It opens a new webpage



PROJECT-11

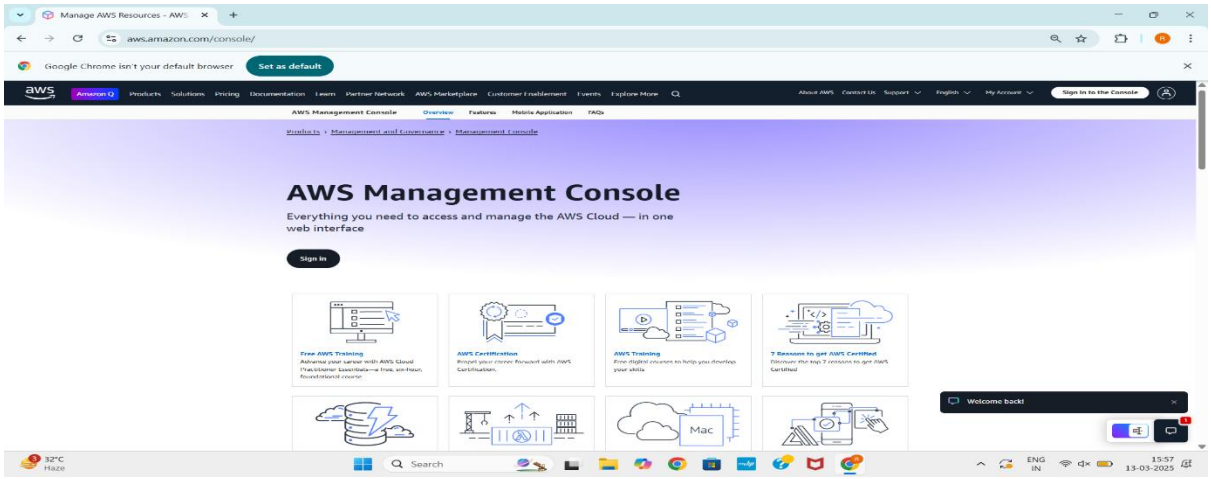
CREATE IAM POLICES INHERITANCE FOR YOUR COMPANY



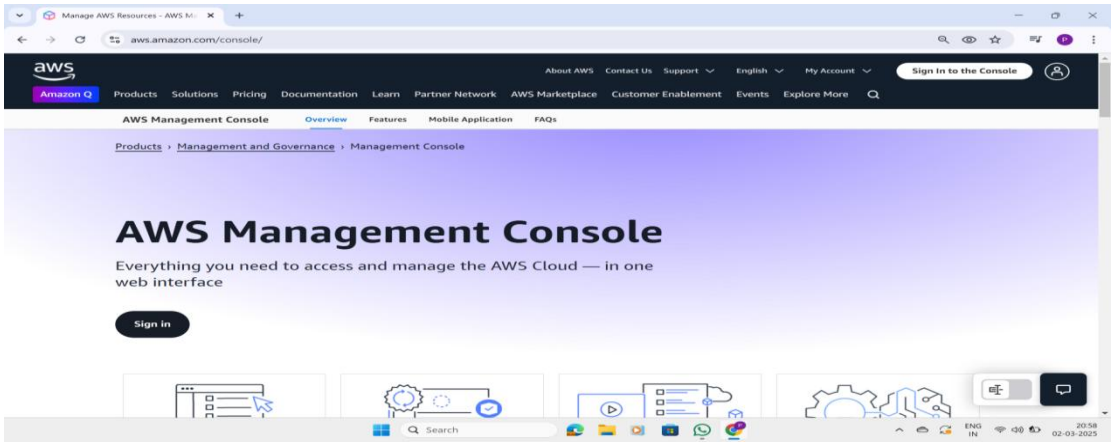
Project-12:

Removing the permissions *for a specific user*

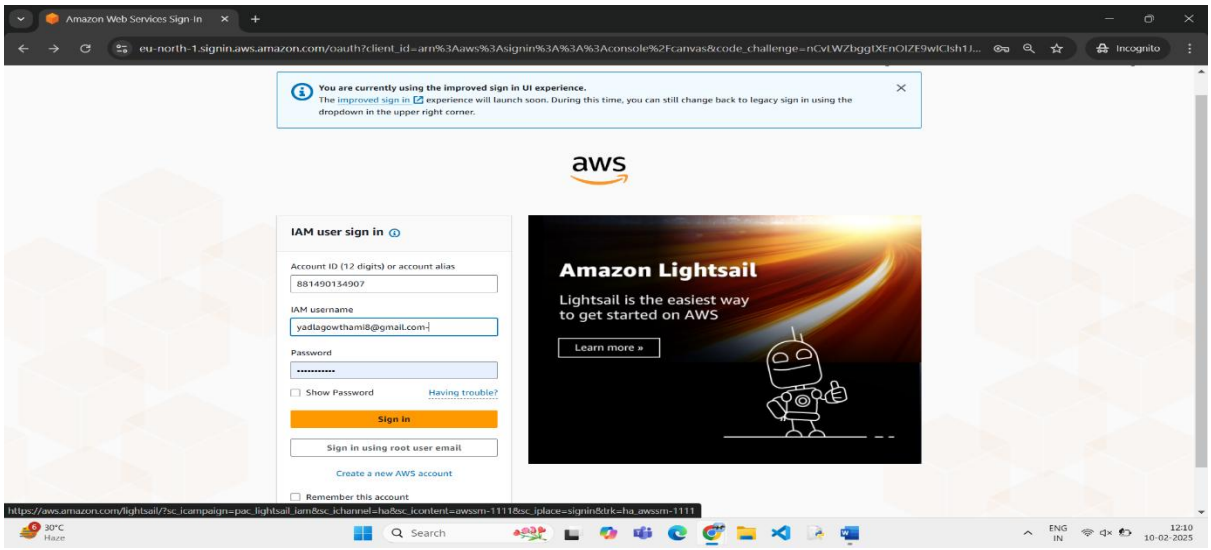
Step 1: Go to the Google Chrome and type Aws Management Console



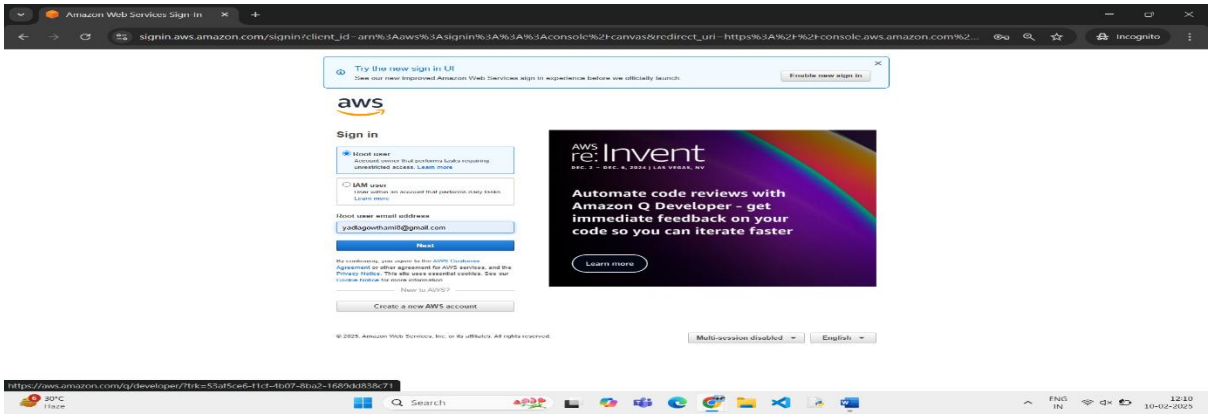
Step 2 : Click on the sign into console



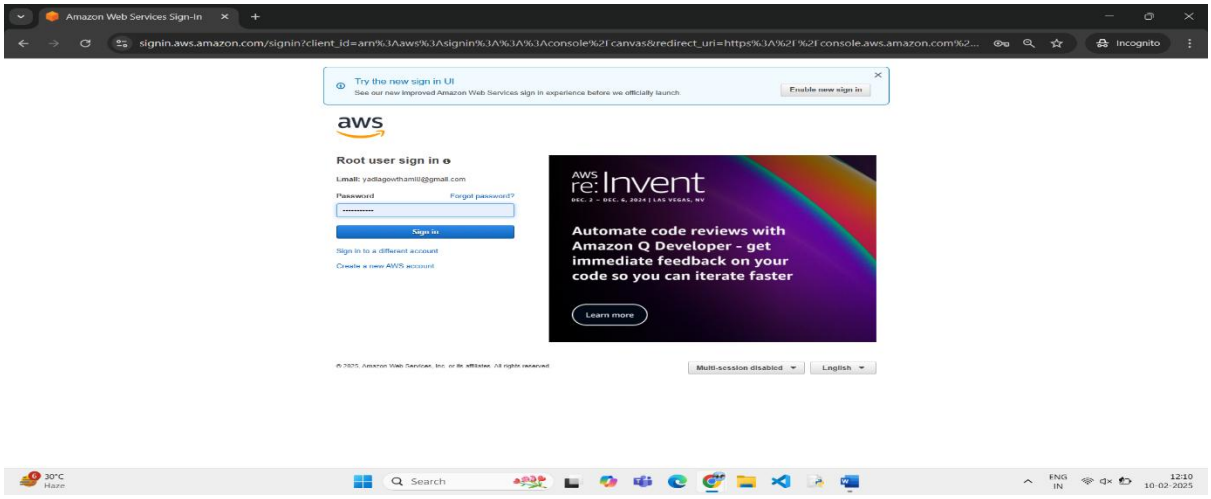
Step 3: Click on “sign in using root user email***.***



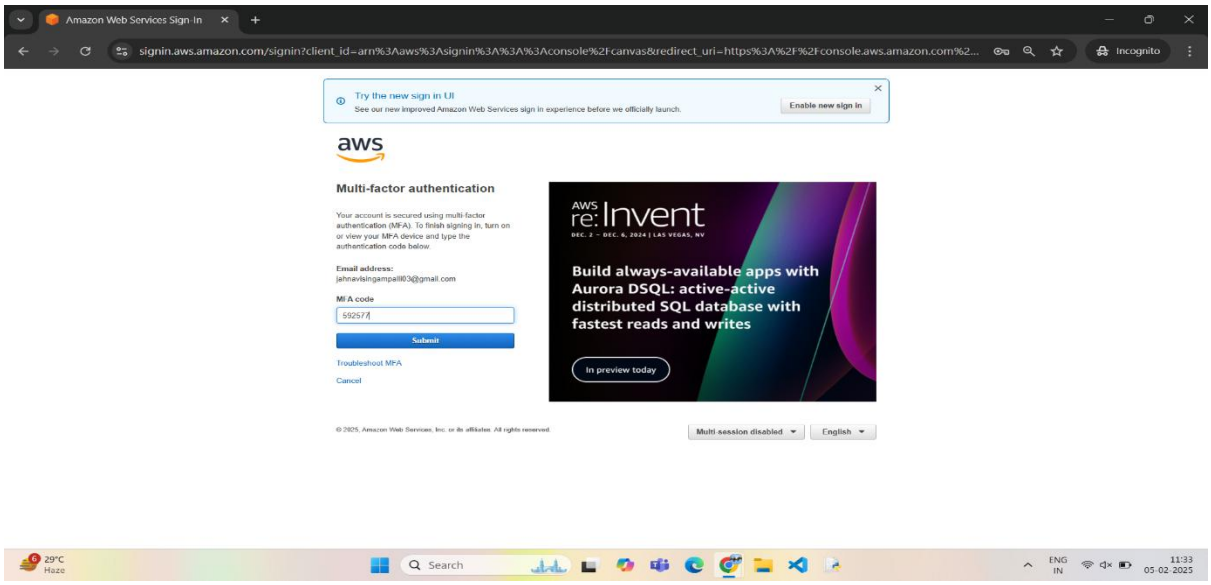
Step 4: Enter the email id and click on Next



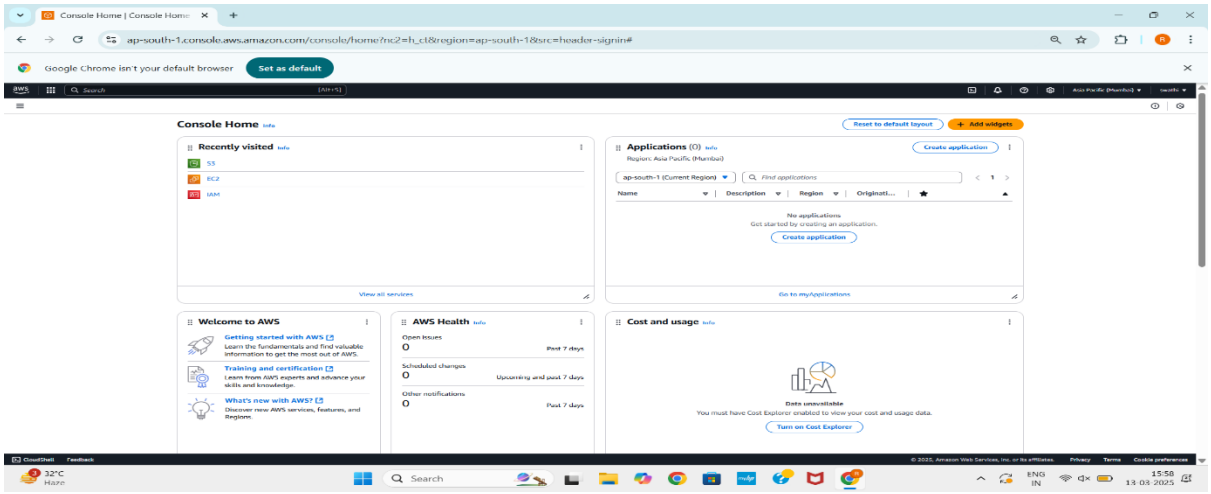
Step 5:Enter your password and click on sign in



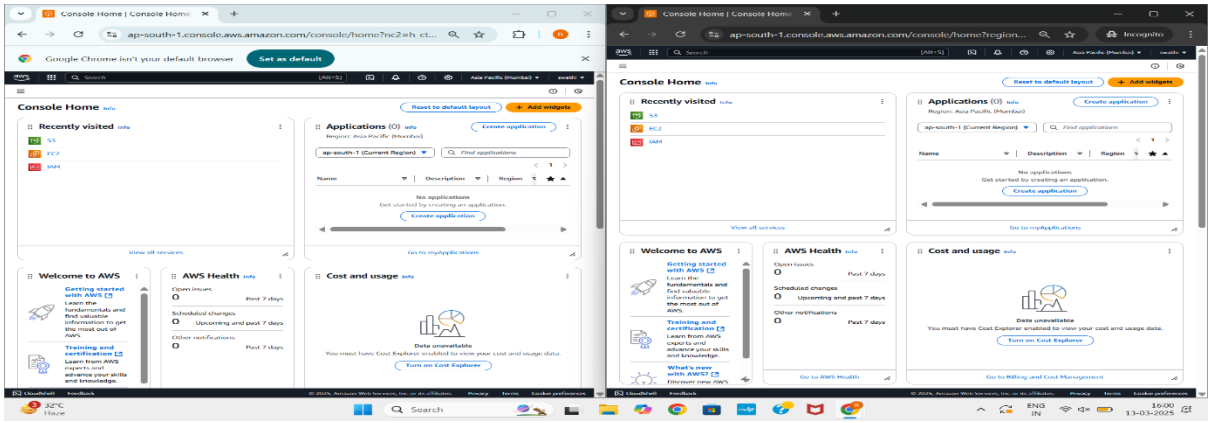
Step 6:Now enter the MFA code from the mobile and click on submit



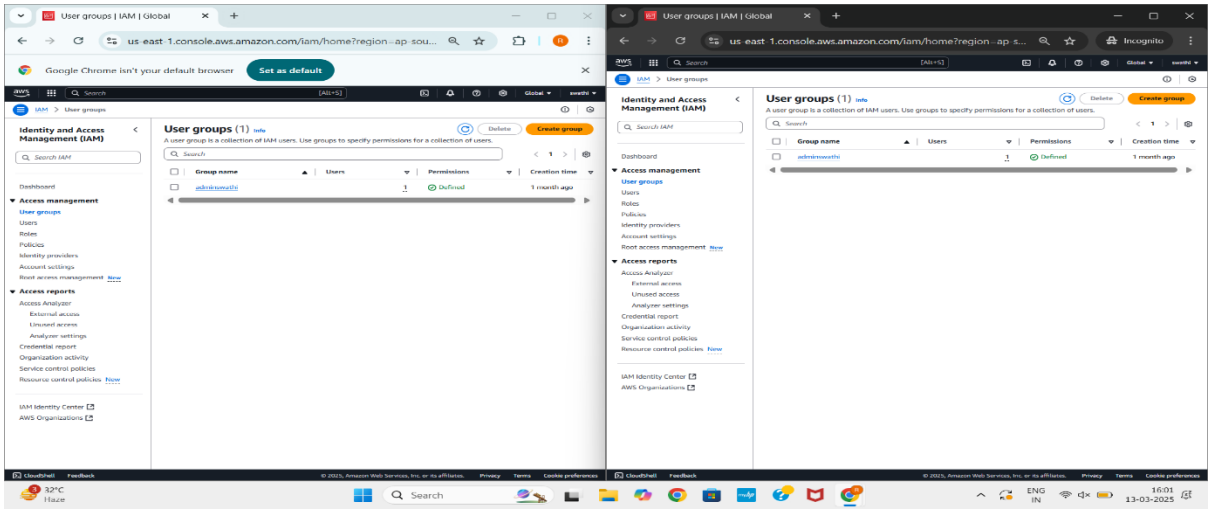
Step 7:Now you will get Console Home page



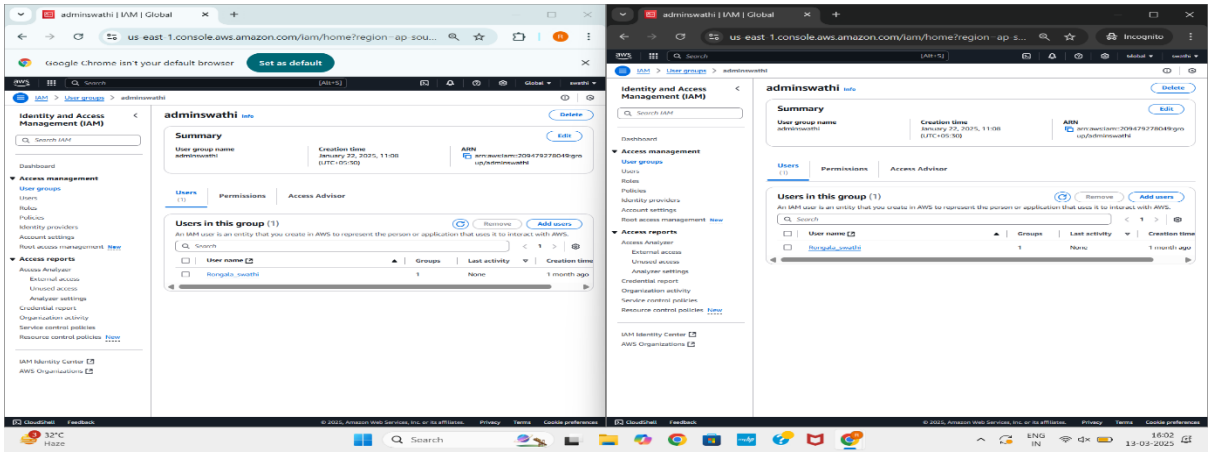
Step 8:Now enter another tab in Incognite mode and open the Aws Console Page



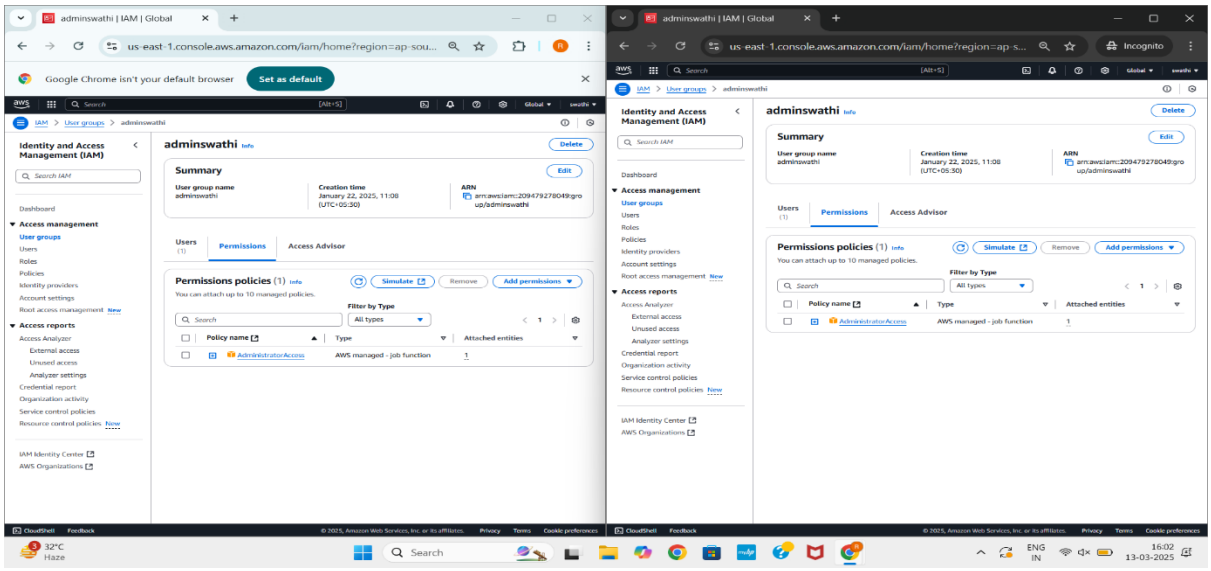
Step 9:Now open IAM account and click on user groups.



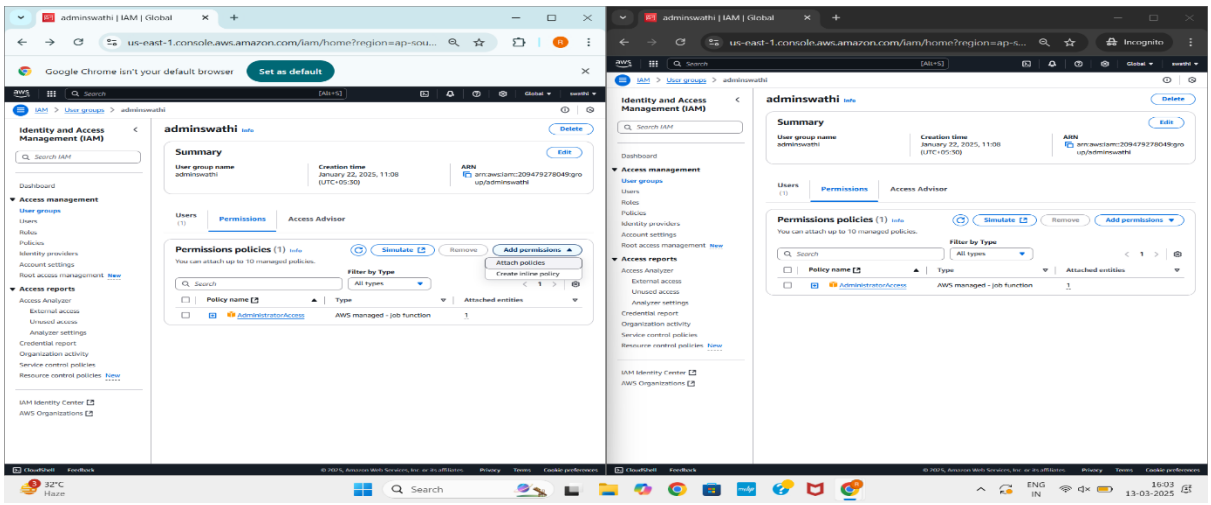
Step 10:Click on the user name and you will get as below.



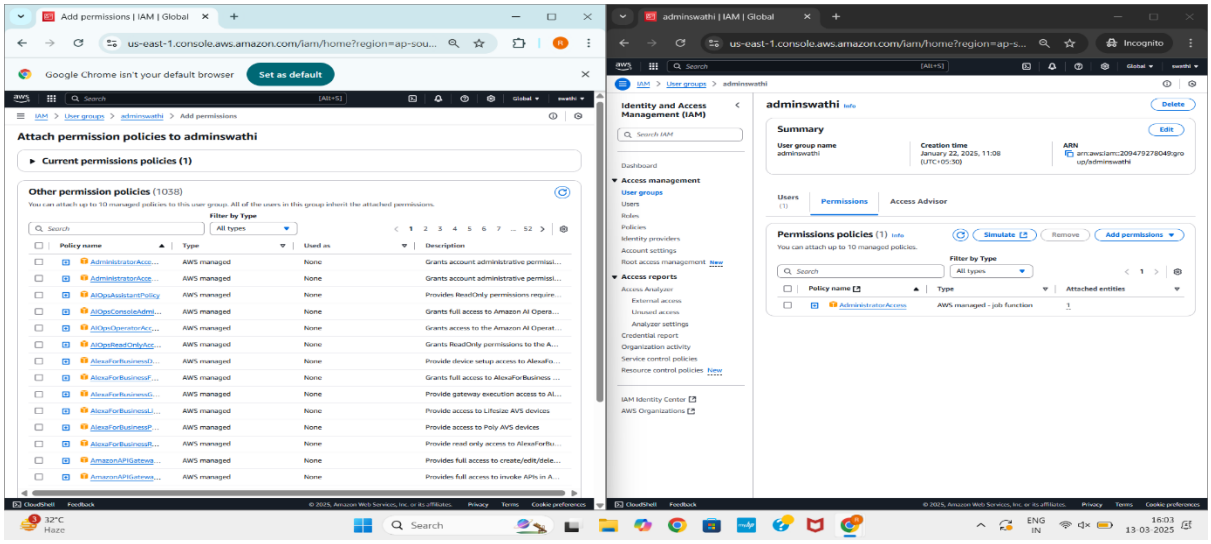
Step 11:Open the Permission tab.



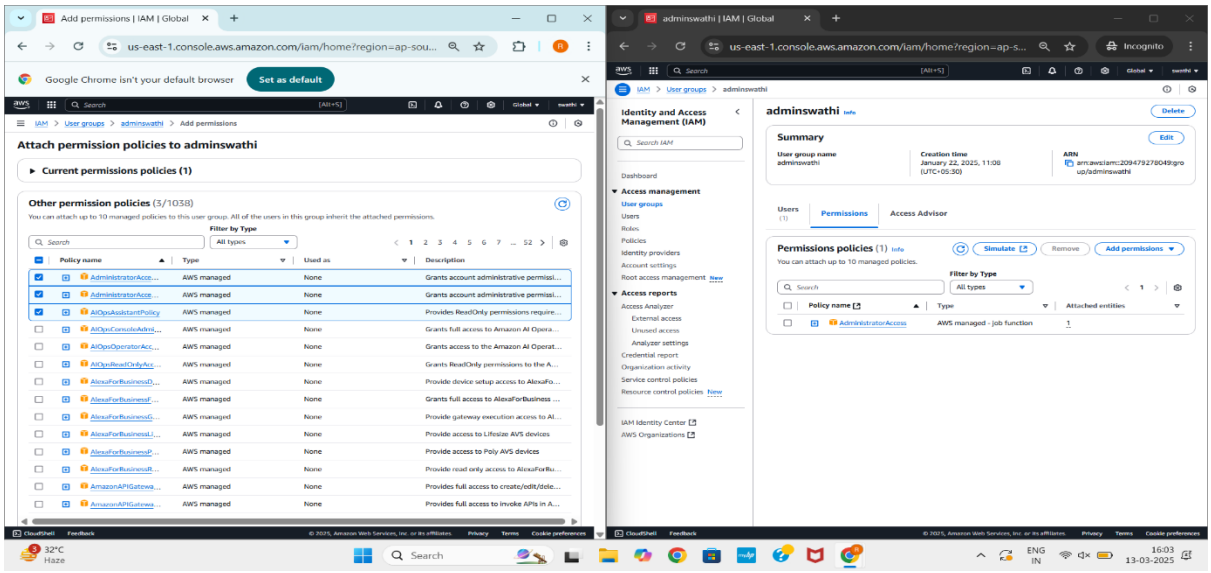
Step 12:Click on “Add Permissions” and click on “Attach policies”.



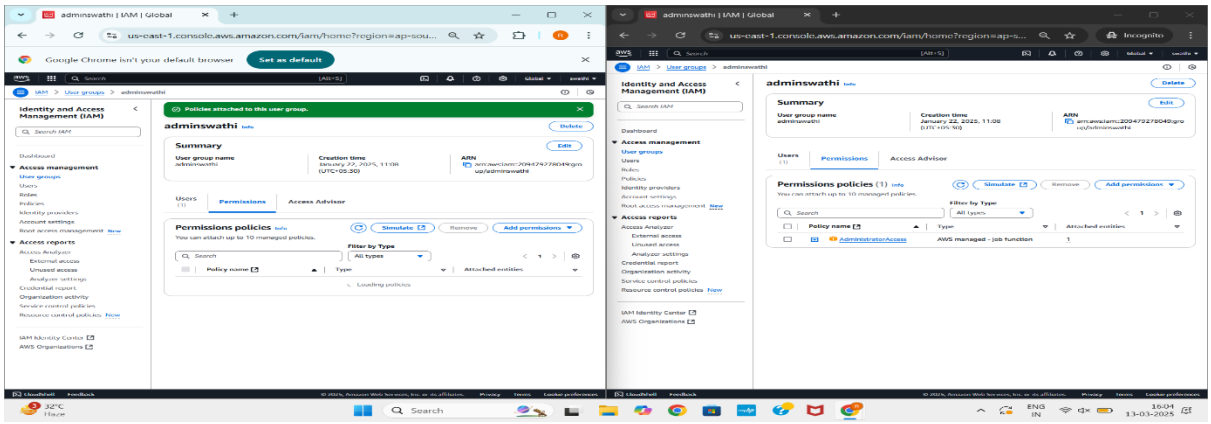
Step 13:Now you will get all the permission policies



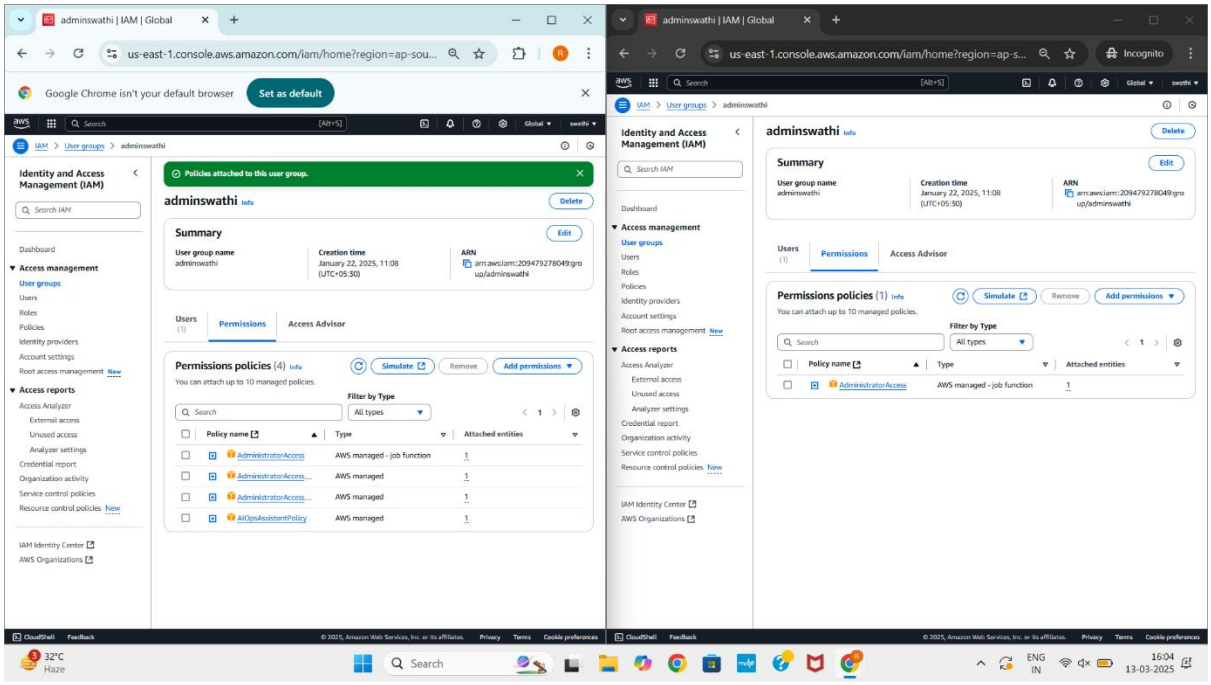
Step 14:Choose the policies and click on Attach policies.



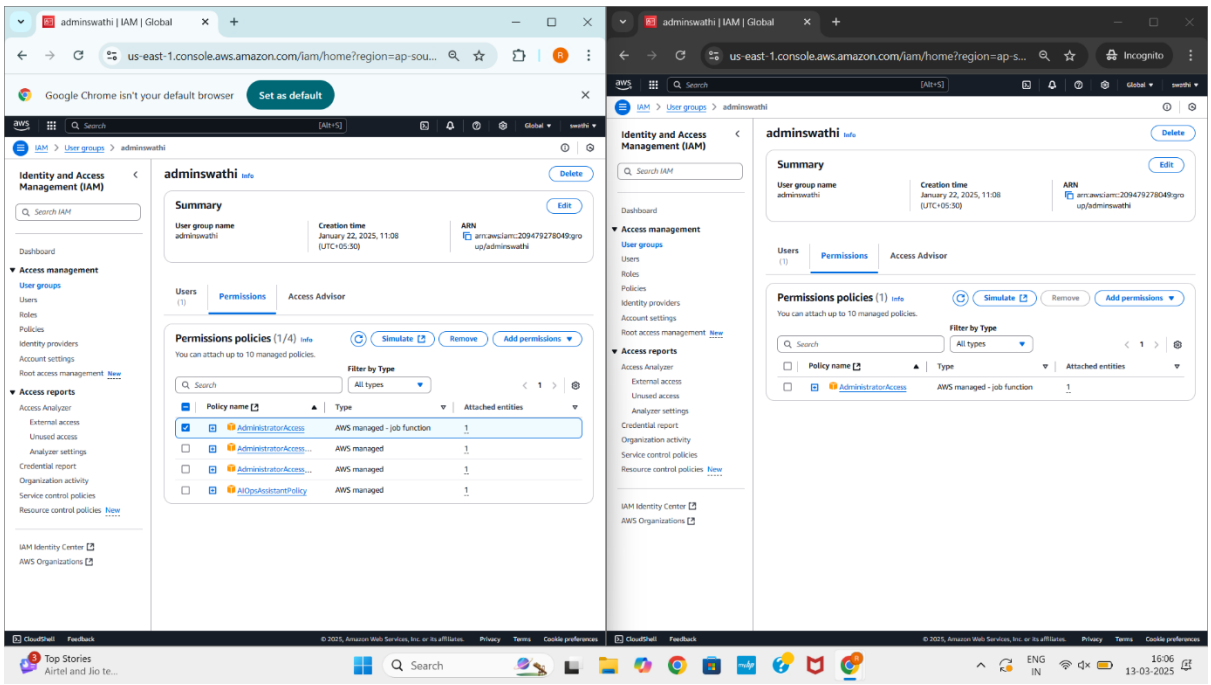
Step 15:Now you will get a message as Policies attached successfully.



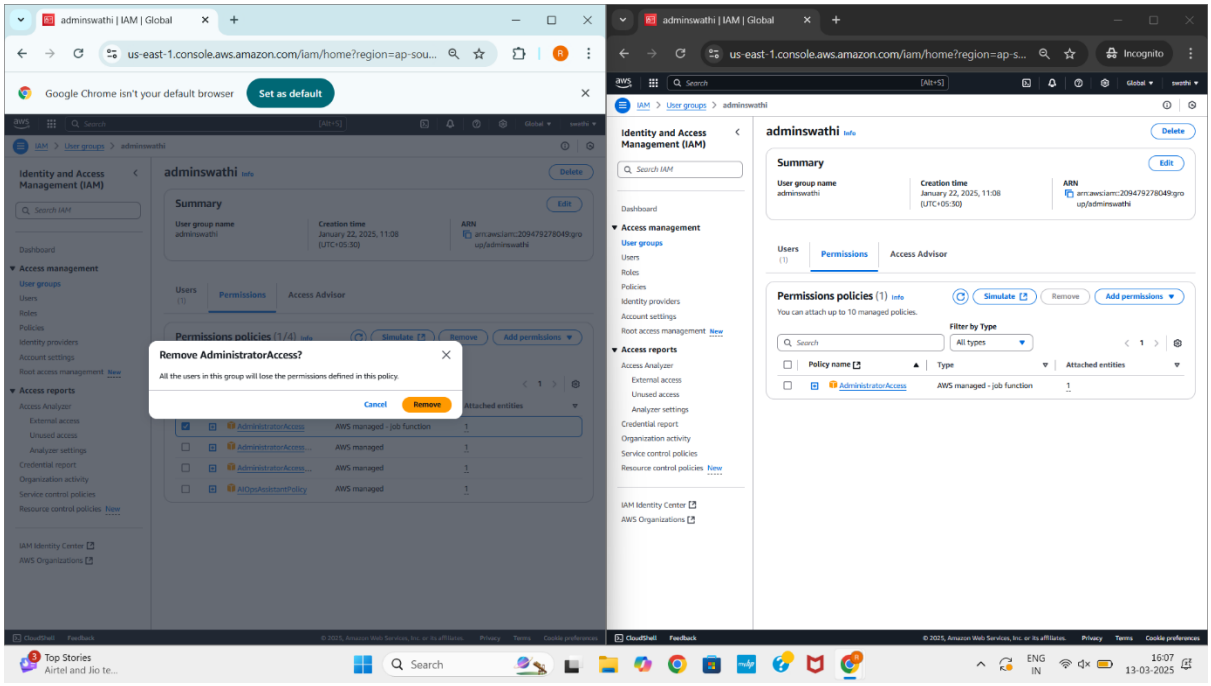
Step 16:Go back to the user group and you will get as “defined in green colour.”



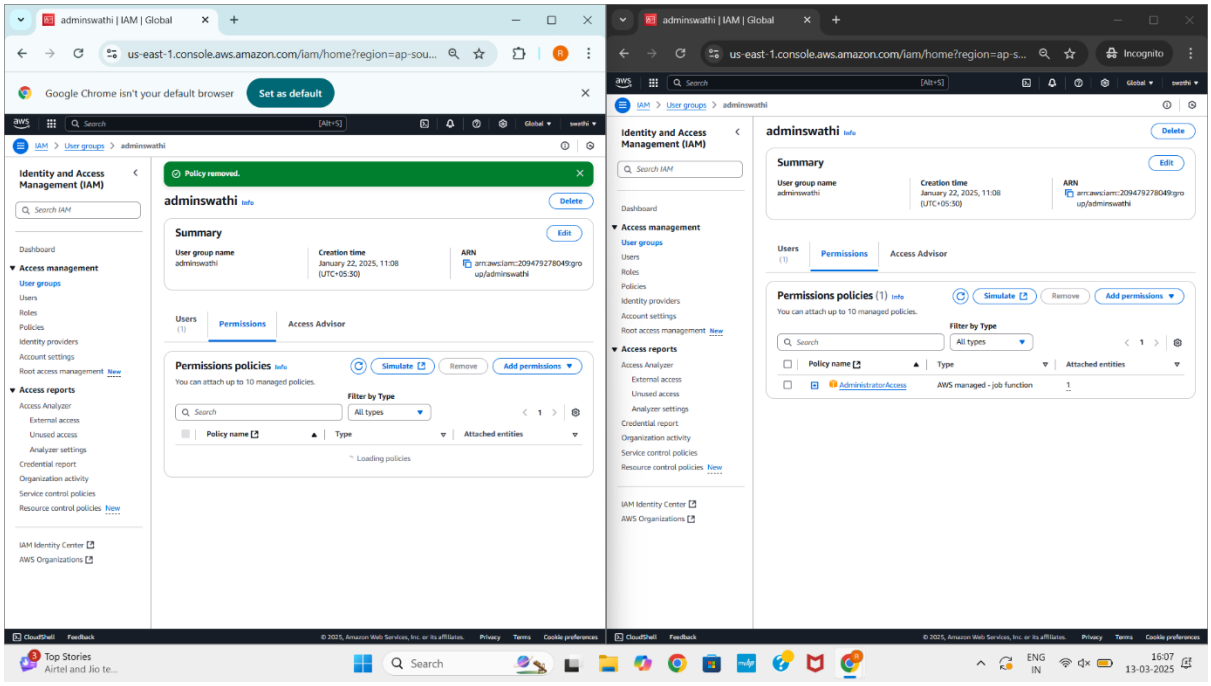
Step 17: Now again open the user and got to the permission tab and select the policies that you want to remove and click on remove.



Step 18: Now you will get the pop up box to confirm the removal of the policy. Click on remove**.**



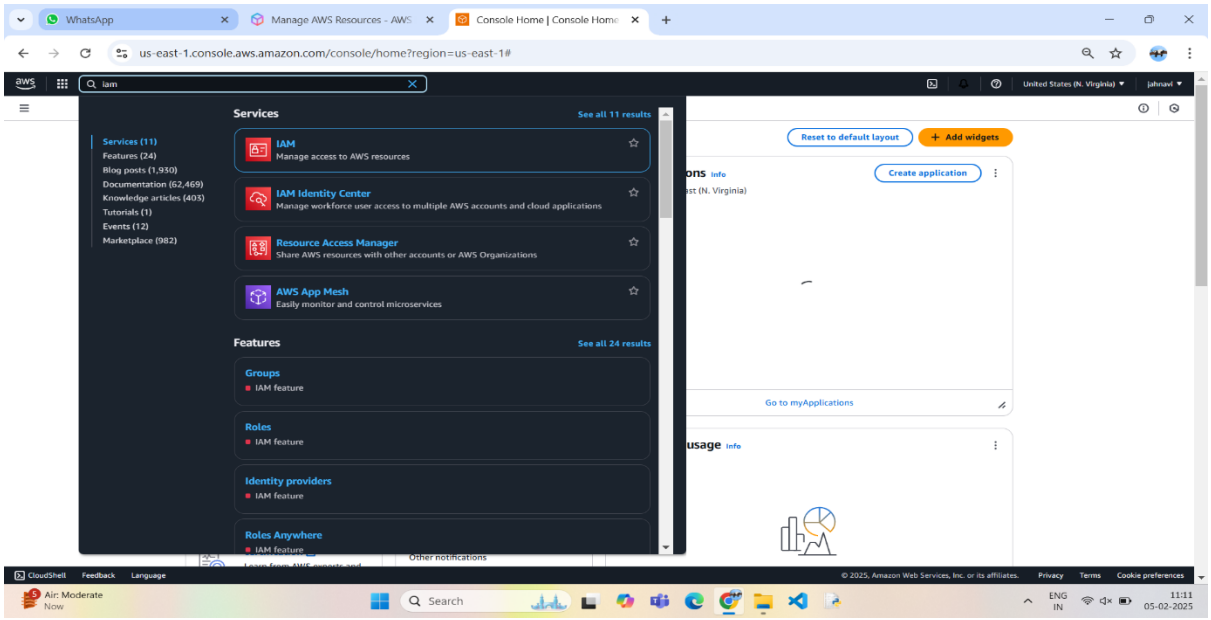
Step 19:*Now you will get the message as policy remove successfully.*



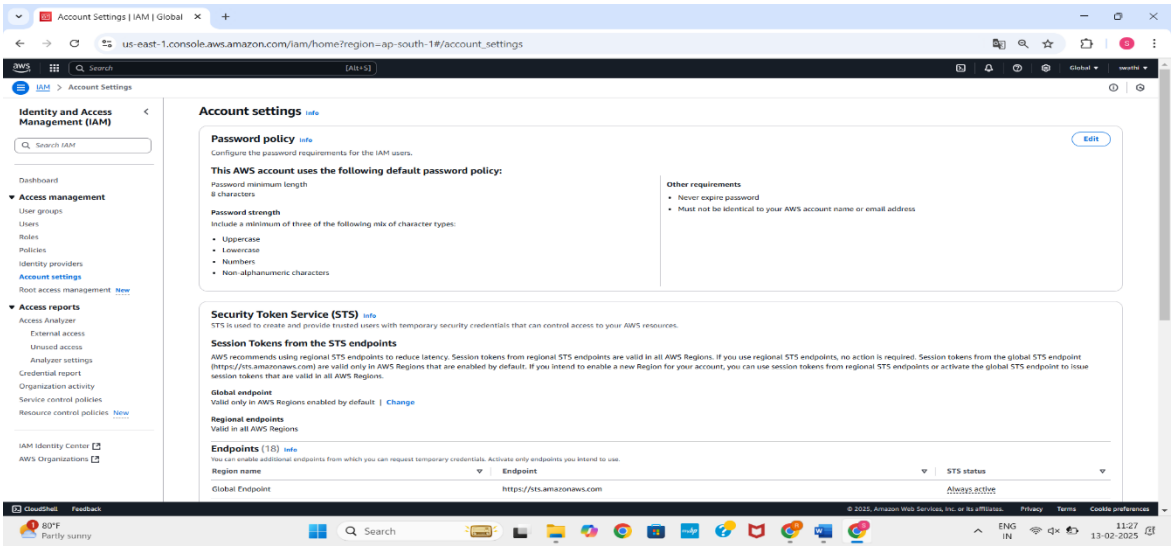
PROJECT -13

Create password Policy

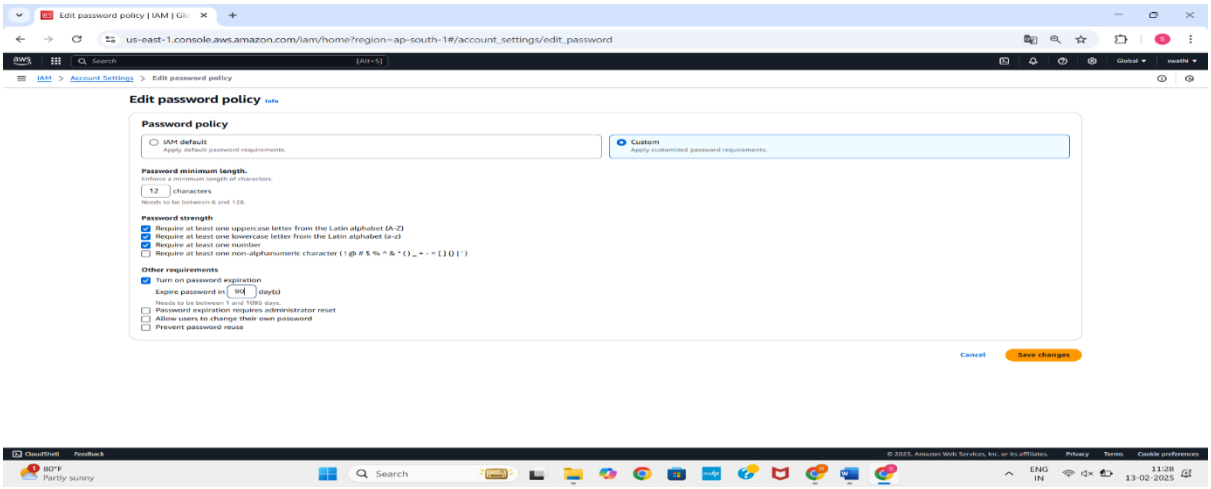
Step-1: open a aws console page



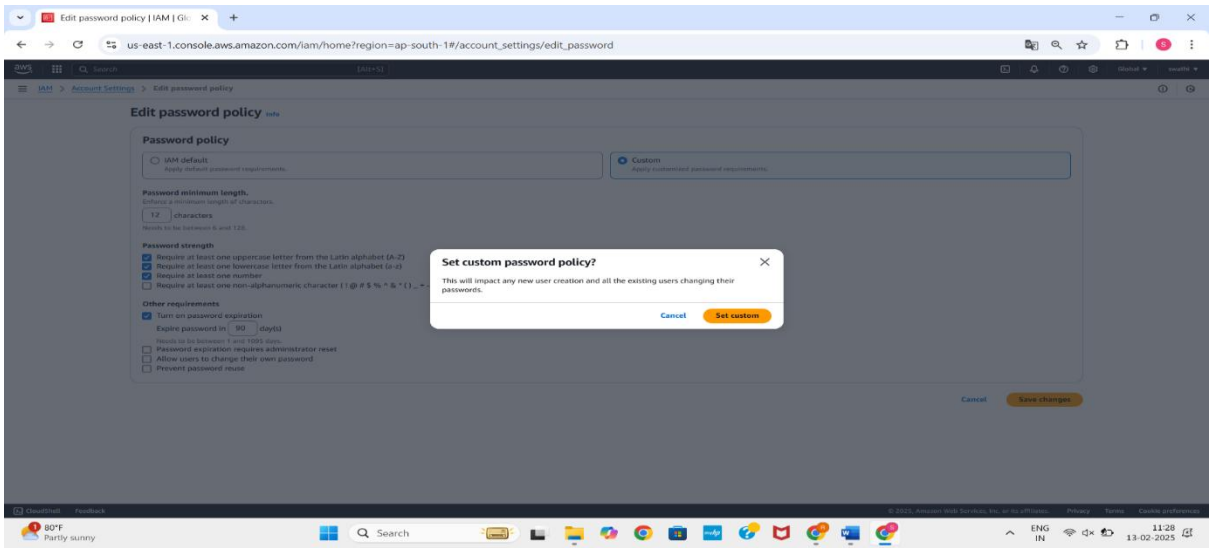
Step 2:- Click on Account settings



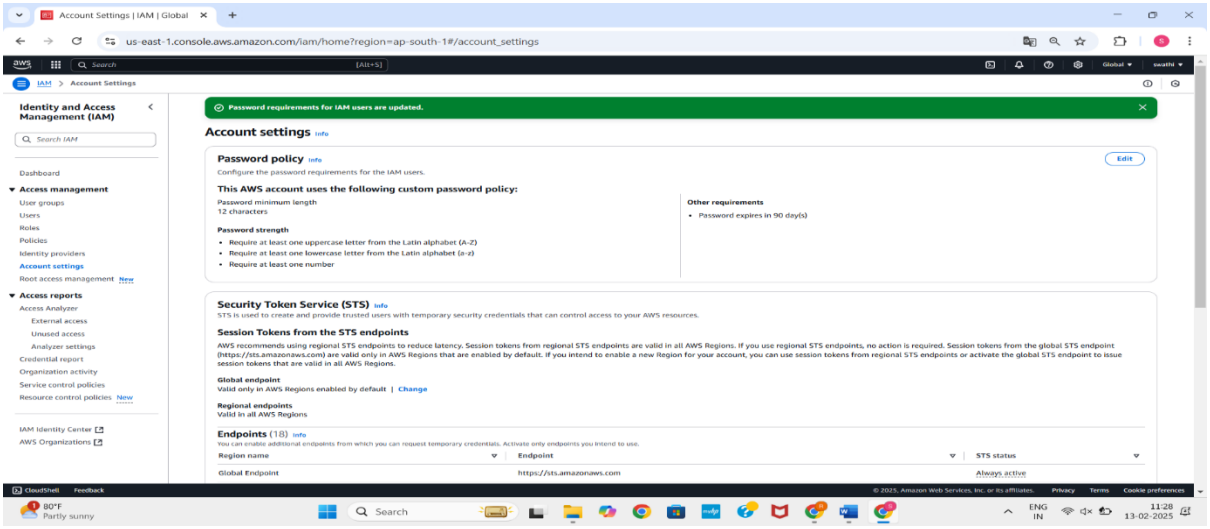
Step 3:-Click on edit



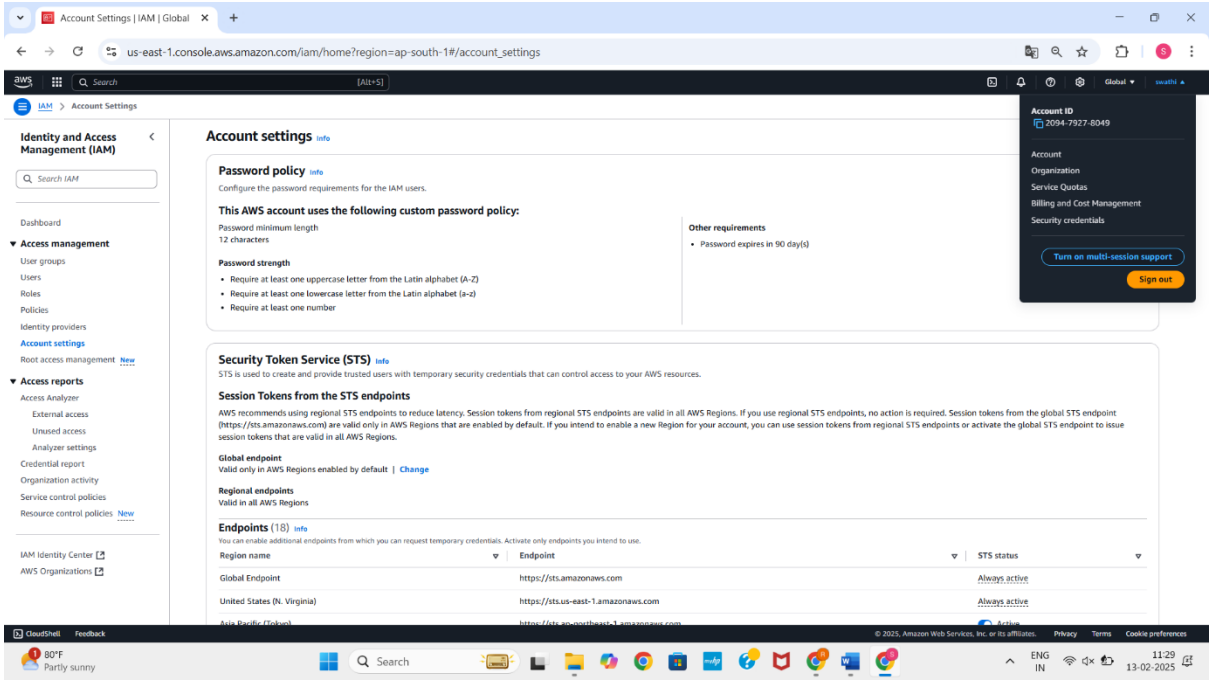
Step 4-Click on custom to change password according to you



Step 5:- Select custom password policy



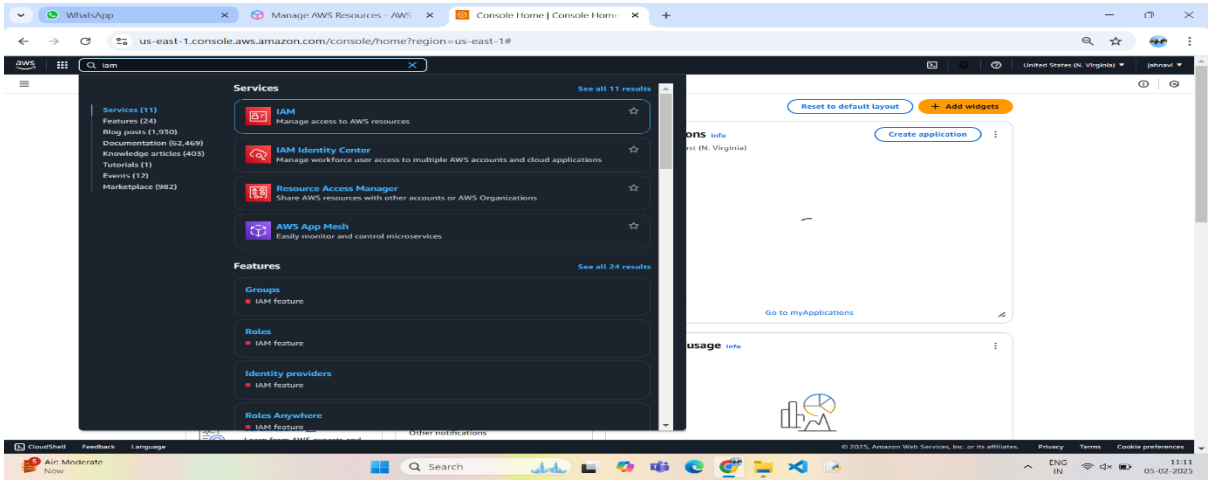
Step 6:- Password requirements for IAM users are updated



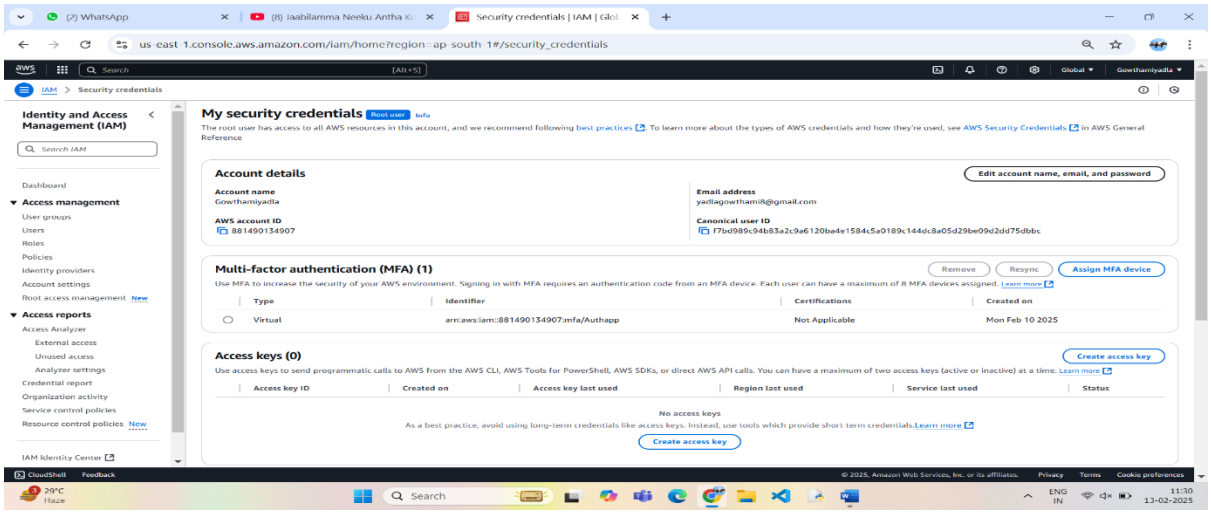
Project-14

• *Login using MFA code*

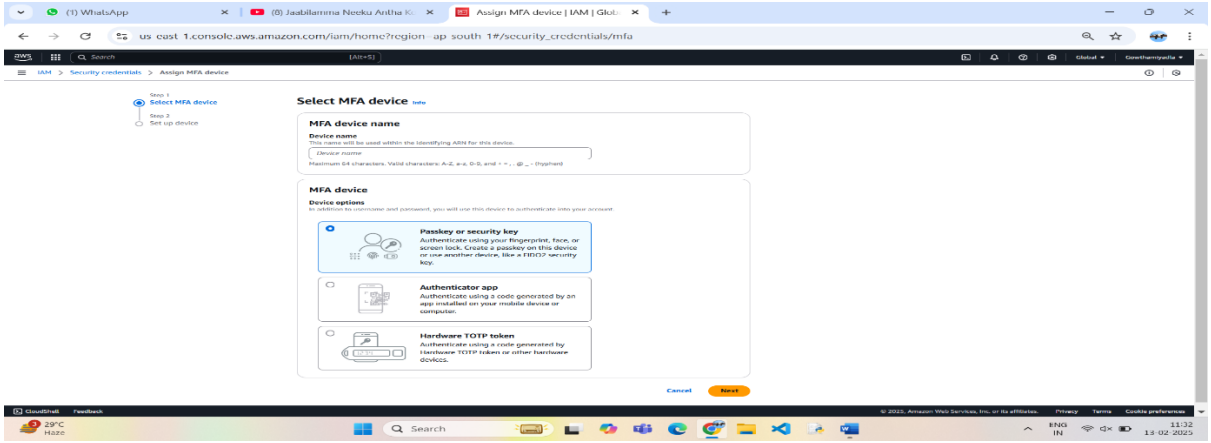
Step1: Open the IAM dashboard



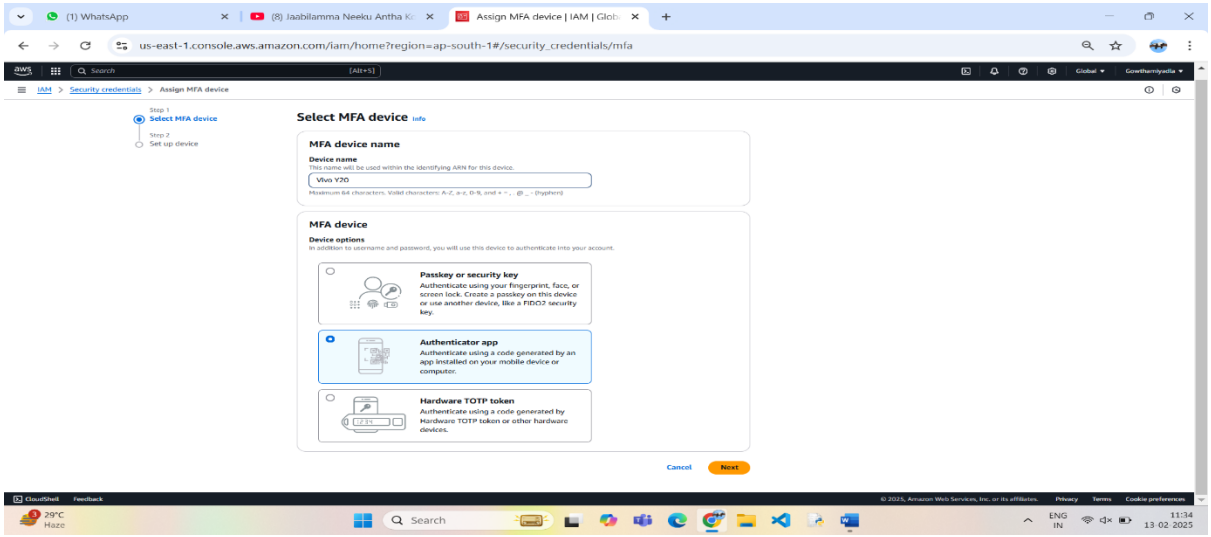
Step 2:-Click on security credentials



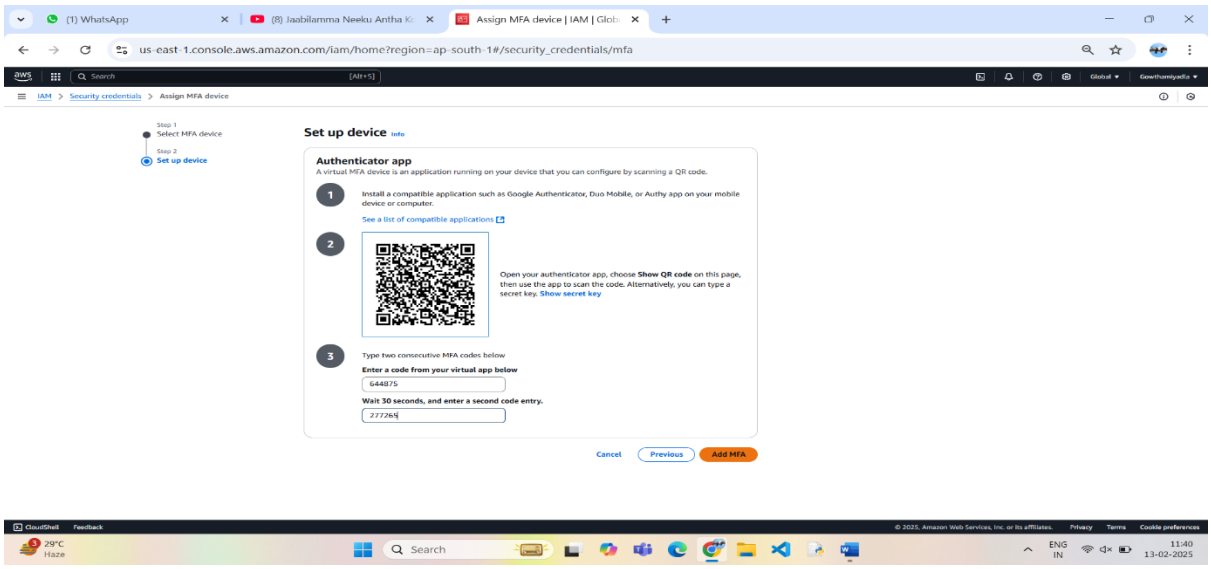
Step 3:-Click on assign MFA



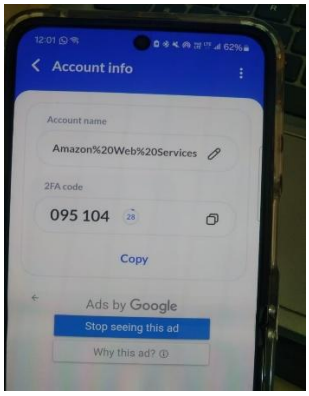
Step 4:- Give the device name and choose Authenticator app



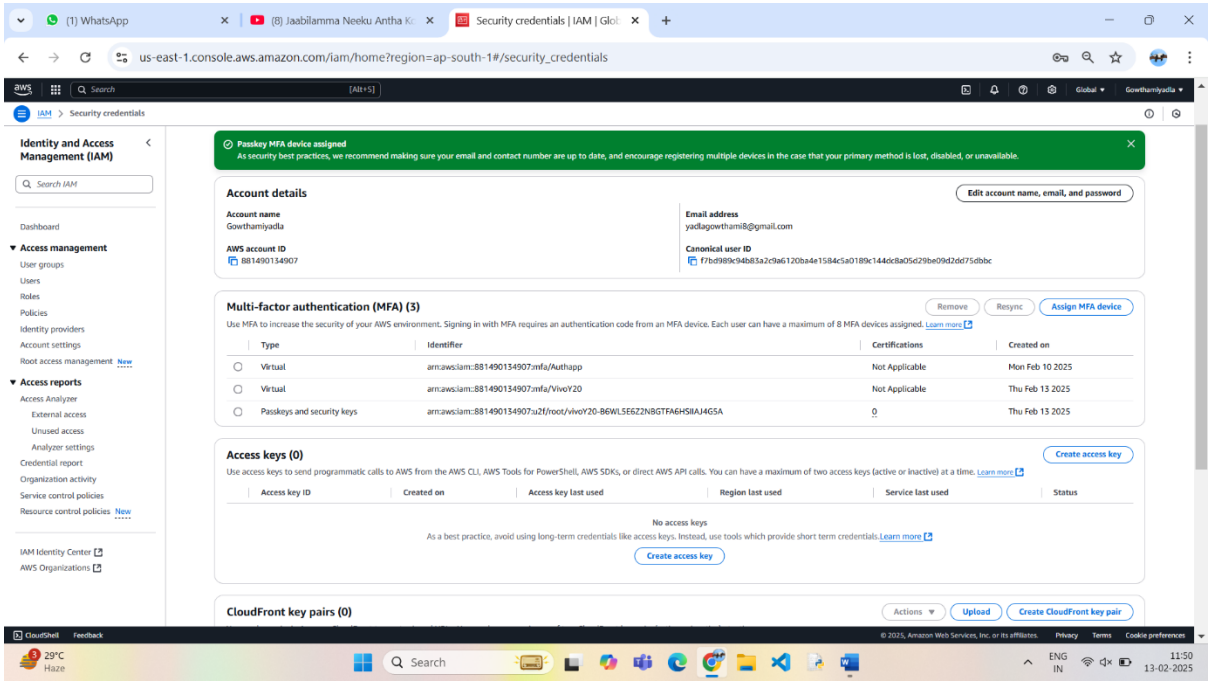
Step 5:- Click on show QR code



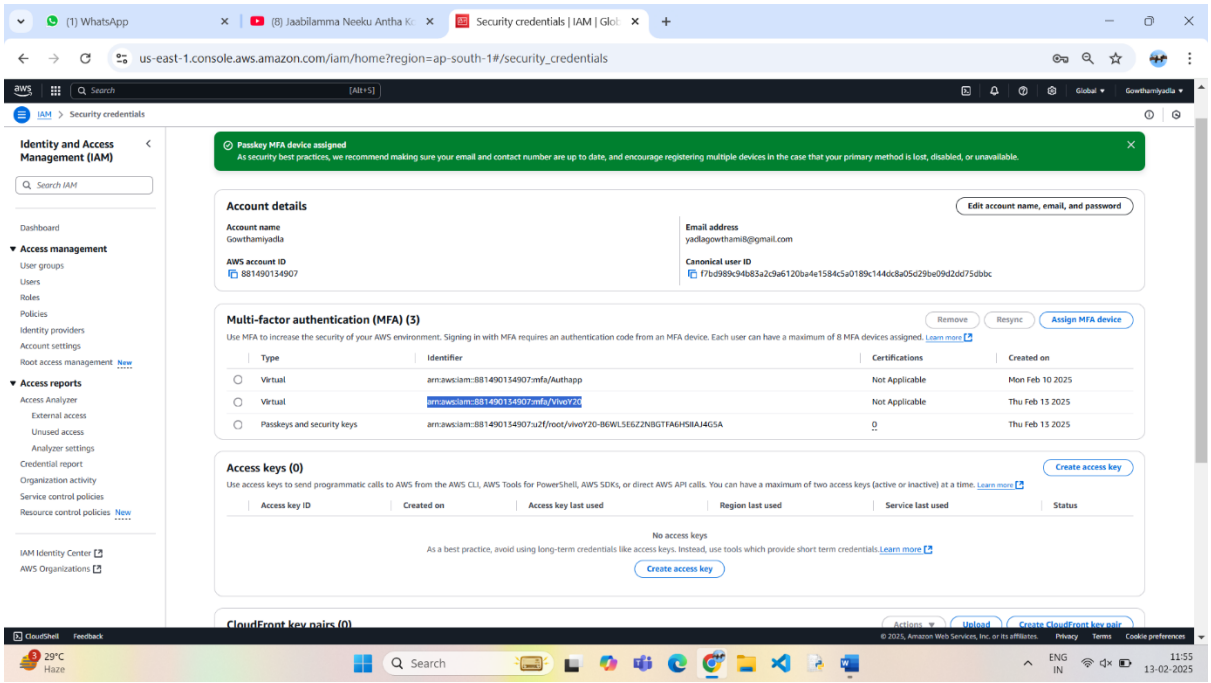
Step 6:- Use the authenticator app, you will get two MFA codes. First enter the MFA code 1, then you will receive MFA code 2



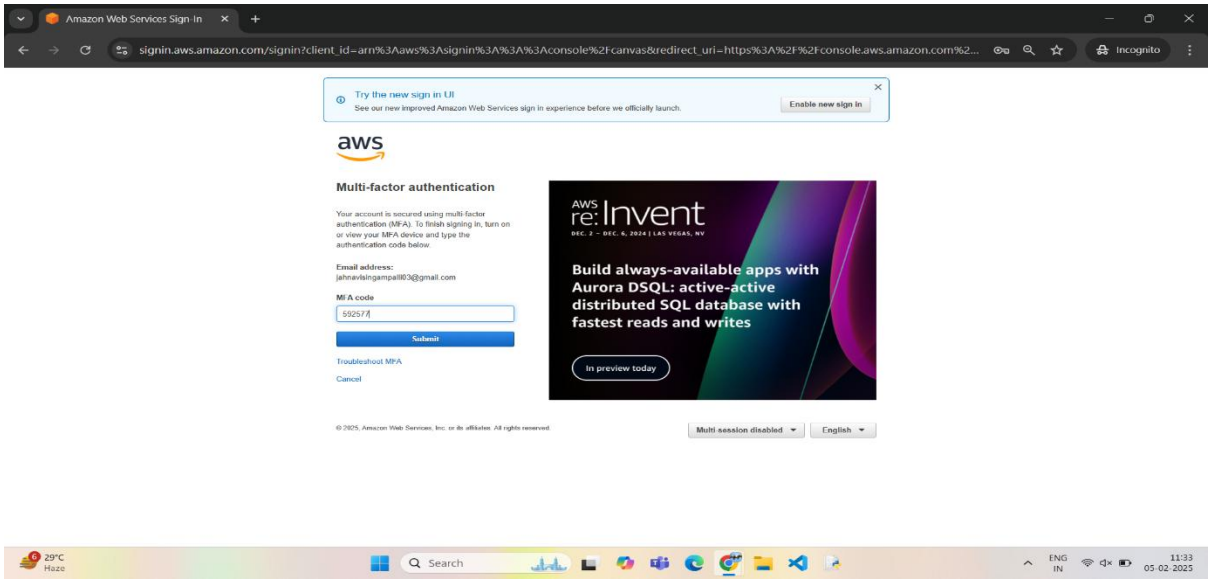
Step 7:-MFA device assigned



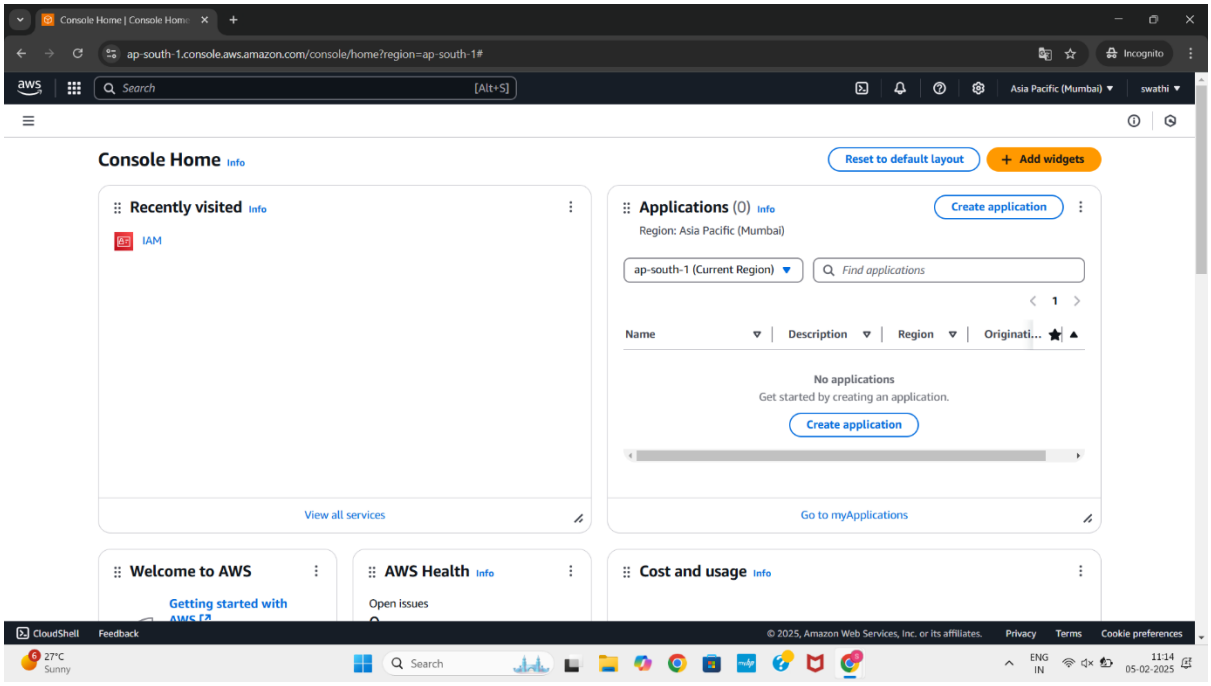
Step 8:- The device link will be appeared



Step 9:-Now sign out and sign in again



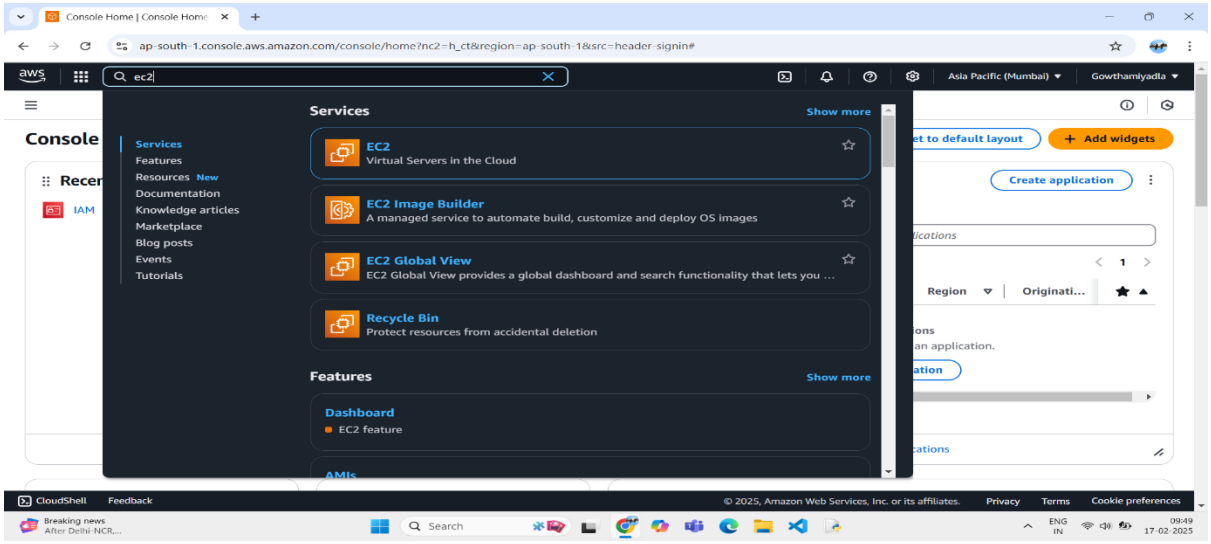
Step 10:- Your console home page will be opened



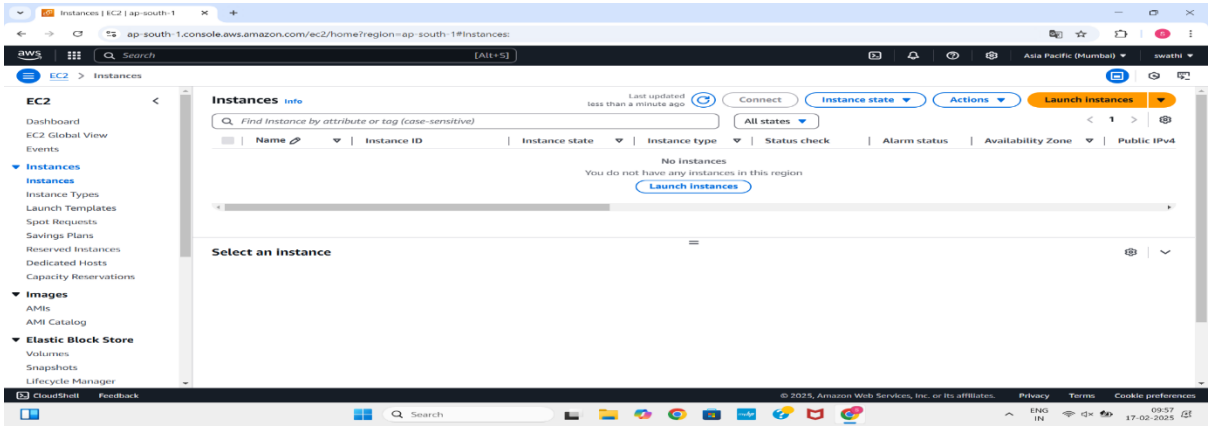
Project-15

• *Elastic Compute Cloud (EC2)*

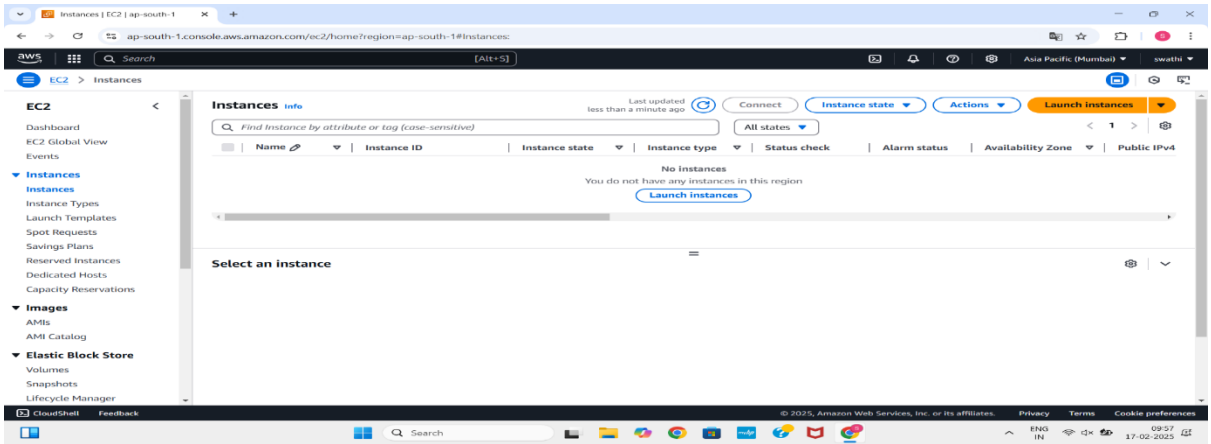
Step 1:-Search EC2 in the console page



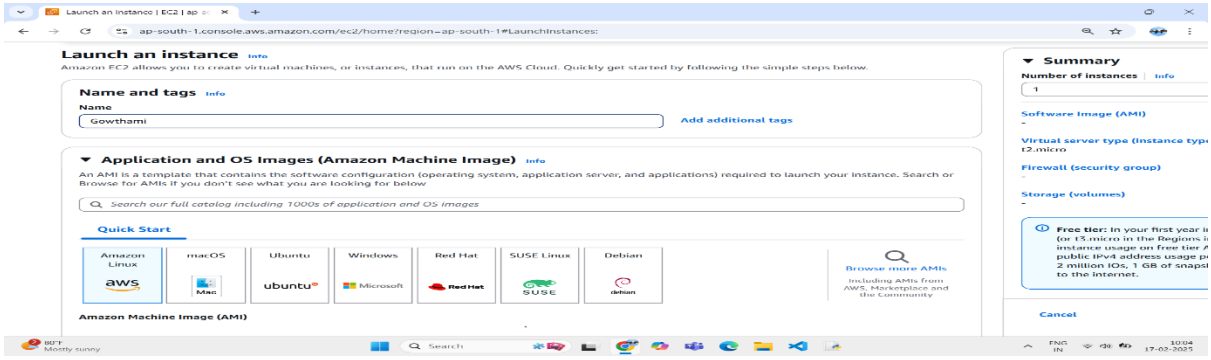
Step 2:- Click on Instance



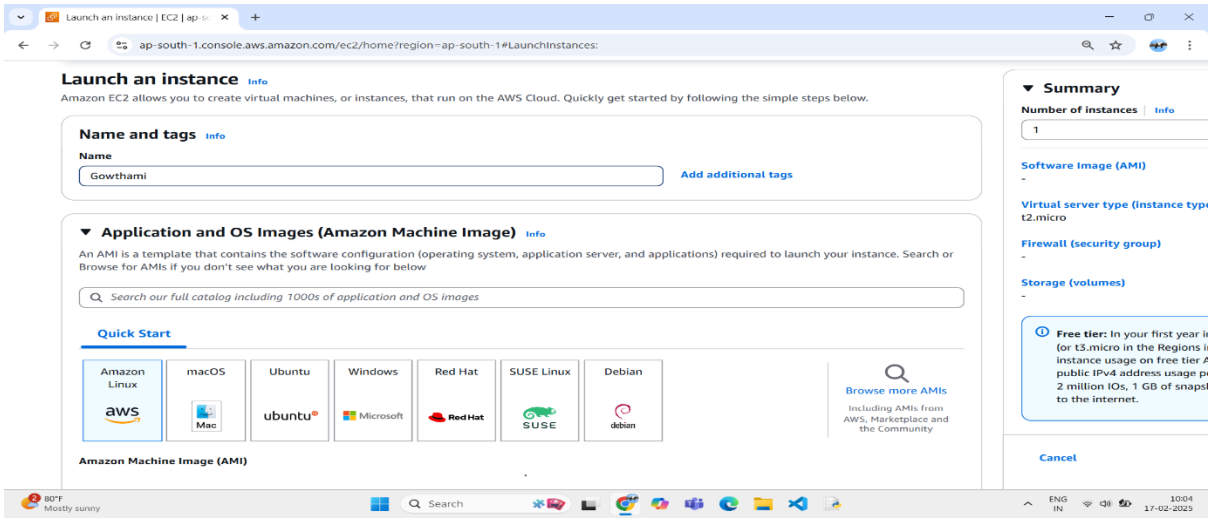
Step 3:- Click on launch instance



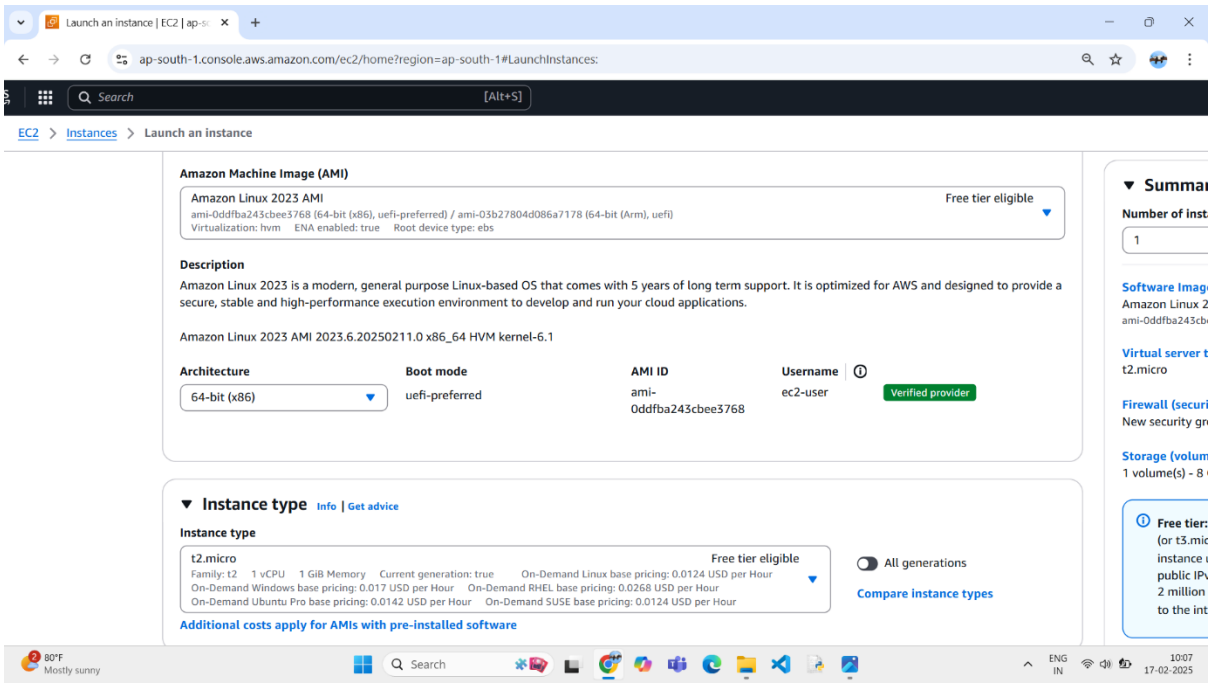
Step 4:- Define Name



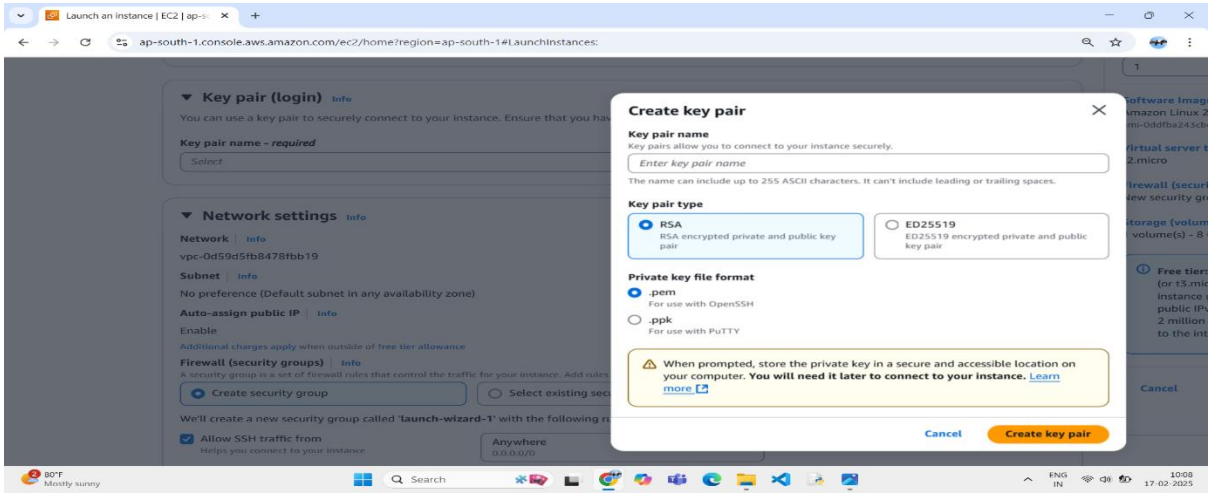
Step 5:- Choose Amazon Linux



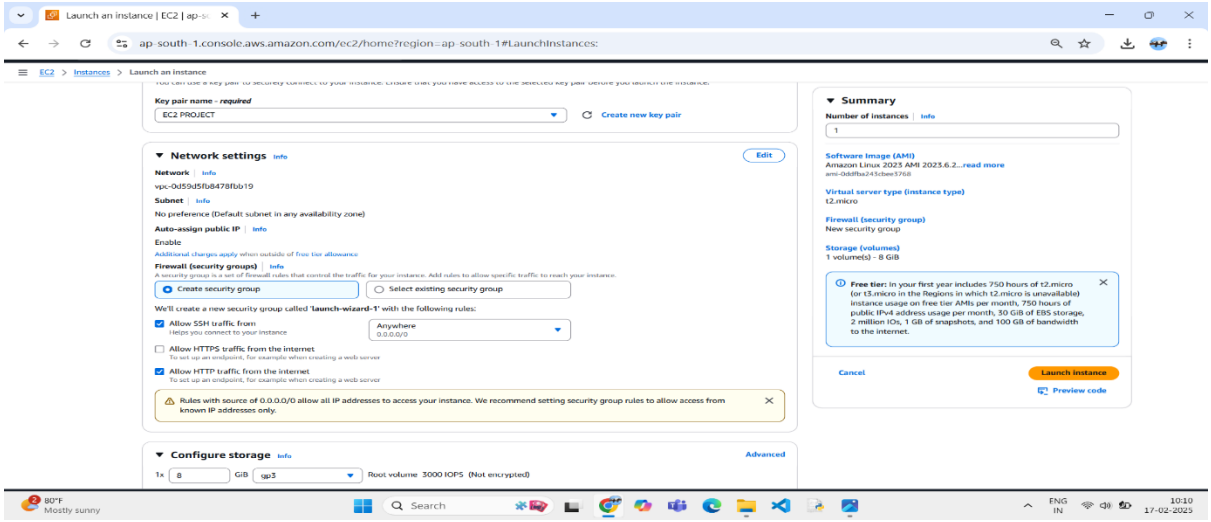
Step 6:-Choose instance type



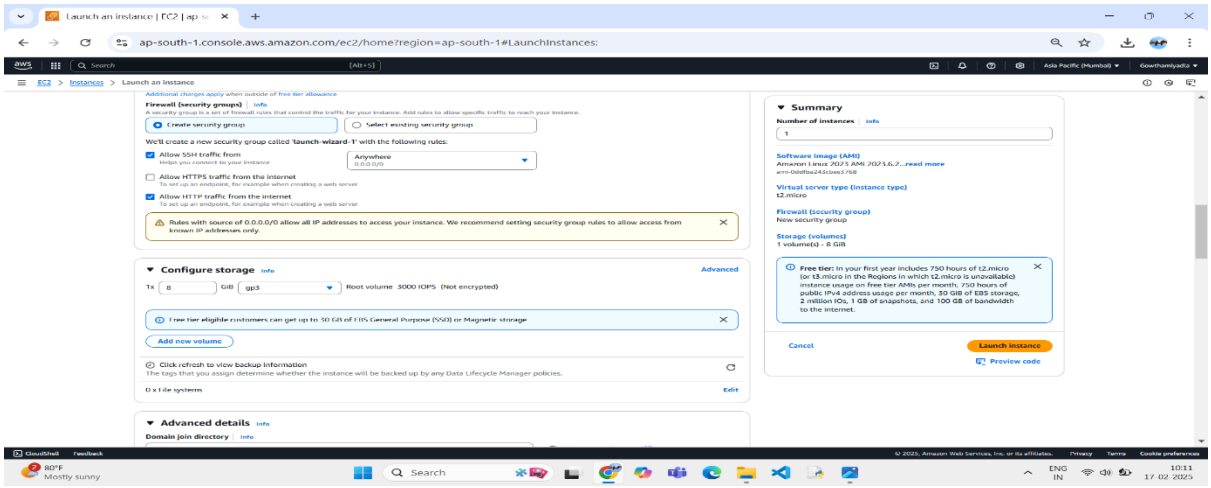
Step 7:-Click on create new key pair and define key pair name and click on create key pair



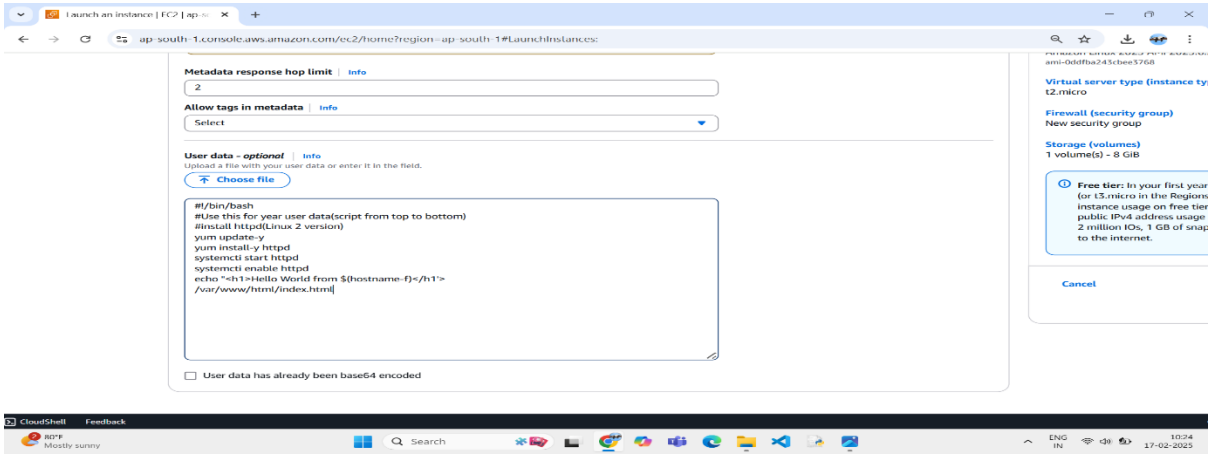
Step 8:-In the Network settings, Select allow SSH ana Http



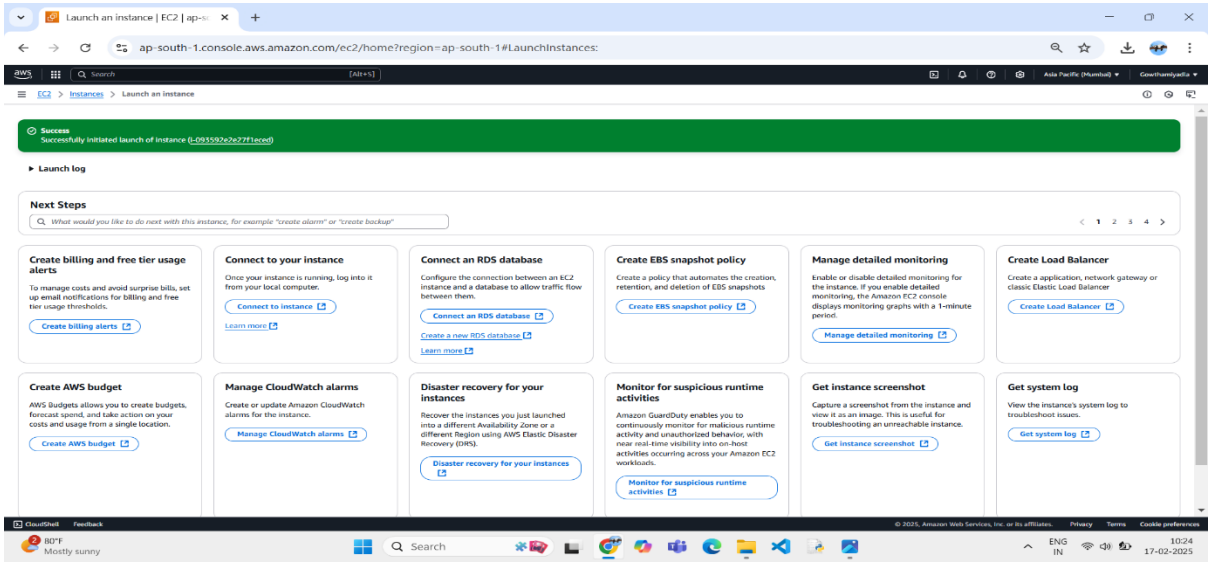
Step 9:- Have a look on configure storage



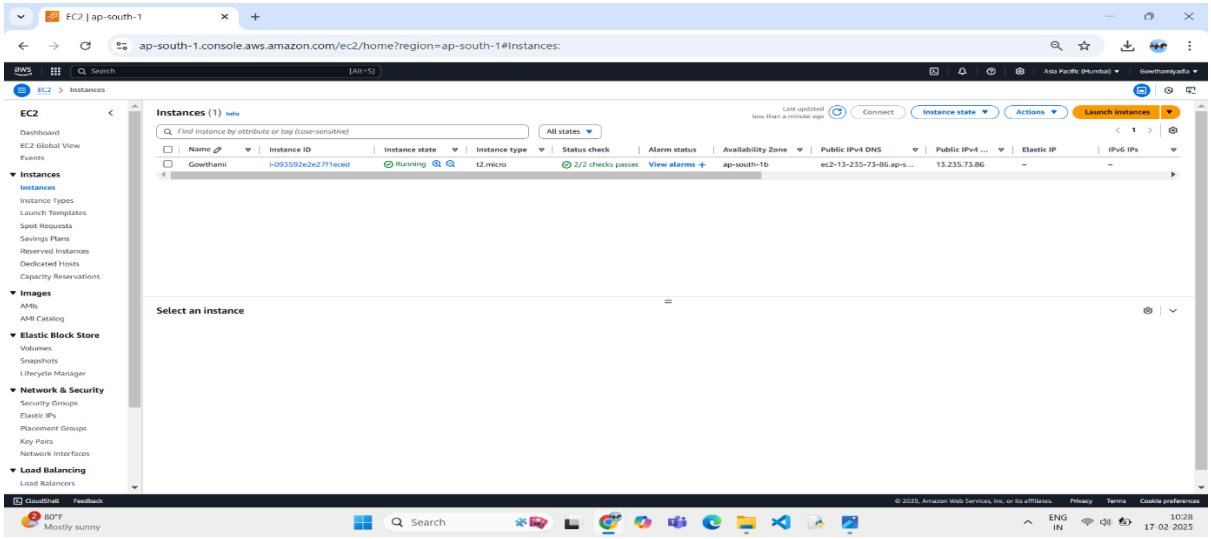
Step 10:-Click on Advanced Details and write the code. Now have a look on summary and click on Launch instance



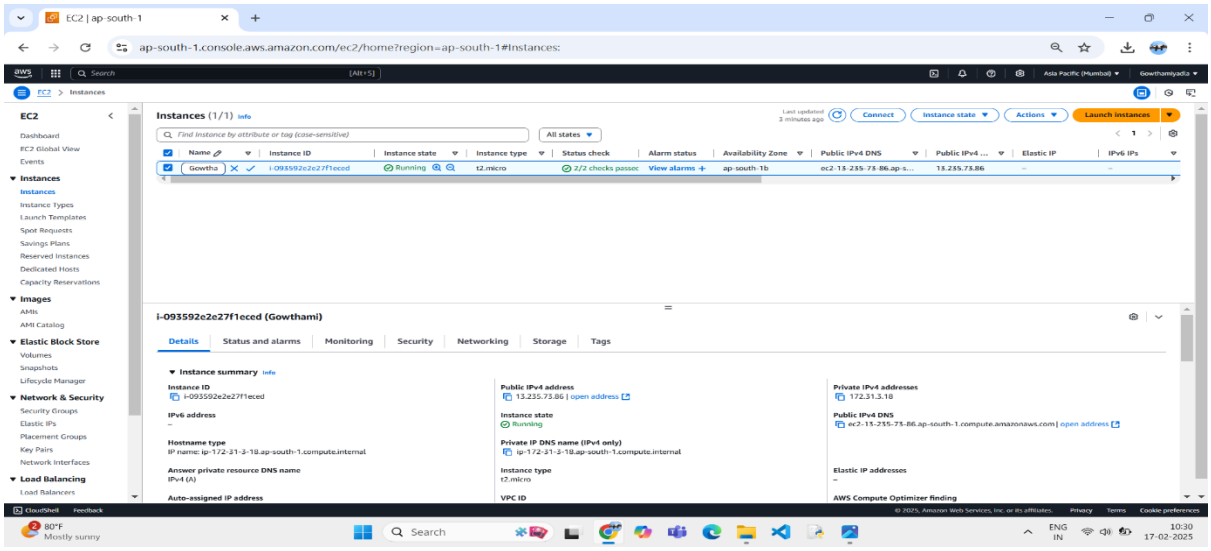
Step 11:-Successfully instance will be launched



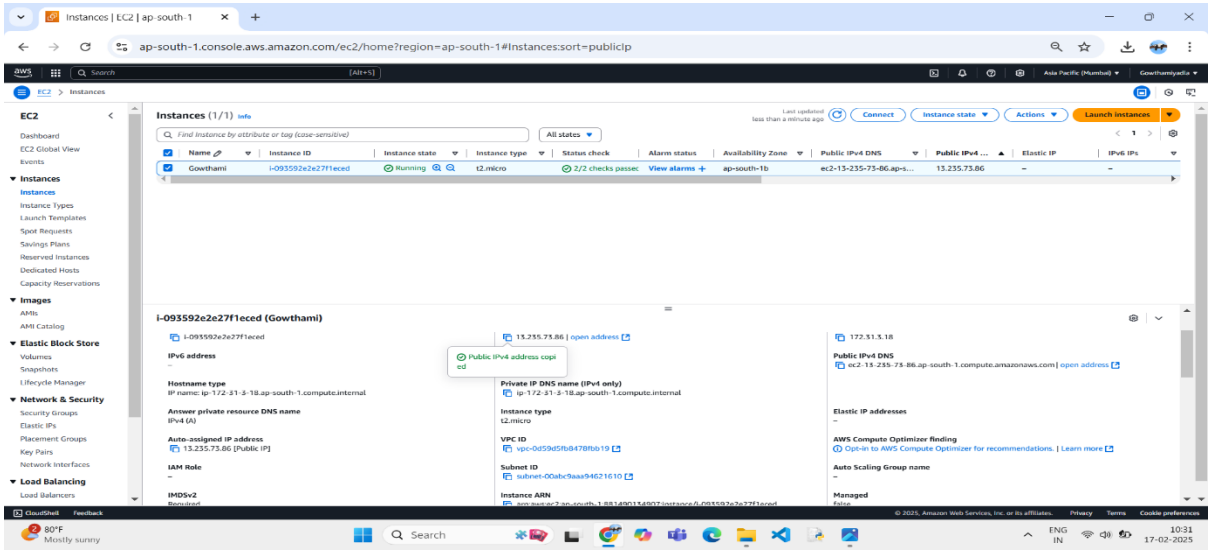
Step 12:-Now click on instance and check your first instance, it take 30 seconds to update. Please wait and refresh the page, we can see its running



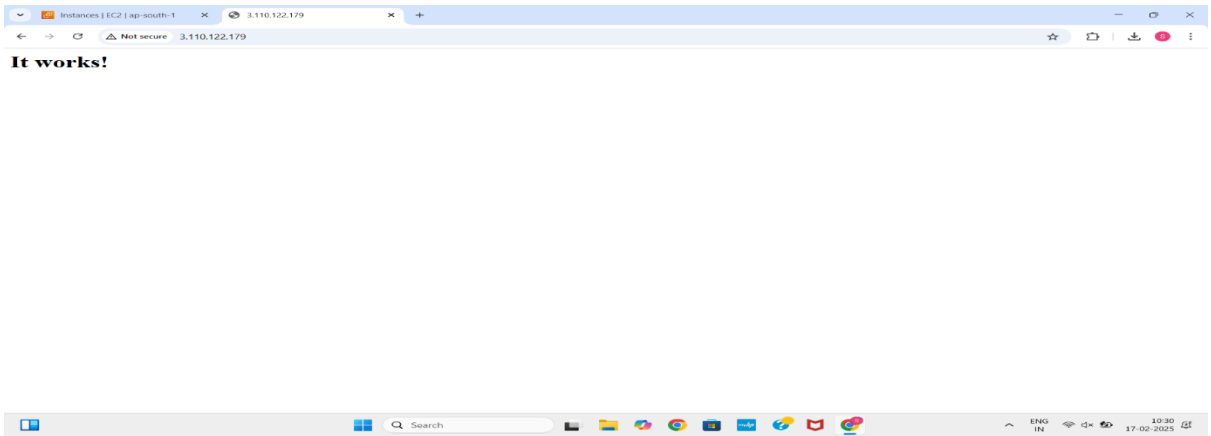
Step 13:- Click on my first instance and you can see the details down



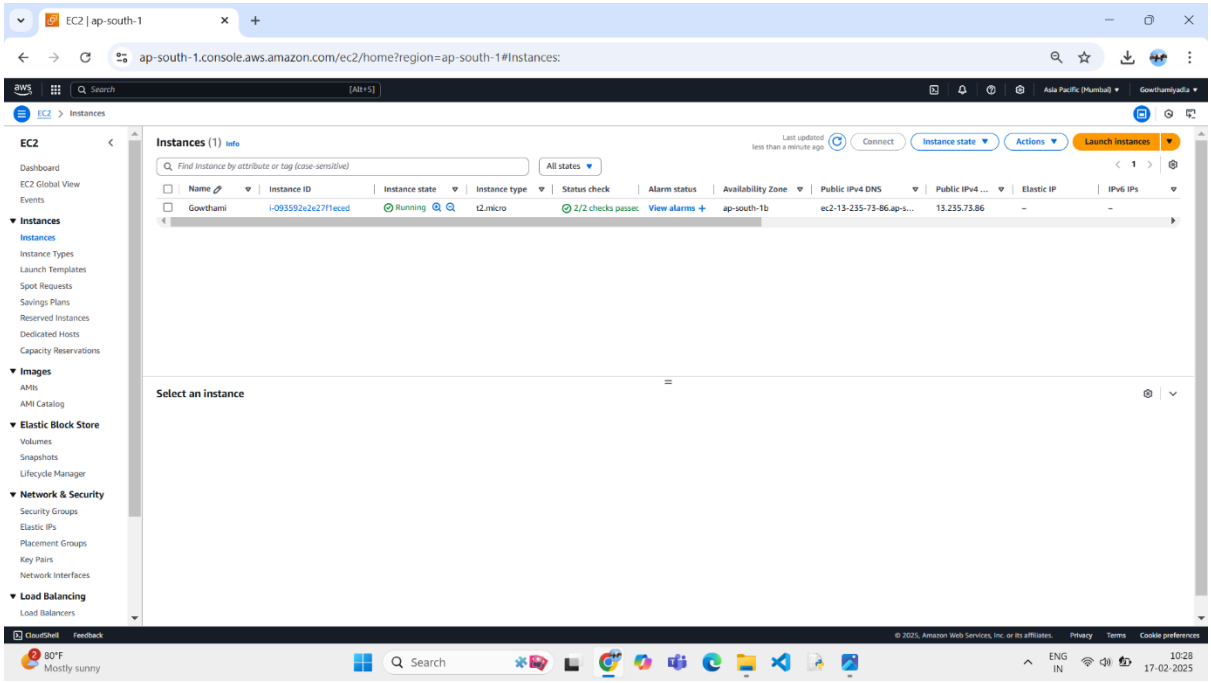
Step 14:-Copy the public IP Address



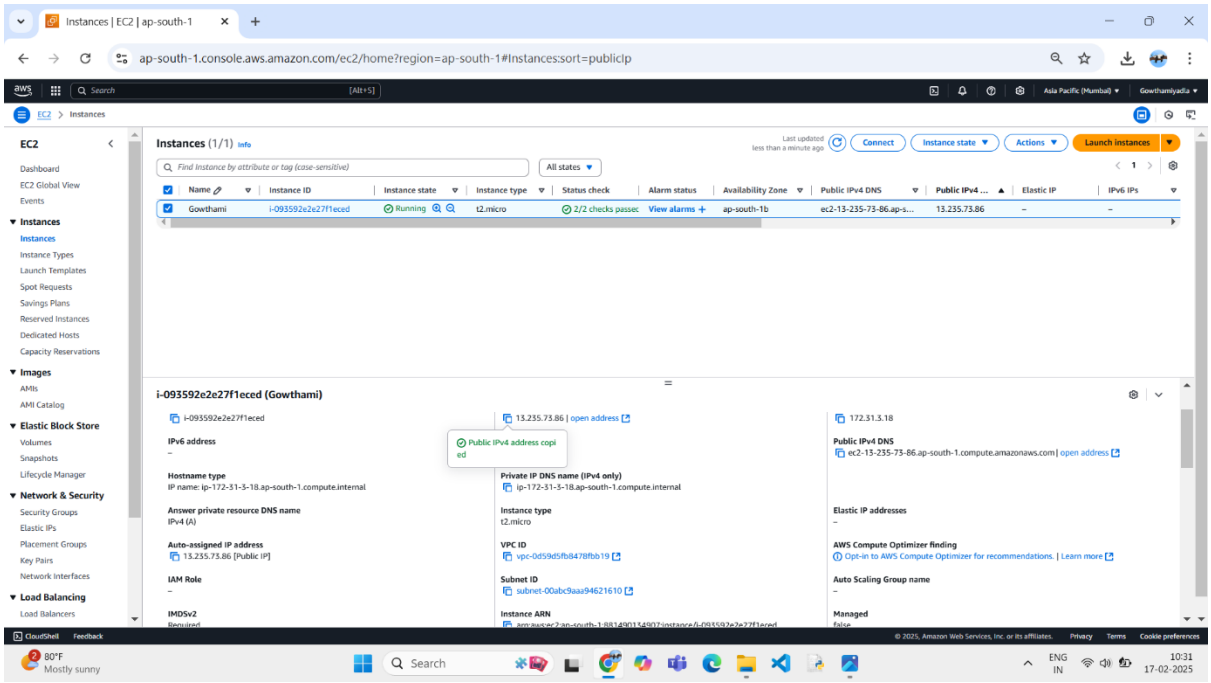
Step 15:-Paste the URL in the new browser and run it



Step 16:- Now stop to avoid billing from AWS



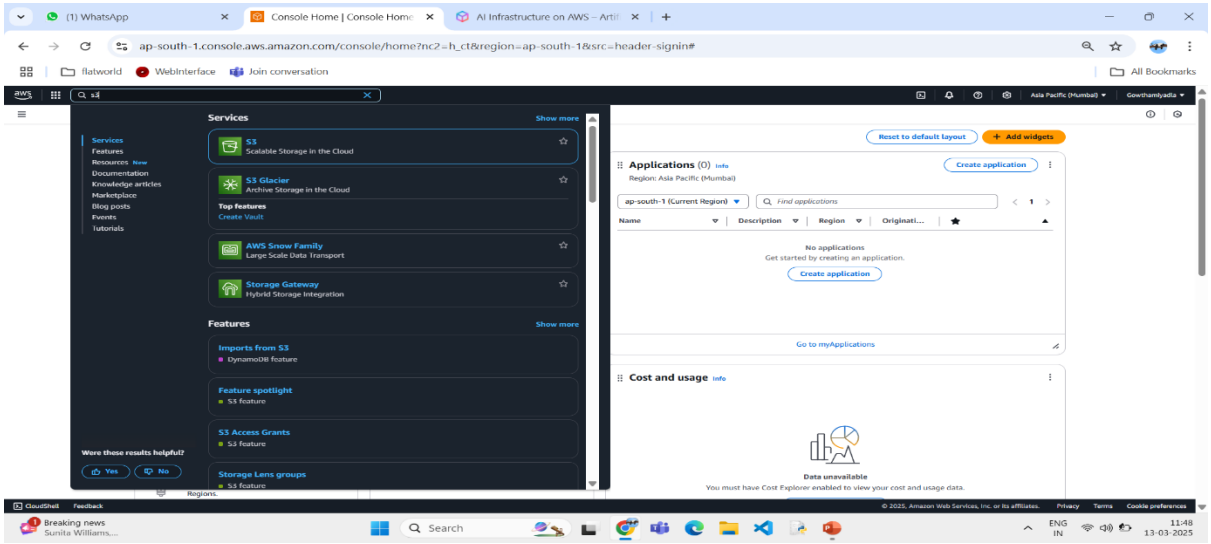
Step 17:- Successfully stopped



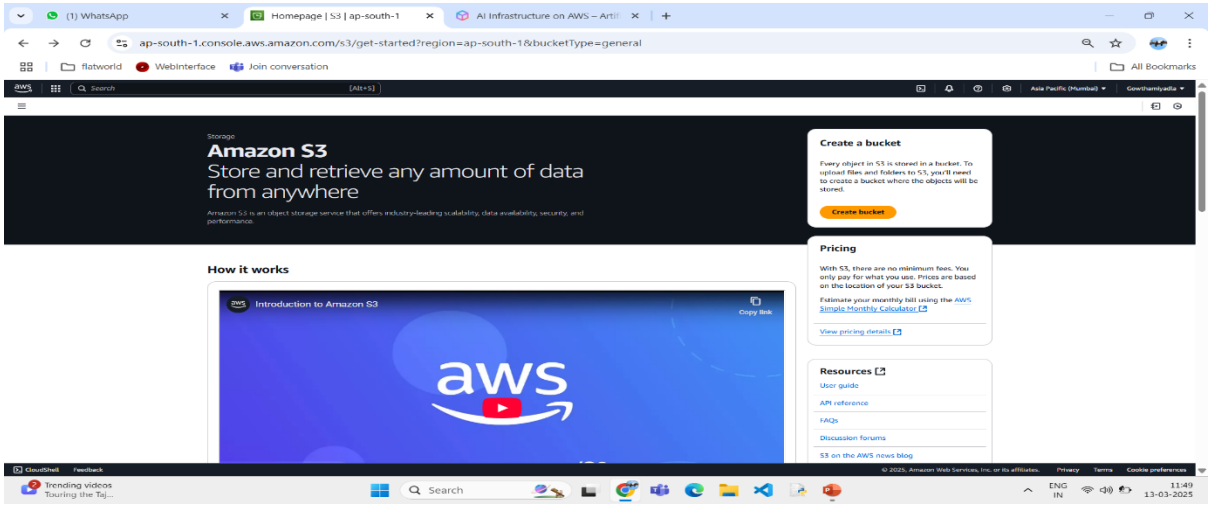
PROJECT16

• Creating of S3 Buckets and Objects

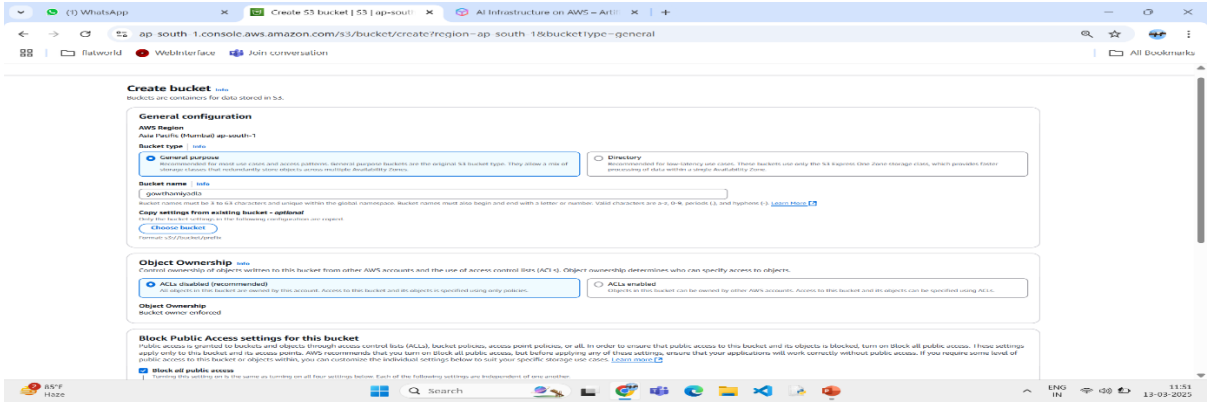
Step1: Go to the search bar and enter “S3 bucket”



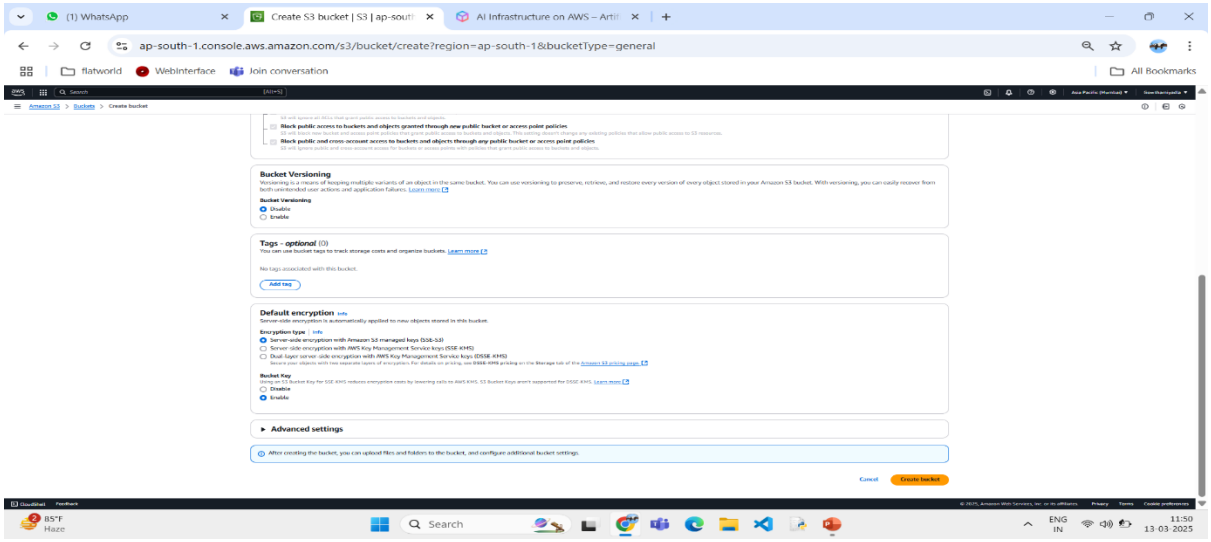
Step2:Click on create bucket



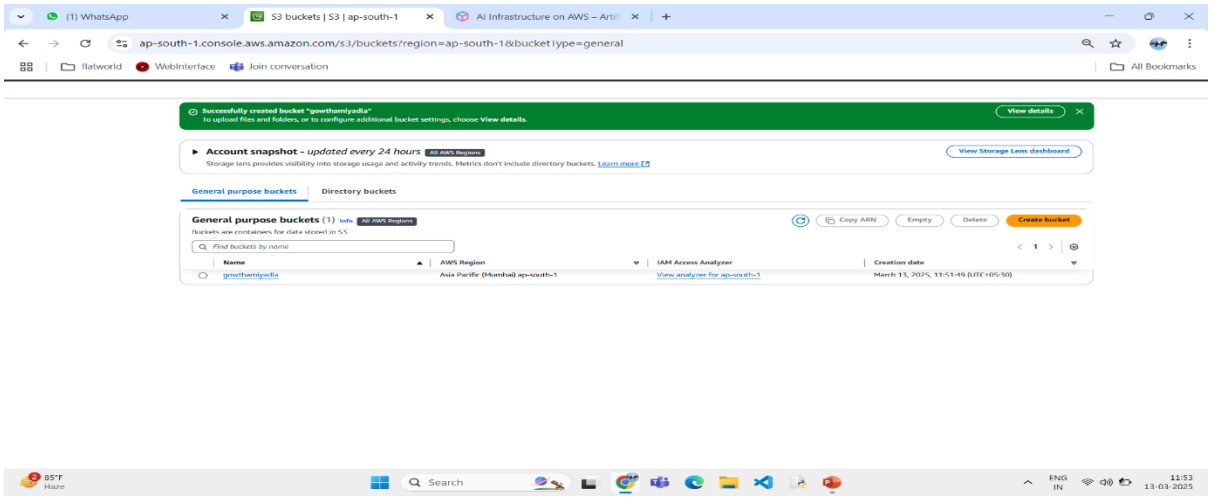
Step3:Give a name in the bucket and click on “create bucket”



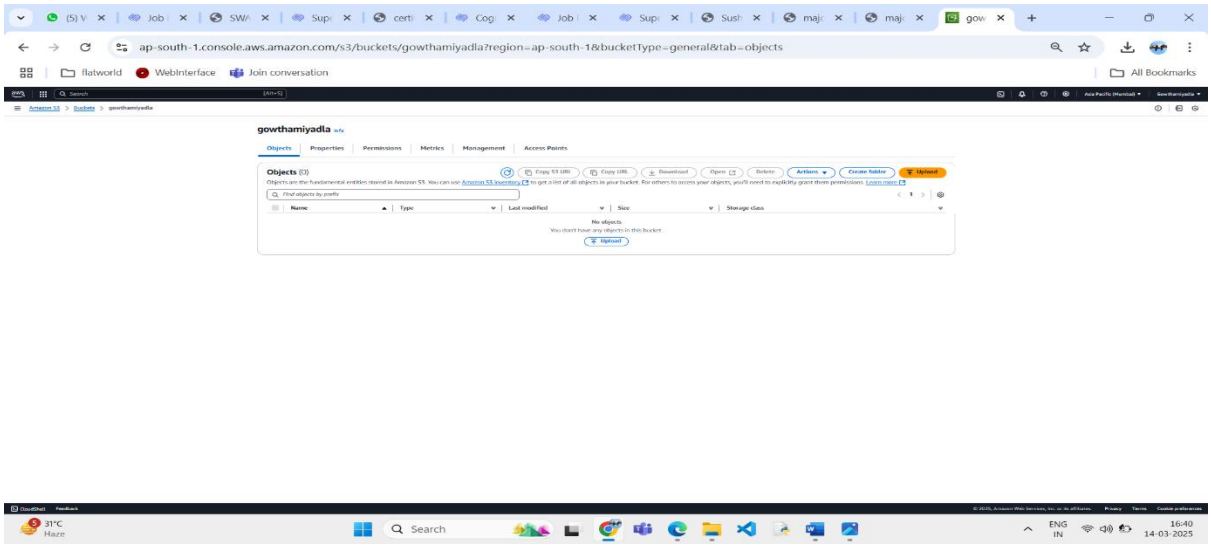
Step 4:- Have a look on default settings and click on create Bucket.



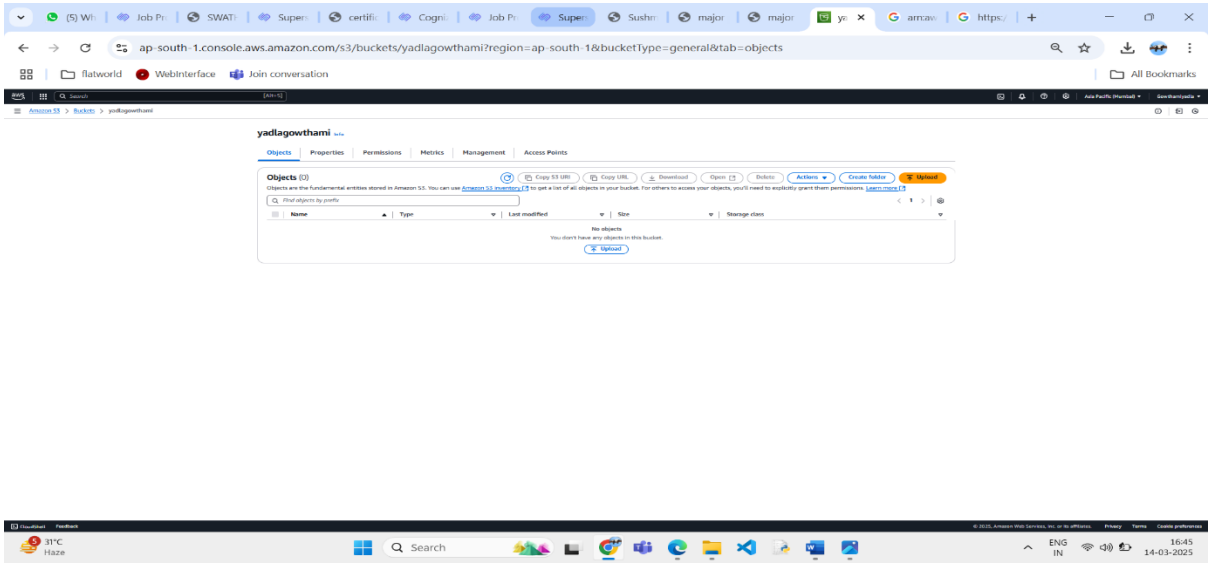
Step 5:-Successfully bucket will be created



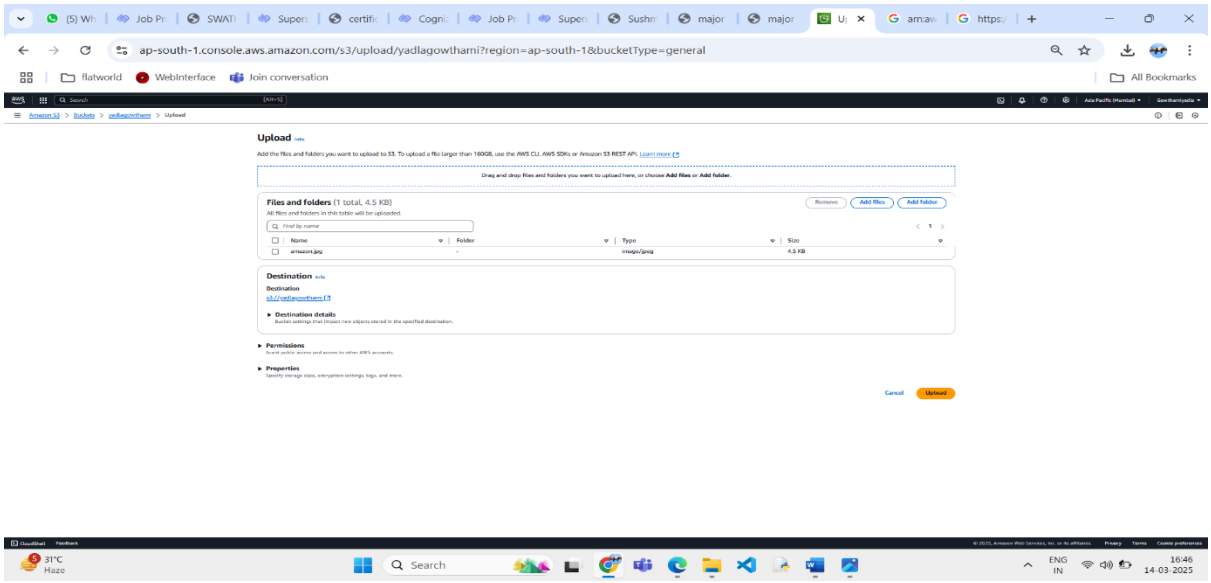
Step 6:- Click on your bucket



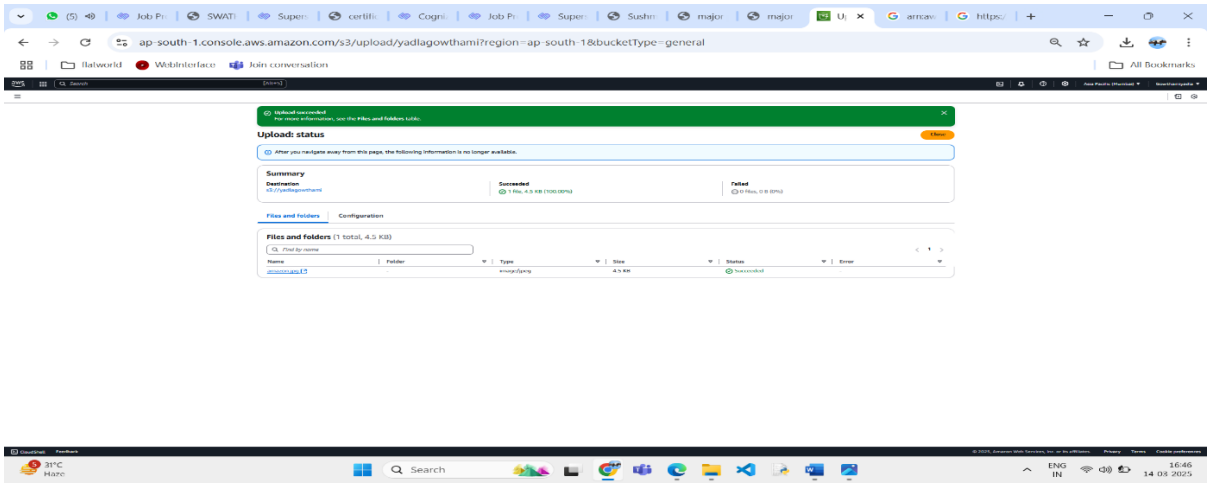
Step 7:- objects will be appeared



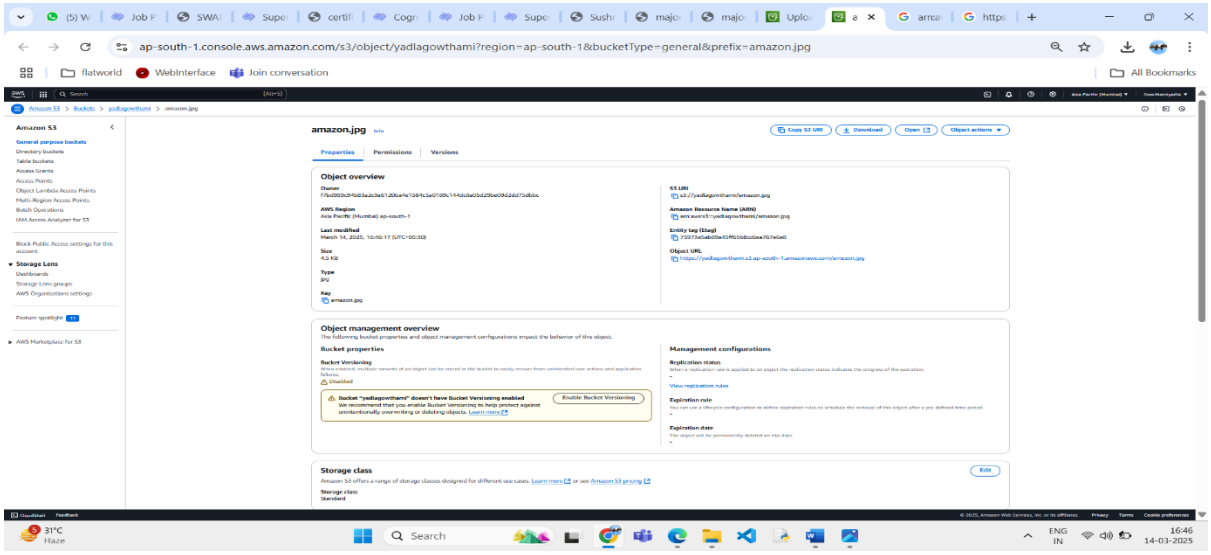
Step 8:- Click on upload. Click on upload object and click on upload



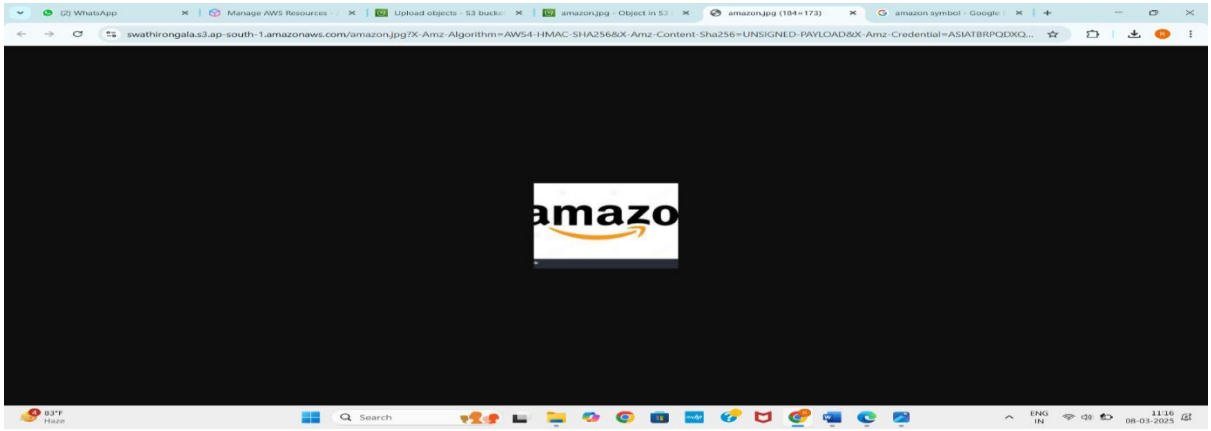
Step 9:-Successfully will be uploaded



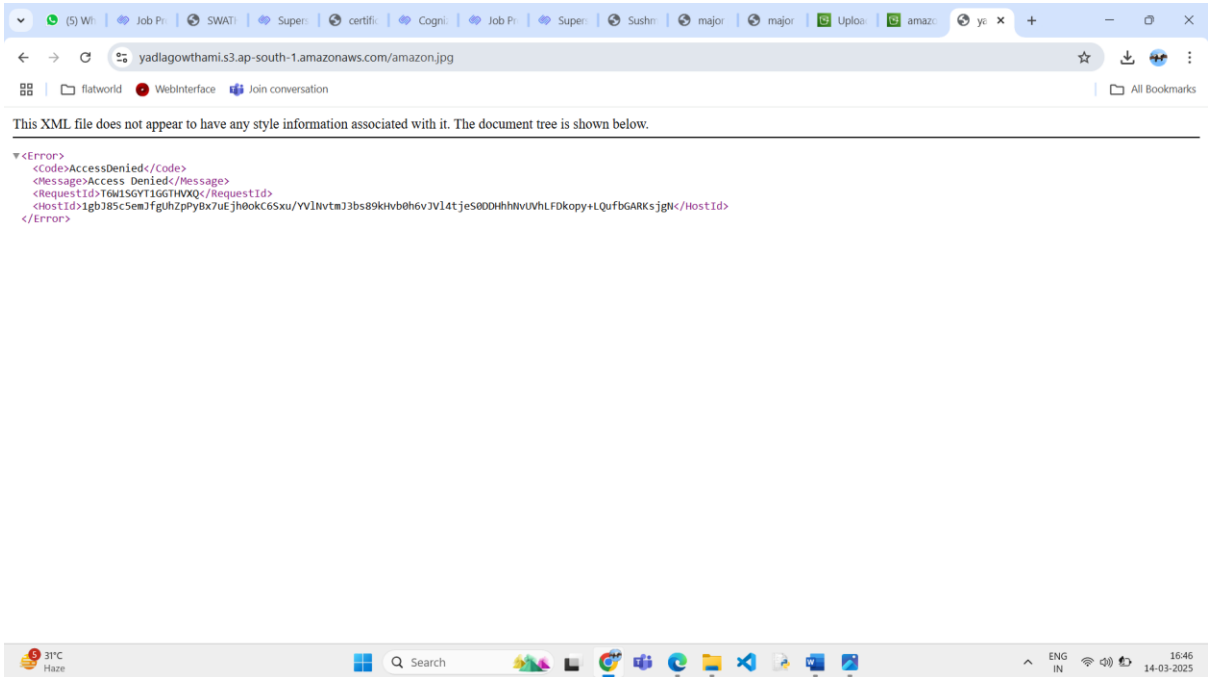
Step 10:- Object details will be overviewed and click on open



Step 11:-Copy the URL and open it



Step 12:- Object denied



MINI PROJECT-1

ADHOC NETWORK-TECH COMPANY,VIZAG
ADITYA DEGREE COLLEGE-RAMNAGAR
LONG-TERM INTERNSHIP

TEAM MEMBERS :-

GANAGALLA LAKSHMI SAI PRASANNA

SINGAMPALLI JAHNAVI

RONGALLA SWATHI VENKATA PARVATHI

YADLA GOWTHAMI

PETCHETI VAISHNAVI DEVI

AIM

RESTRICT EC2 ACTIONS USING IAM POLICES

--MINI PROJECT-1
BY--Y.GOWTHAMI

AGENDA:

CREATE A POLICY THAT ALLOWS USERS TO START/STOP EC2 INSTANCES BUT NOT TERMINATE THEM

CONTENTS

INTRODUCTION:

Amazon Web Services (AWS) is a comprehensive and widely adopted cloud platform that provides a broad set of cloud computing services, offering scalable and reliable infrastructure for businesses of all sizes. Launched in 2006 by Amazon, AWS allows organizations to use IT resources like computing power, storage, databases, machine learning, analytics, and more, on-demand and at scale.

Here are the key components and benefits of AWS

:

1. Core Services of AWS:

Compute Services: AWS offers several compute services, with **Amazon EC2** (Elastic Compute Cloud) being the most notable. It allows users to provision and scale virtual servers (instances) on-demand.

Storage Services: AWS offers various storage solutions like **Amazon S3** (Simple Storage Service) for object storage, Amazon EBS (Elastic Block Store) for persistent storage, and **Amazon Glacier** for long-term, archival storage.

Databases: AWS provides managed database services, including **Amazon RDS** (Relational Database Service), (NoSQL), and **Amazon Aurora**, a high-performance relational database.

Networking: With services like **Amazon VPC** (Virtual Private Cloud), AWS allows users to configure private, isolated networks for resources.

Machine Learning & AI: AWS provides a range of tools like **AWS Lex**, and **AWS Recognition** to help organizations implement machine learning and AI capabilitie

2. **Flexibility and Scalability:**

AWS allows organizations to scale their resources up or down based on demand. The pay-as-you-go model means businesses only pay for what they use, enabling cost savings without compromising performance.

3. Security: Security is a top priority for AWS. It follows strict compliance with major security certifications and standards like ISO 27001, HIPAA, GDPR, and PCI DSS. AWS also provides a variety of security services, including **AWS Identity and Access Management (IAM),** encryption tools, and network security features to protect applications and data.

4. Global Reach: AWS has a massive infrastructure network across the globe, with **data centers in multiple regions** and availability zones. This global reach enables businesses to deploy applications and services closer to end-users for lower latency and better performance.

5. Cost Efficiency: AWS operates on a pay-as-you-go pricing model, where users only pay for the resources they consume. This pricing flexibility helps organizations avoid upfront costs and allows them to scale their infrastructure according to their needs.

6. Support for Hybrid Cloud: AWS also supports hybrid cloud environments, allowing organizations to combine on-premises infrastructure with cloud services. This is facilitated by services like **AWS Outposts** and **AWS Direct Connect**.

AWS has transformed how organizations approach IT infrastructure, enabling them to focus more on their core business operations rather than managing physical hardware. With its range of services, global presence, and flexible pricing, AWS remains a top choice for businesses moving to the cloud.

INTRODUCTION ABOUT RESTRICT EC2 ACTIONS USING IAM POLICES

AWS Identity and Access Management (IAM) allows administrators to control access to Amazon EC2 resources using fine-grained policies. By defining IAM policies, organizations can restrict EC2 actions to enhance security, prevent accidental deletions, and enforce compliance.

1.EC2 ACTIONS:

Amazon EC2 (Elastic Compute Cloud) is a core service in AWS that provides scalable and re sizable computing capacity in the cloud. It allows users to deploy virtual servers, known as EC2 instances, to run applications without having to invest in physical hardware.

Key Features of EC2:

1.Scalability – EC2 enables users to quickly scale up or down based on demand.

2. Security & Control – EC2 integrates with IAM for access management and supports security groups for network protection.

3. Flexible Storage Options – EC2 instances use Amazon EBS (Elastic Block Store) for persistent storage and instance store for temporary storage.

2.IAM POLICES:

An AWS IAM (Identity and Access Management) policy is a JSON document that defines permissions for users, groups, and roles within an AWS account. IAM policies help control who can access AWS resources and what actions they can perform.

Key Features of IAM POLICIES:

1. Fine-Grained Access Control – Policies specify which AWS services and actions are allowed or denied.

2.Attach to Users, Groups, or Roles – IAM policies can be assigned to individual users, groups of users, or IAM roles.

3.Supports Conditions – Policies can include conditions to restrict access based on IP addresses, time, MFA authentication, or specific tags.

ALGORITHM OF EC2 ACTIONS USING IAM POLICES:

Step 1: Login in to the AWS with Rootuser

Step 2: Click on Policies and then Create policy

Step 3: After clicking on create policies then select JSON on tab and enter the code

Step 4: After entering the code click on next and give the policy name then click on create policy

Step 5: So the policy successfully created

Step 6: Now we have to attach the policy to the Users, So click on users then select the user which you want to attach the policy

Step 7: After selecting the user Click on Add permissions

Step 8: In that permissions select Attach policies directly And select the policy which you want to Attach

Step 9: Then click on Add permission on the tab

Step 10: So successfully we gave the permissions to the policy Now we can check as below steps

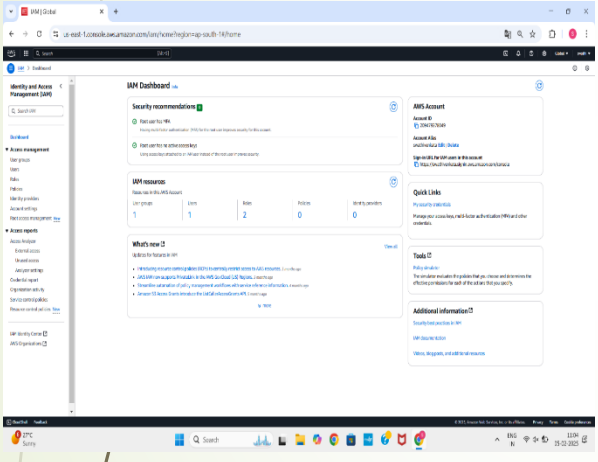
Step 11: Now we have to login in to the user which we used above to give the permissions And then go to EC2 click on instances Then select the instance which you want to check. Here we successfully started the instance.

Step 12: Now we successfully stopped the running instance

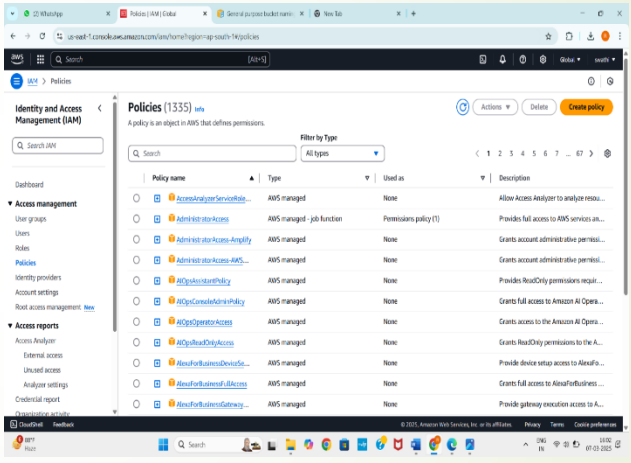
Step 13: We tried to terminate the stopped instance but it showed an error . So our Project is successfully Completed

PROCESS OF EC2 ACTIONS USING IAM POLICES:

Step 1: Login in to the AWS with Root user

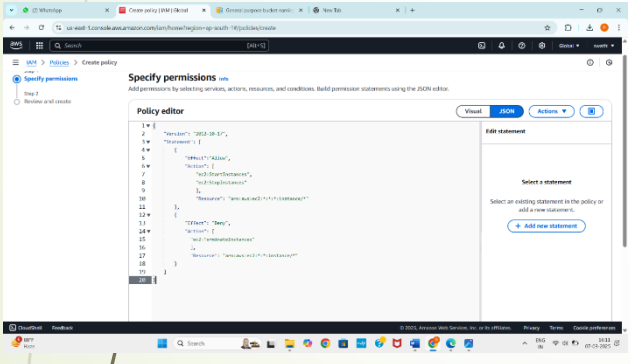


Step 2: Click on Policies and then Create policy



PROCESS OF EC2 ACTIONS USING IAM POLICES:

Step 3: After clicking on create policies then select JSON on tab and enter the code



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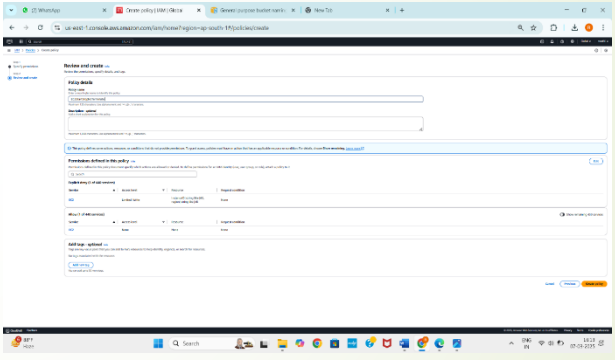
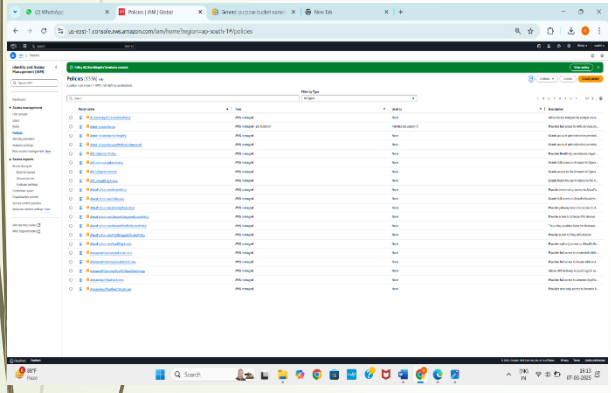


PROCESS OF EC2 ACTIONS USING IAM POLICES:

Step 5: So the policy successfully created



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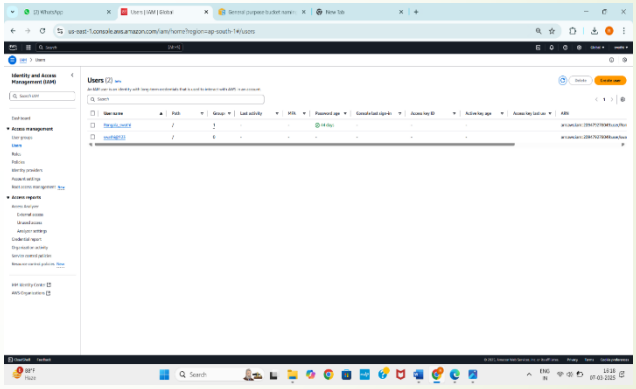
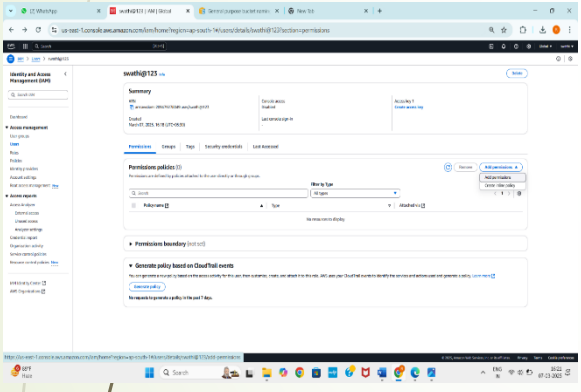
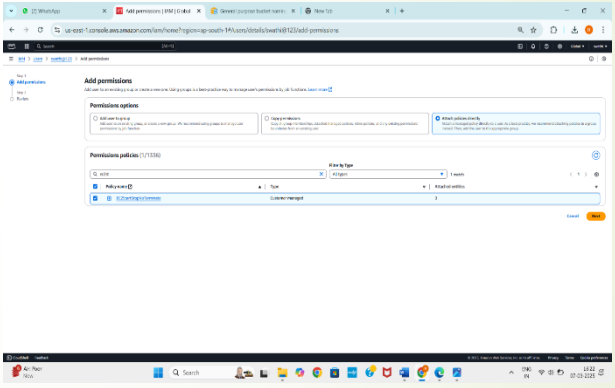


PROCESS OF EC2 ACTIONS USING IAM POLICES:

Step 7: After selecting the user Click on Add permissions

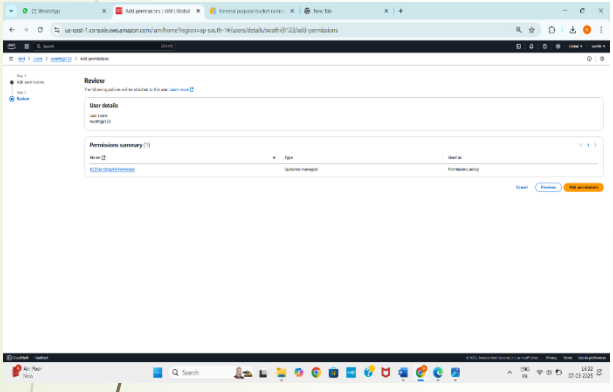


Step 8: In that permissions select Attach policies directly And select the policy which you want to Attach



PROCESS OF EC2 ACTIONS USING IAM POLICES:

Step 9: Then click on Add permission on the tab



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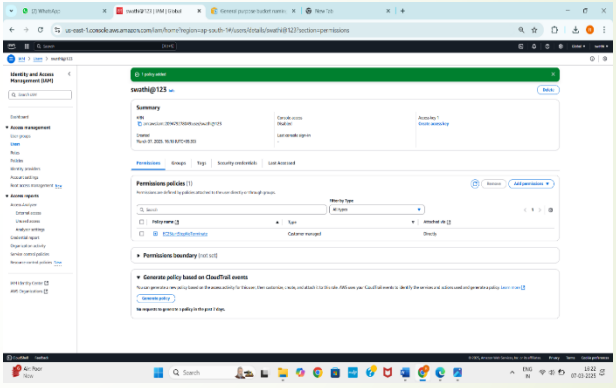

PROCESS OF EC2 ACTIONS USING IAM POLICES:

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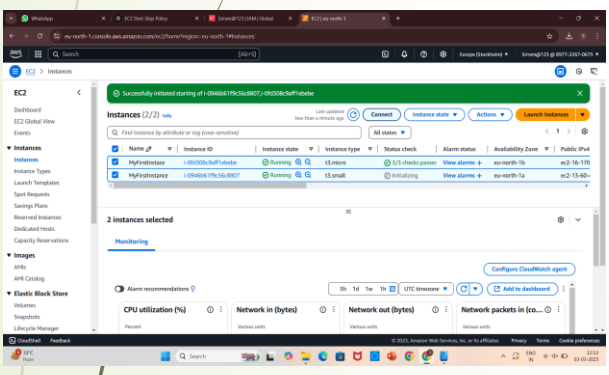
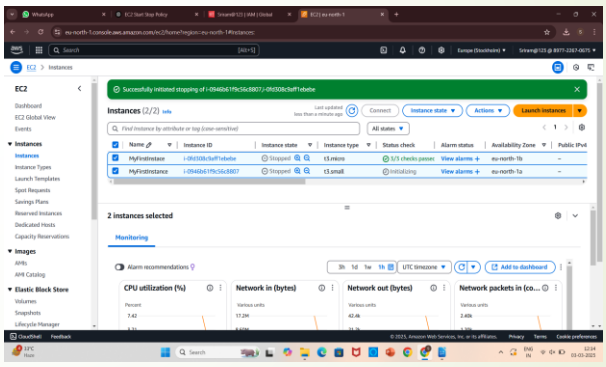
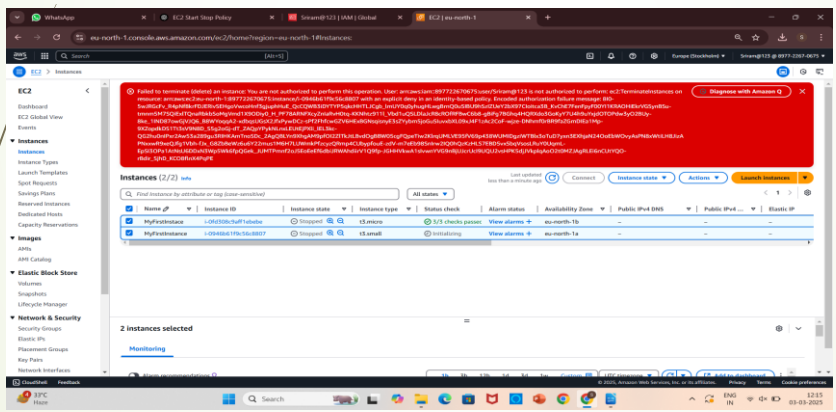


Step 12: Now we successfully stopped the running instance



PROCESS OF EC2 ACTIONS USING IAM POLICES:

Step 13: We tried to terminate the stopped instance but it showed an error . So our Project is successfully Completed



CONCLUSION

In this project, we successfully demonstrated how to restrict EC2 actions using AWS Identity and Access Management (IAM) policies. By implementing least privilege principles, we ensured that users and roles had only the necessary permissions to perform specific EC2 operations, reducing the risk of unauthorized access and potential security threats.

Through the creation of well-defined IAM policies, we restricted actions such as launching, terminating, and modifying EC2 instances based on user roles, groups, and conditions. This approach enhances security, minimizes human errors, and aligns with AWS best practices for access control.

enforcing IAM policies for EC2 resource management is a crucial step in securing cloud environments. Organizations should continuously monitor and refine these policies to adapt to evolving security requirements and compliance standards. By integrating IAM policies with AWS monitoring tools like AWS CloudTrail and AWS Config, administrators can maintain a robust security posture while ensuring operational efficiency.

THANKYOU

MINI PROJECT-2

ADHOC NETWORK-TECHCOMPANY,VIZAG
ADITYA DEGREE COLLEGE-RAMNAGAR
LONG-TERM INTERNSHIP

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SAI PRASANNA
SINGAMPALLI JAHNAVI
RONGALLA SWATHI
VENKATA PARVATHI
YADLA GOWTHAMI
PETCHETI VAISHNAVI
DEVI

CREATE A DROP BOX

--MINI PROJECT-1

BY-R.SWATHI

AGENDA:

To securely store files, documents, and media in the cloud.

INTRODUCTION:

CONTENTS

Amazon Web Services (AWS) is a comprehensive and widely adopted cloud platform that provides a broad set of cloud computing services, offering scalable and reliable infrastructure for businesses of all sizes. Launched in 2006 by Amazon, AWS allows organizations to use IT resources like computing power, storage, databases, machine learning, analytics, and more, on-demand and at scale.

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INTRODUCTION

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INTRODUCTION

6. Support for Hybrid Cloud:

CONTENTS

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AWS has transformed how organizations approach IT infrastructure, enabling them to focus more on their core business operations rather than managing physical hardware. With its range of services, global presence, and flexible pricing, AWS remains a top choice for businesses moving to the cloud.

INTRODUCTION ABOUT CREATING DROP BOX

Dropbox is a cloud-based file storage and collaboration platform that allows users to store, sync, and share files across devices. Founded in 2007 by Drew Houston and Arash Ferdowsi, Dropbox simplifies file management by enabling users to access their documents, photos, and videos from anywhere with an internet connection.

Key Features of Dropbox:

1. Cloud Storage – Store files securely in the cloud and access them from multiple devices

2. File Synchronization – Automatically sync files across computers, smartphones, and tablets.

3. File Sharing – Share files and folders with others via links or collaboration tools.

4. Collaboration Tools – Work on documents with team members using Dropbox Paper and real-time commenting.

5.Version Control & Backup – Restore previous versions of files and recover deleted files.

6.Security & Encryption – Protect files with encryption and two-factor authentication.

Benefits of Creating a Dropbox Account

1. Easy File Access from Anywhere – Store files in the cloud and access them from any device with an internet connection.

2. Automatic File Synchronization – Changes made to files are updated across all linked devices in real-time.

3. Secure Cloud Storage – Files are protected with encryption, two-factor authentication, and backup options.

4. Simple File Sharing – Share files and folders with others via links, without needing to send large email attachments.

ALGORITHM OF CREATING DROP BOX:

STEP 1: Open google and search dropbox.com and it will open the google page as shown in the picture

SETP2: Now sign up to create an account in dropbox.

STEP3:Now enter your details and create your account.

STEP4: It will allow to open this page now click on the free for 2gb data to login to your account.

STEP5: Now this will it will allow to open this page now click the personl to open next page

STEP6:Now it will open this page next we can allow access to upload our files here.

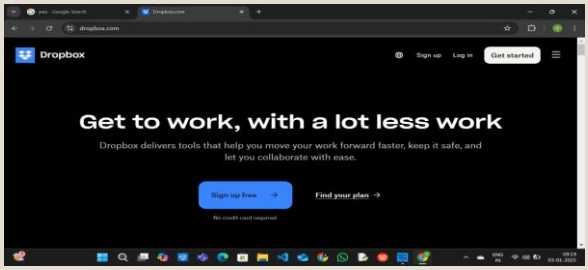
STEP7:Now allow to create folder. And give a name to the folder.

STEP8: The file selected from folder will now allow to upload in the dropbox.

STEP9: Now the file is been uploaded in drop box.

PROCESS OF CREATING DROP BOX:

STEP 1: Open google and search dropbox.com and it will open the google page as shown in the picture



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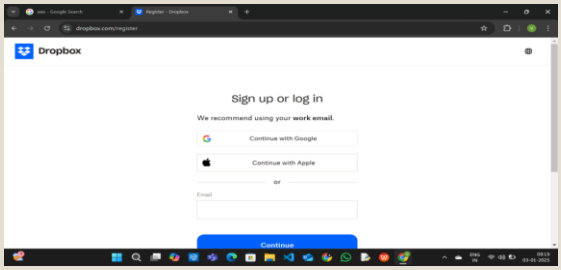
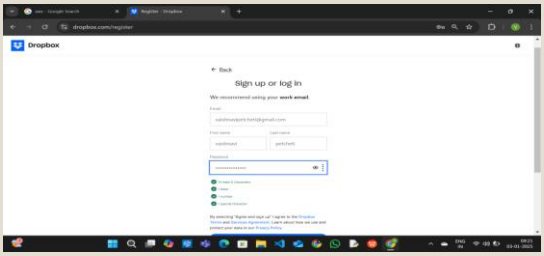
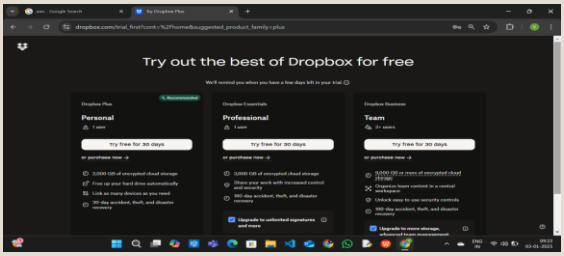


PROCESS OF CREATING DROP BOX:

STEP3: Now enter your details and create your account.

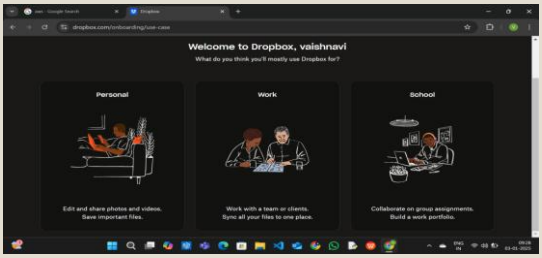


STEP4: It will allow to open this page now click on the free for 2gb data to login to your account.

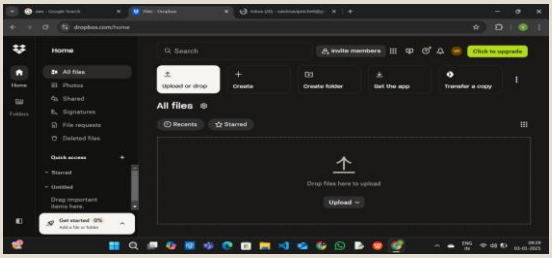


PROCESS OF CREATING DROP BOX:

STEP5: Now this will it will allow to open this page now click the personl to open next page

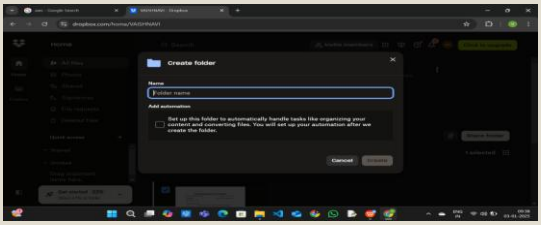


STEP6: Now it will open this page next we can allow access to upload our files here.

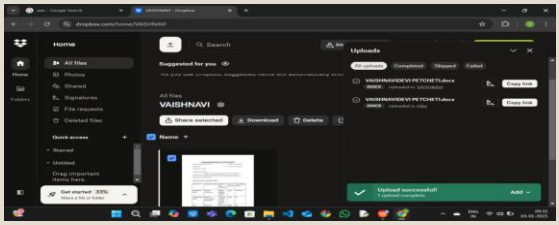


PROCESS OF CREATING DROP BOX:

STEP7: Now allow to create folder. And give a name to the folder.

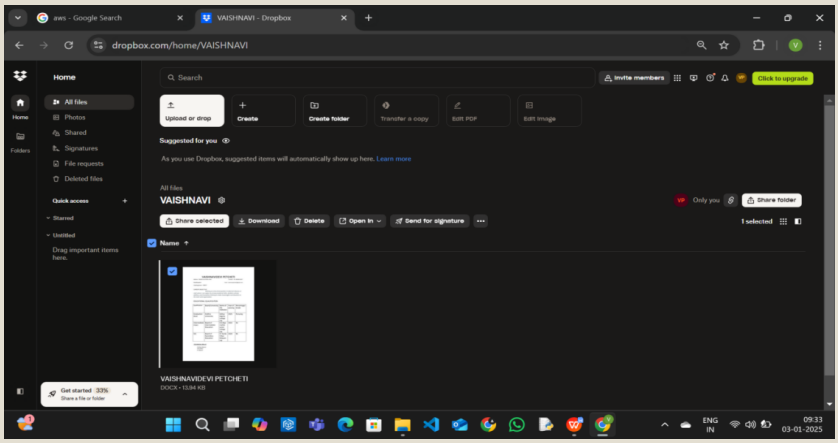


STEP8: The file selected from folder will now allow to upload in the dropbox.



PROCESS OF CREATING DROP BOX:

STEP9: Now the file is been uploaded in drop box.



CONCLUSION OF CREATING DROP BOX:

Creating a Dropbox account offers a secure, efficient, and convenient way to store, access, and share files from anywhere. With its seamless synchronization, collaboration tools, and strong security features, Dropbox enhances productivity for both individuals and businesses. Whether for personal use or professional teamwork, Dropbox simplifies file management, ensures data protection, and integrates with various apps to streamline workflows. By leveraging cloud storage, users can enjoy flexibility, reliability, and peace of mind, making Dropbox a valuable solution for modern digital needs.

Creating a Dropbox account provides a secure and convenient way to store, access, and share files from anywhere. With seamless synchronization, collaboration tools, and strong security, it enhances productivity and ensures data protection for both personal and professional use.

Dropbox simplifies file management and collaboration by offering cloud-based storage that is accessible anytime, anywhere. It is an essential tool for both personal and professional use, ensuring your files are secure and always within reach.

THANKYOU

MAJOR PROJECT

ADHOC NETWORK-TECH COMPANY,VIZAG

ADITYA DEGREE COLLEGE-RAMNAGAR
LONG-TERM INTERNSHIP

-- Major Project
BY
YADLA GOWTHAMI

AIM

CREATING OF S3 BUCKETS AND OBJECTS

AGENDA:

TITLE
INTRODUCTION
ALGORITHM
PROCESS
CONCLUSION

Introduction to S3 Buckets and Objects

Amazon Simple Storage Service (Amazon S3) is a scalable, secure, and highly available object storage service provided by AWS. It is designed to store and retrieve any amount of data from anywhere on the web. S3 is widely used for data backup, content distribution, static website hosting, and big data analytics.

What Are S3 Buckets and Objects?

S3 Bucket:
An S3 bucket is a logical container for storing objects (files). Each bucket must have a unique name across all AWS accounts and is associated with a specific AWS region.

S3 Objects:
Objects are the actual data stored in S3. Each object consists of:

Data (file content)

Metadata (key-value pairs with additional information about the object)

A unique key (filename or path within the bucket)

Purpose of S3 Buckets and Objects

1. **Secure Data Storage**:

   Store and manage data securely with access control policies.

2. **Scalability**:

   Automatically scales to handle growing amounts of data.

3. **High Availability**:

   Provides 99.99% availability and durability.

4. **Cost-Effective**:

   Pay only for the storage and bandwidth used.

5. **Flexible Data Retrieval**:

   Supports standard, infrequent access, and archive storage classes.

ALGORITHM OF S3 BUCKETS AND OBJECTS:

Step1: Go to the search bar and enter “S3 bucket”

Step2:Click on create bucket

Step3:Give a name in the bucket and click on “create bucket”

Step 4:Have a look on default settings and click on create Bucket.

Step 5:Successfully bucket will be created

Step 6:Click on your bucket

Step 7:objects will be appeared

Step 8:Click on upload. Click on upload object and click on upload

Step 9: Successfully will be uploaded

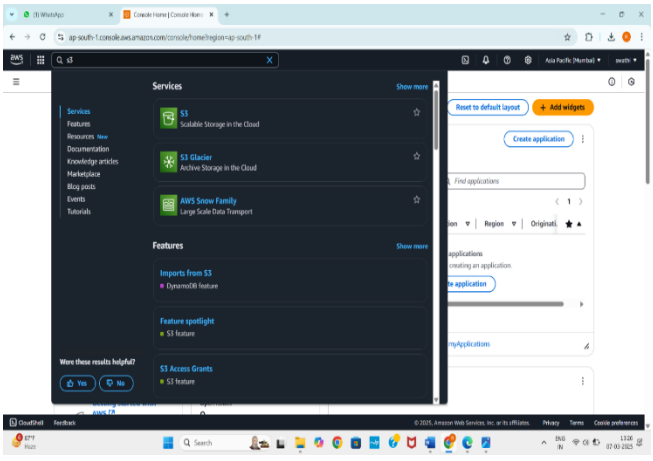
Step 10:Object details will be overviewed and click on open

Step 11:Copy the URL and open it

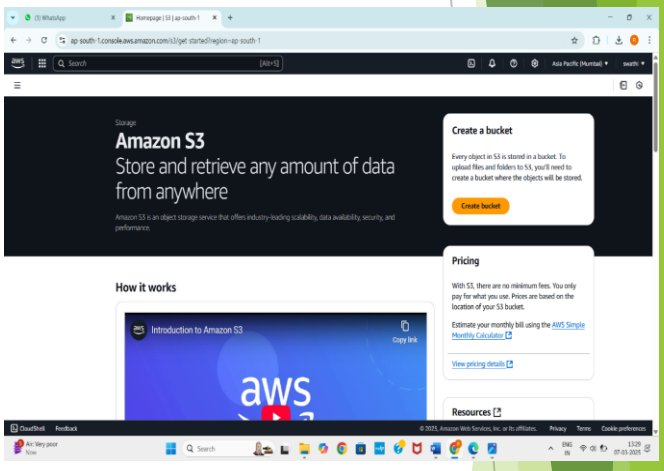
Step 12:Object denied

PROCESS OF S3 BUCKETS AND OBJECTS:

Step 1: Go to the search bar and enter “S3 bucket”

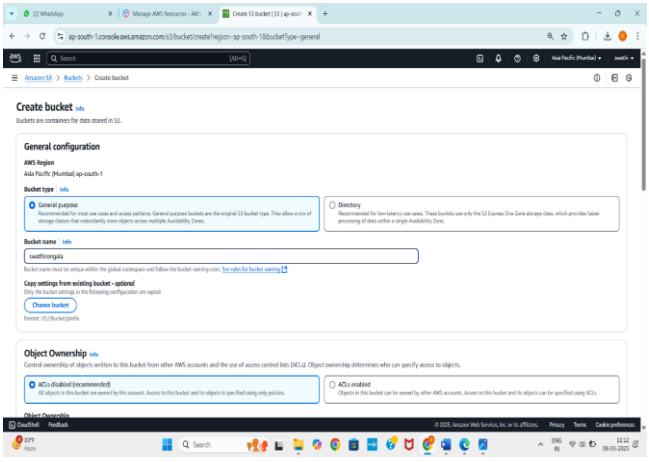


Step 2: :Click on create bucket

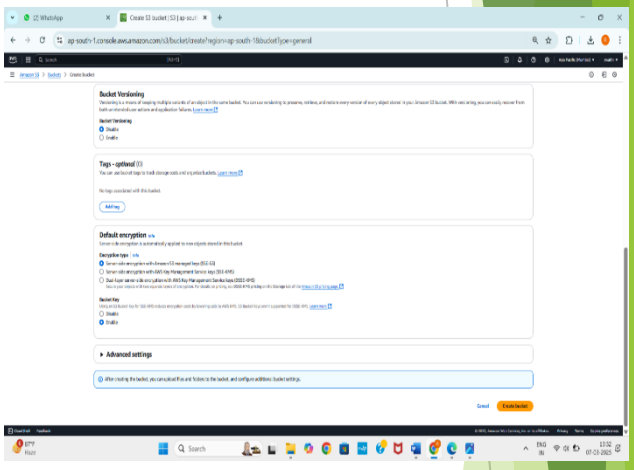


PROCESS OF S3 BUCKETS AND OBJECTS:

Step 3: Give a name in the bucket and click on “create bucket”

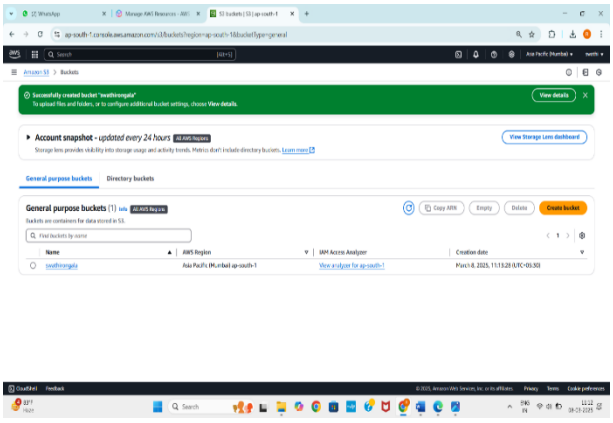


Step 4: Have a look on default settings and click on create Bucket.

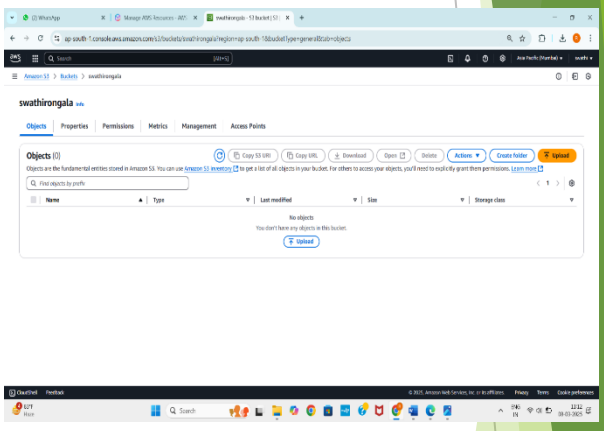


PROCESS OF S3 BUCKETS AND OBJECTS :

Step 5: Successfully bucket will be created

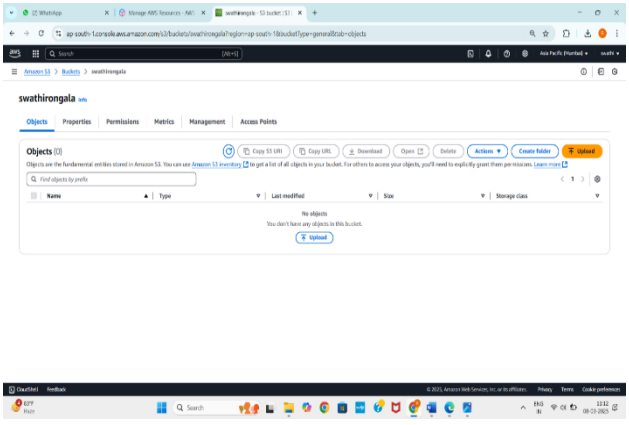


Step 6: Click on your bucket

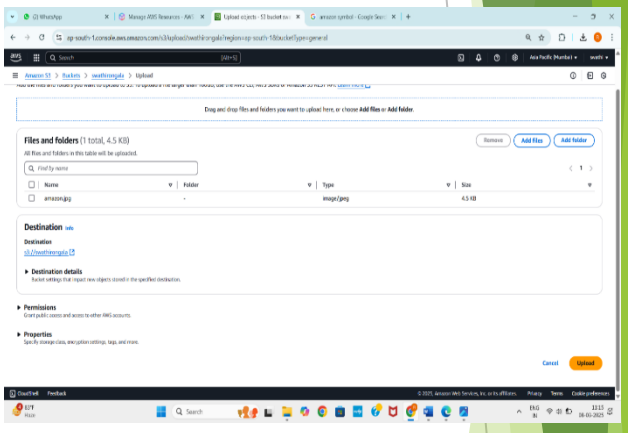


PROCESS OF S3 BUCKETS AND OBJECTS :

Step 7: :objects will be appeared

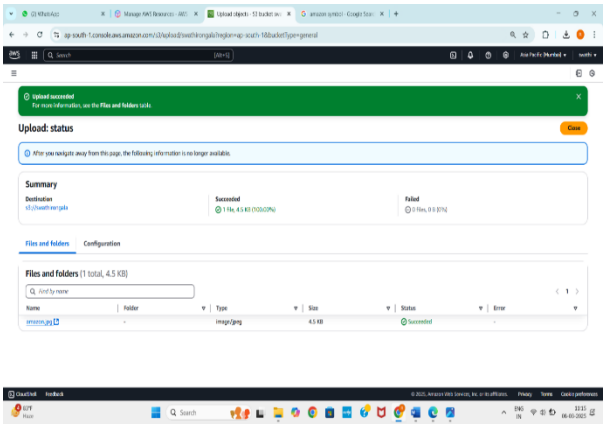


Step 8: Click on upload. Click on upload object and click on upload

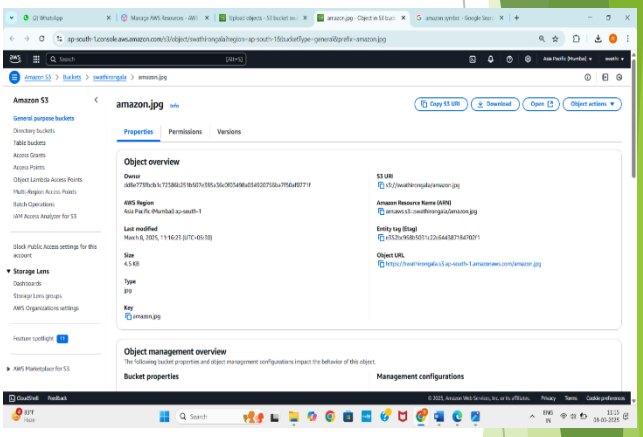


PROCESS OF S3 BUCKETS AND OBJECTS :

Step 9: Successfully will be uploaded

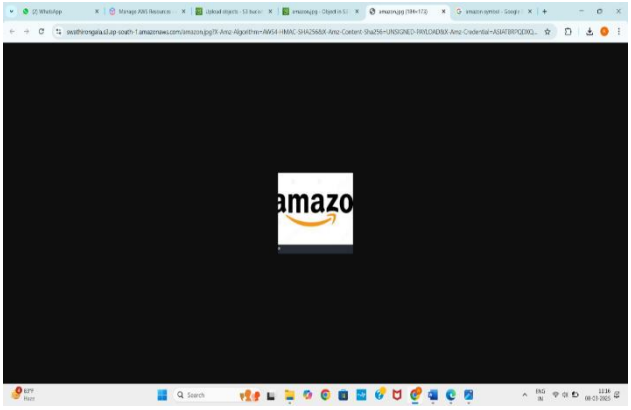


Step 10: Object details will be overviewed and click on open

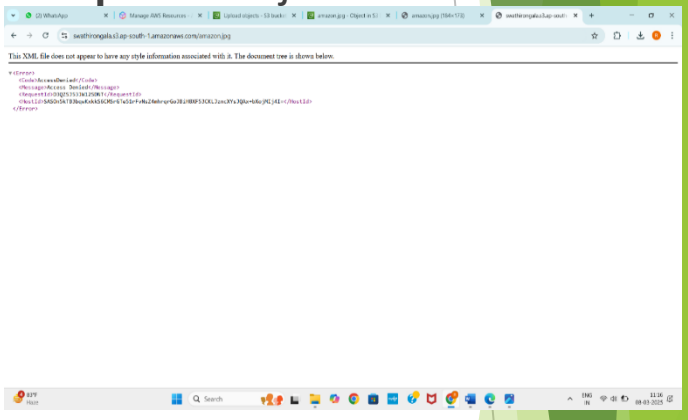


PROCESS OF S3 BUCKETS AND OBJECTS :

Step 11: Copy the URL and open it



Step 12: Object denied



Conclusion on Creating S3 Buckets and Objects:

1. **Bucket Creation :**

   Buckets act as containers for storing objects.

   Each bucket must have a unique name globally across AWS.

   You can configure settings like region, versioning and encryption.

2. **Object Storage:**

   Objects (files, data, images, etc.) are stored inside buckets.

   Each object has a unique key (filename/path).

   Metadata and access permissions can be assigned to each object.

3**. Permissions & Security:**

   Use IAM policies, bucket policies, and ACLs for access control

   Enable encryption (SSE-S3, SSE-KMS, SSE-C) for data protection.

THANKYOU