Assignment sheet for IAM.

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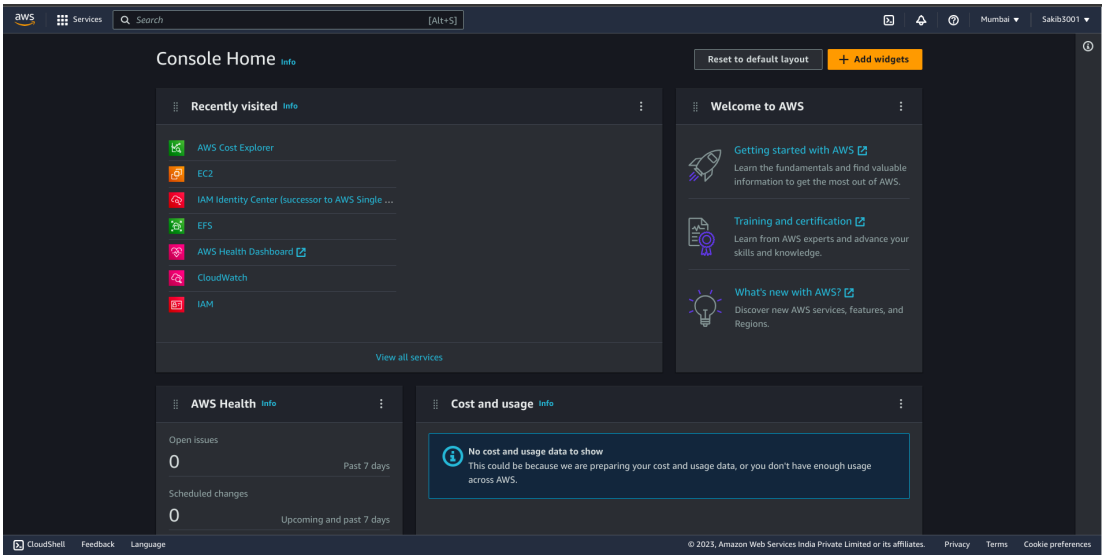
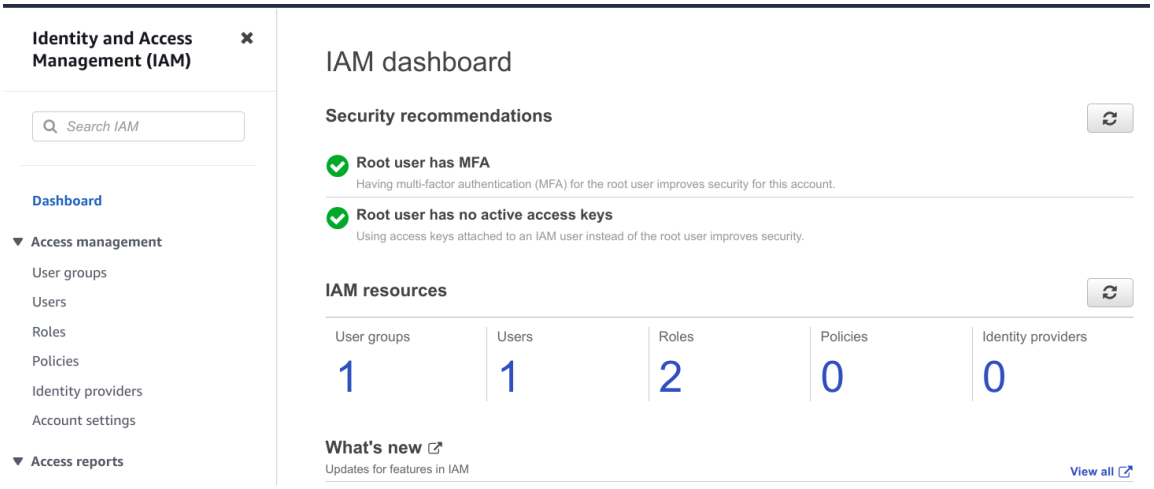
Assignment 1:- Create an IAM user with username of your own wish and grant administrator policy.

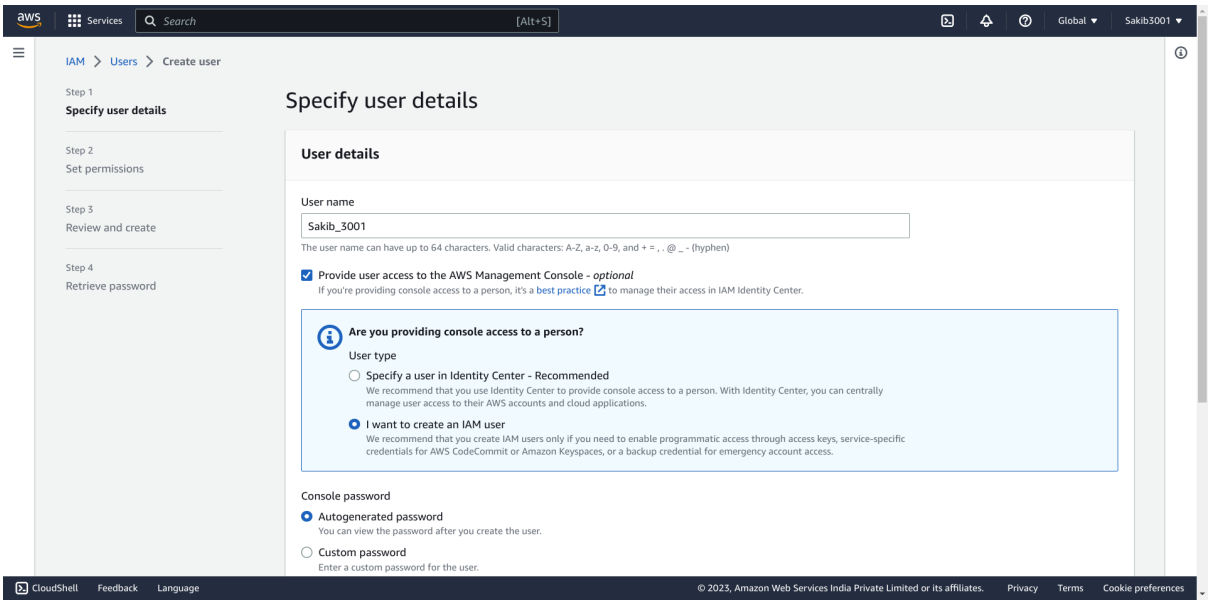
Here I have logged in with my root account.



Now I have gone to the IAM (Identity and Access Management) dashboard.



Here I am creating a user named → Sakib_3001



Here the AdministratorAccess policy has been given separately.

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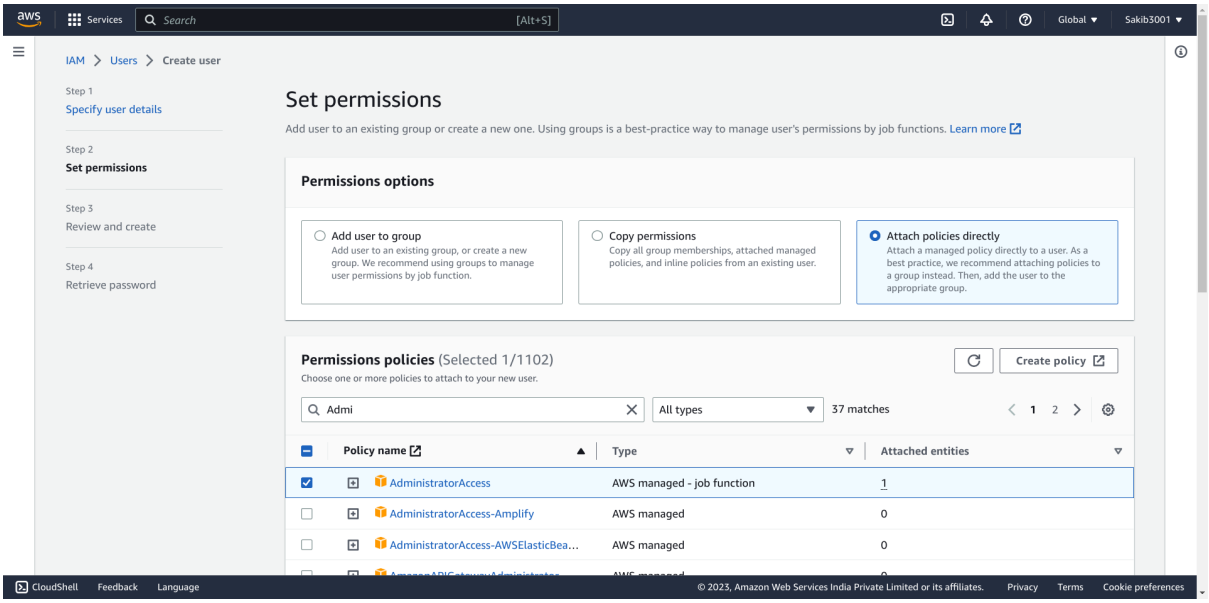
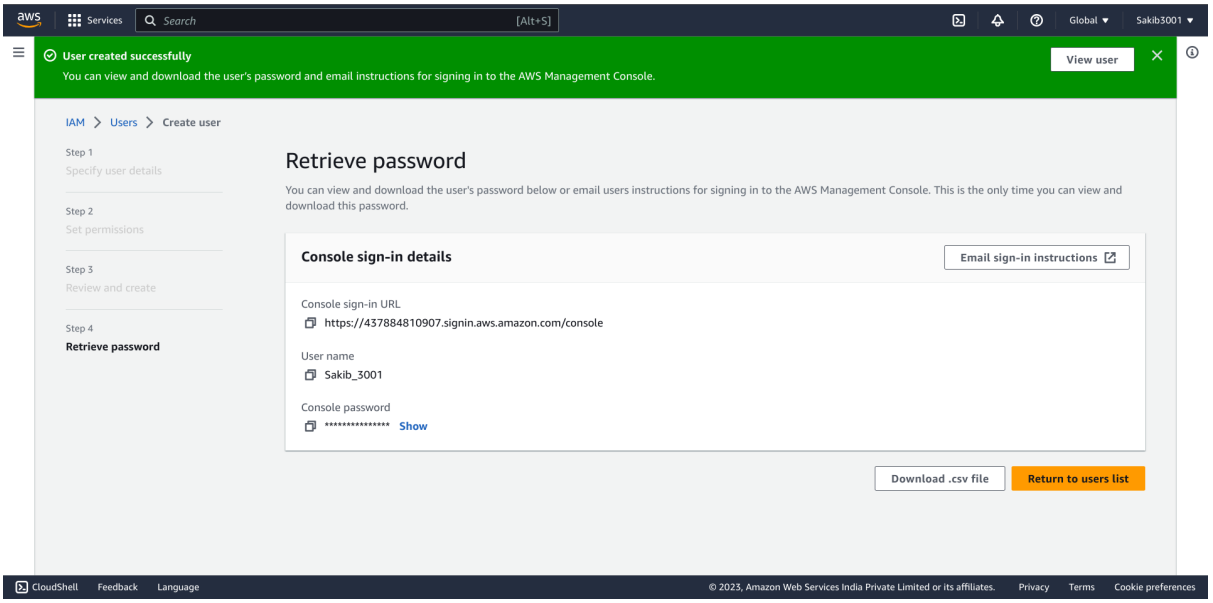
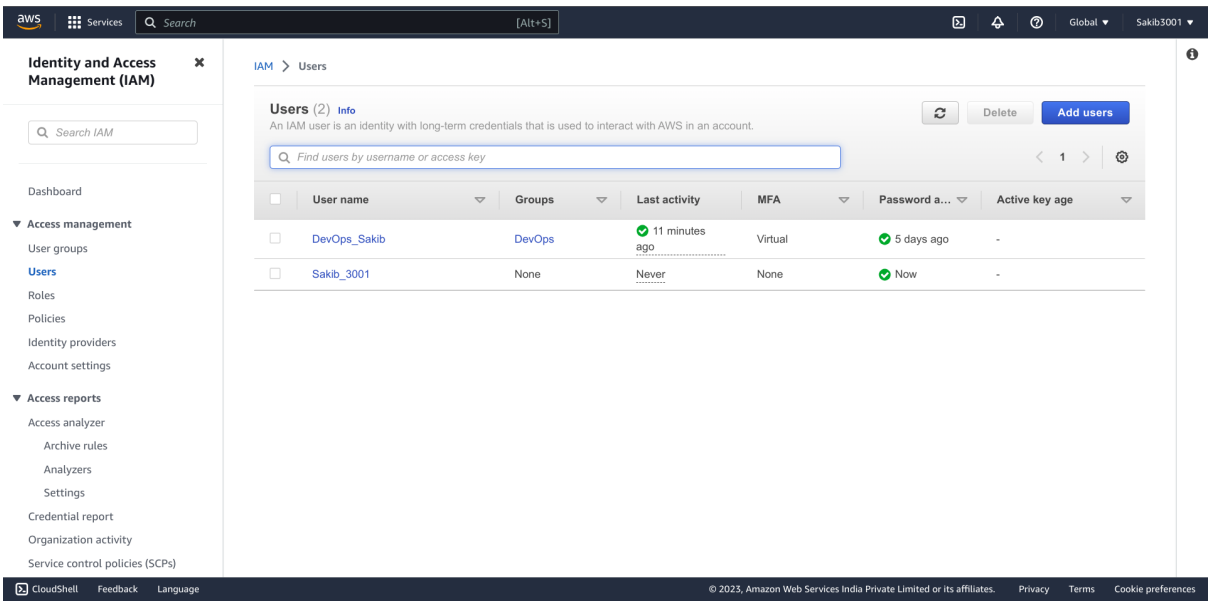


The user has been created successfully.





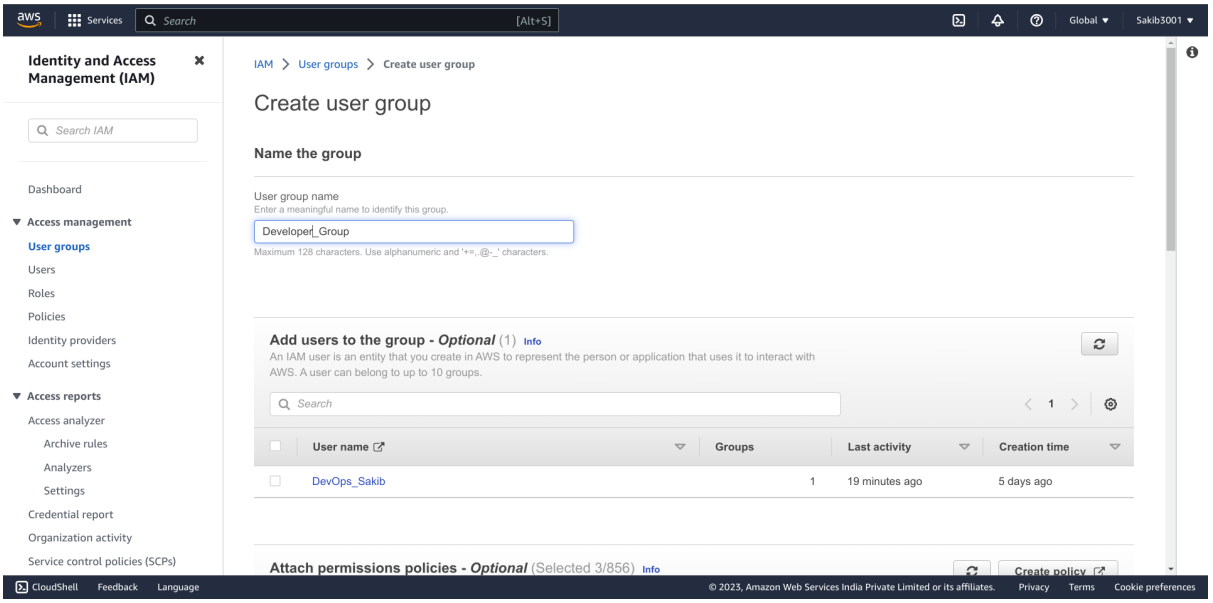
Assignment 2

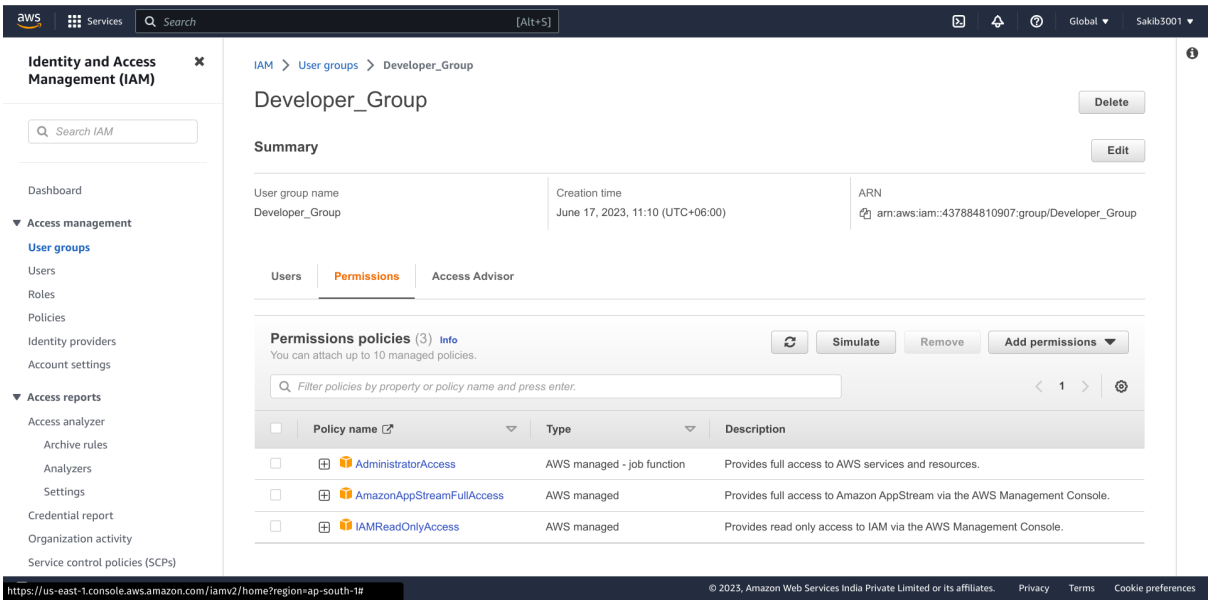
:- Hello students, in this assignment you need to prepare a developers team of avengers.

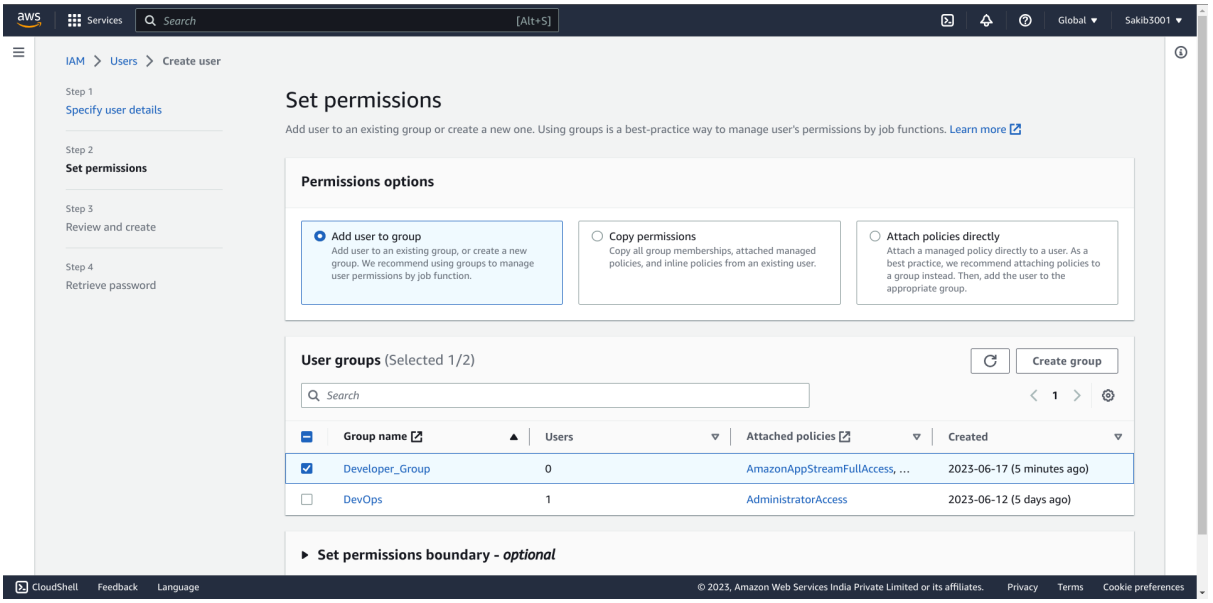
- Create 3 IAM users of avengers and assign them in developer's groups with

IAM policy.

A group named → developer_group with AdministratorAccess, IAMReadOnlyAccess, AmazonAppStreamAccess has been added.






Services
Search
[Alt+S]
Global
Sakib3001
IAM > Users > Create user
Step 1
Specify user details
Step 2
Set permissions
Step 3
Review and create
Step 4
Retrieve password
Set permissions
Add user to an existing group or create a new one. Using groups is a best-practice way to manage user's permissions by job functions. Learn more
Permissions options
Add user to group
Add user to an existing group, or create a new group. We recommend using groups to manage user permissions by job function.
Copy permissions
Copy all group memberships, attached managed policies, and inline policies from an existing user.
Attach policies directly
Attach a managed policy directly to a user. As a best practice, we recommend attaching policies to a group instead. Then, add the user to the appropriate group.
User groups (Selected 1/2)
Create group
Search
1
Group name
Users
Attached policies
Created
Developer_Group
0
AmazonAppStreamFullAccess, ...
2023-06-17 (5 minutes ago)
DevOps
1
AdministratorAccess
2023-06-12 (5 days ago)
Set permissions boundary - optional
CloudShell
Feedback
Language
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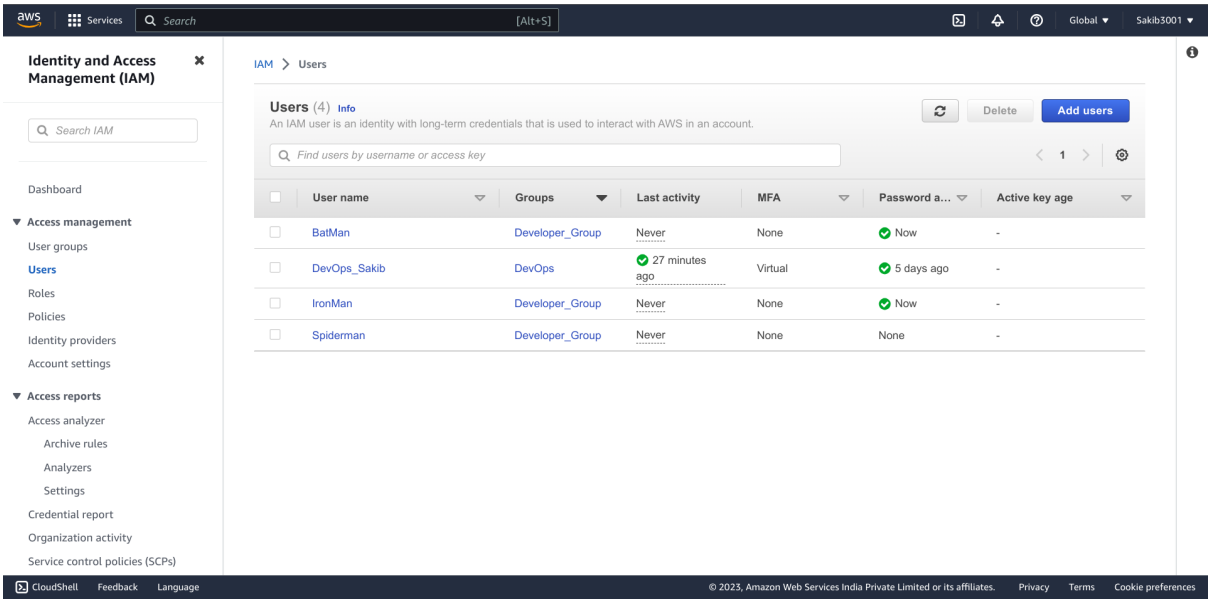
Services
Search
[Alt+S]
Global
Sakib3001
Identity and Access Management (IAM)
Search IAM
Dashboard
Access management
User groups
Users
Roles
Policies
Identity providers
Account settings
Access reports
Access analyzer
Archive rules
Analyzers
Settings
Credential report
Organization activity
Service control policies (SCPs)
IAM > Users
Users (4) Info
An IAM user is an identity with long-term credentials that is used to interact with AWS in an account.
Delete
Add users
Find users by username or access key
1
User name
Groups
Last activity
MFA
Password a...
Active key age
BatMan
Developer_Group
Never
None
Now
-
DevOps_Sakib
DevOps
27 minutes ago
Virtual
5 days ago
-
IronMan
Developer_Group
Never
None
Now
-
Spiderman
Developer_Group
Never
None
None
-
CloudShell
Feedback
Language
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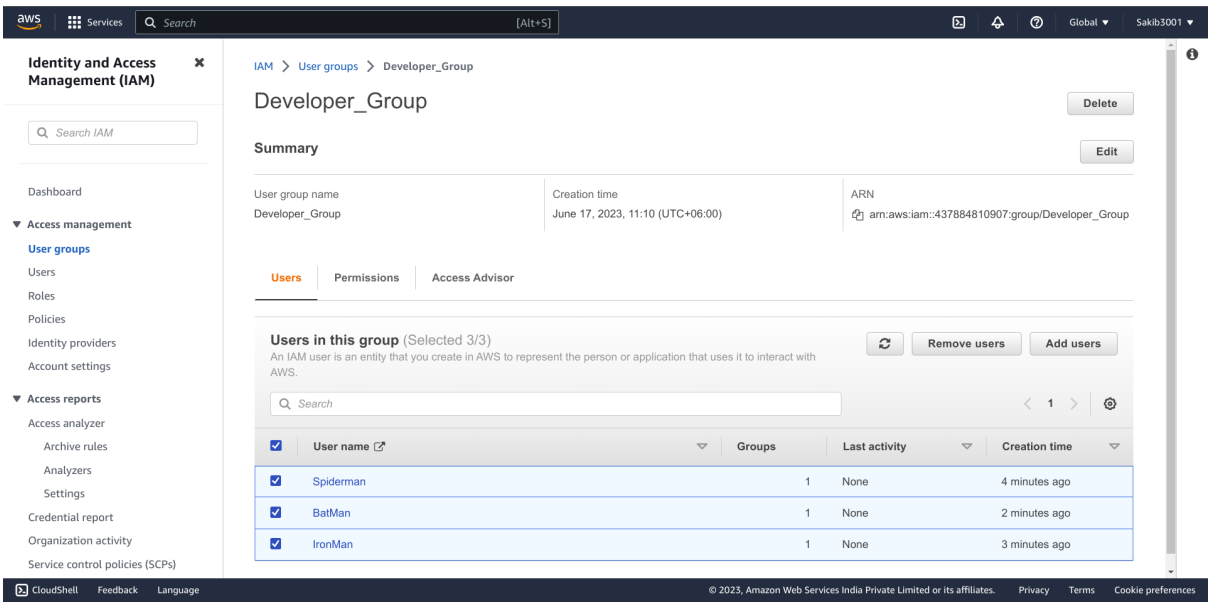
Services
Search
[Alt+S]
Global
Sakib3001
Identity and Access Management (IAM)
Search IAM
Dashboard
Access management
User groups
Users
Roles
Policies
Identity providers
Account settings
Access reports
Access analyzer
Archive rules
Analyzers
Settings
Credential report
Organization activity
Service control policies (SCPs)
IAM > User groups > Developer_Group
Developer_Group
Delete
Summary
Edit
User group name
Developer_Group
Creation time
June 17, 2023, 11:10 (UTC+06:00)
ARN
arn:aws:iam::437884810907:group/Developer_Group
Users
Permissions
Access Advisor
Users in this group (Selected 3/3)
An IAM user is an entity that you create in AWS to represent the person or application that uses it to interact with AWS.
Remove users
Add users
Search
1
User name
Groups
Last activity
Creation time
Spiderman
1
None
4 minutes ago
BatMan
1
None
2 minutes ago
IronMan
1
None
3 minutes ago
CloudShell
Feedback
Language
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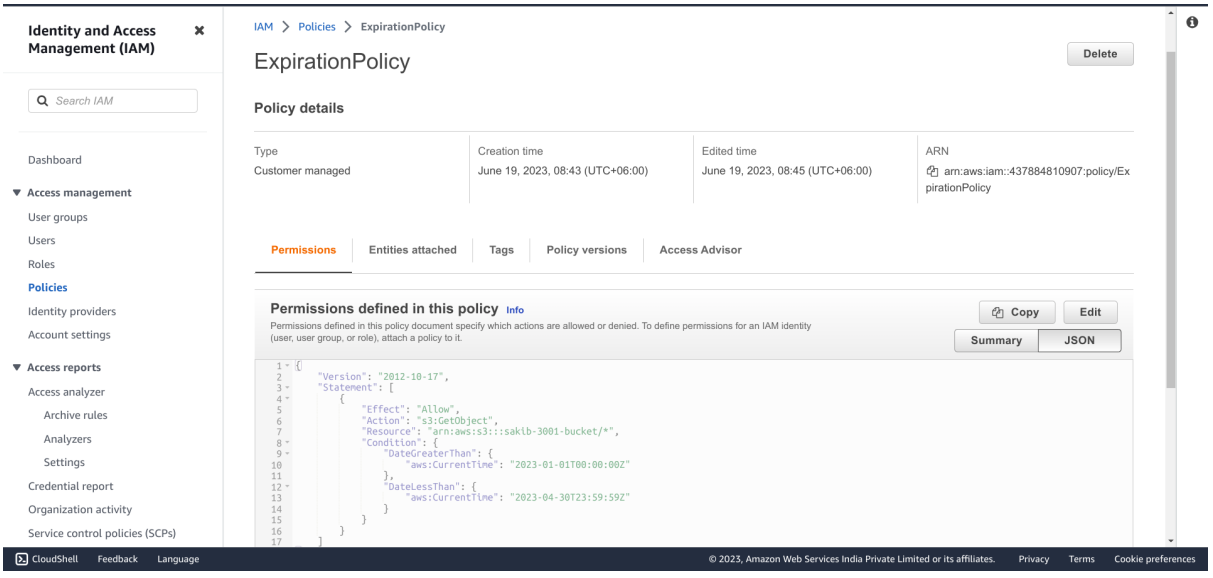
Assignment 3 :- Define a condition in policy for expiration like

```
"DateGreaterThan":
{
"aws:CurrentTime":"2020-04-01T00:00:00Z"
},
"DateLessThan":
{
"aws:CurrentTime":"2020-06-30T23:59:59Z"
}
Define the span of 4 months as per your wish
```

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": "s3:GetObject",
      "Resource": "arn:aws:s3:::sakib-3001-bucket/*",
      "Condition": {
        "DateGreaterThan": {
          "aws:CurrentTime": "2023-01-01T00:00:00Z"
        },
        "DateLessThan": {
          "aws:CurrentTime": "2023-04-30T23:59:59Z"
        }
      }
    }
  ]
}
```

The policy has been created named ExpirationPolicy:



15 MCQ questions related to IAM

1. Which AWS service is used for identity and access management?
   a) S3
   b) EC2
   c) IAM
   d) RDS

2. Which of the following statements best describes IAM roles?
   a) IAM roles are used to assign permissions to AWS services.
   b) IAM roles are used to grant permissions to IAM users.
   c) IAM roles are used to manage access keys for IAM users.
   d) IAM roles are used to enable multi-factor authentication for IAM users.

3. What is the maximum number of IAM users that can be created per AWS account by default?
   a) 5
   b) 10
   c) 20
   d) There is no default limit.

4. Which of the following actions can be performed using IAM policies?
   a) Grant permissions to IAM users and groups.
   b) Assign AWS resource tags to IAM users.
   c) Manage access keys for IAM users.
   d) Create and manage IAM roles.

5. Which statement best describes IAM groups in AWS?
   a) IAM groups are used to manage IAM users.
   b) IAM groups are used to manage IAM policies.
   c) IAM groups are used to manage AWS resources.
   d) IAM groups are used to manage access keys.

6. What is the purpose of an IAM policy simulator in AWS?
   a) To simulate the performance of IAM roles.
   b) To simulate the cost of IAM policies.
   c) To simulate the effects of IAM policies.
   d) To simulate the access key rotation for IAM users.

7. Which of the following authentication methods is supported by IAM?
   a) Username and password
   b) Access key and secret key
   c) Biometric authentication
   d) SMS-based one-time password (OTP)

8. Which of the following is NOT a valid IAM permission boundary?
   a) Allow
   b) Deny
   c) Pass
   d) Condition

9. Which of the following statements is true about IAM roles?
   a) IAM roles can be associated with multiple users.
   b) IAM roles are only used for temporary access.
   c) IAM roles can be used across AWS accounts.
   d) IAM roles have access keys and secret keys.

10. Which AWS service can be used to audit and monitor IAM events?
   a) AWS CloudFormation
   b) AWS Config
   c) AWS CloudTrail
   d) AWS CloudWatch

11. What is the purpose of an IAM policy condition in AWS?
   a) To define the actions that can be performed by an IAM user.
   b) To specify the resources that can be accessed by an IAM user.
   c) To define the context in which an IAM policy is evaluated.
   d) To specify the time period during which an IAM policy is valid.

12. Which of the following AWS resources can be assigned tags?
   a) IAM users
   b) IAM policies
   c) IAM roles
   d) All of the above

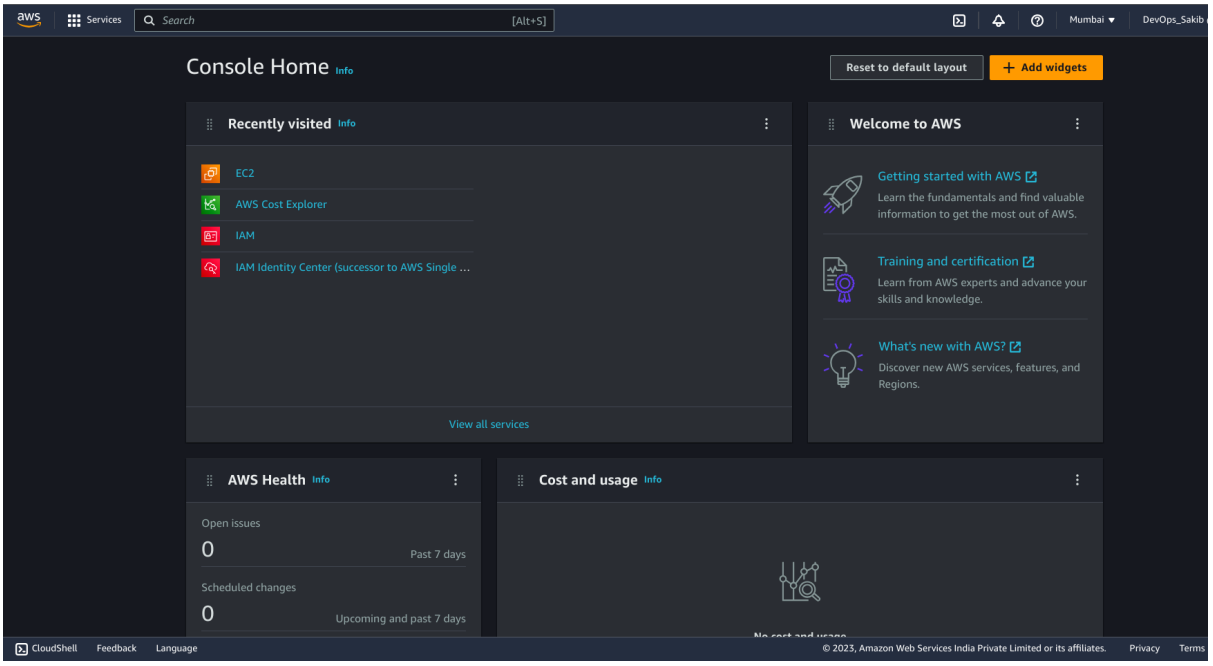
13. Which of the following is NOT a valid IAM policy element?
   a) Statement
   b) Action
   c) Resource
   d) Condition

14. What is the purpose of an IAM instance profile?
   a) To manage IAM roles for EC2 instances.
   b) To manage IAM users for EC2 instances.
   c) To manage access keys for EC2 instances
   d) To manage permissions for EC2 instances.

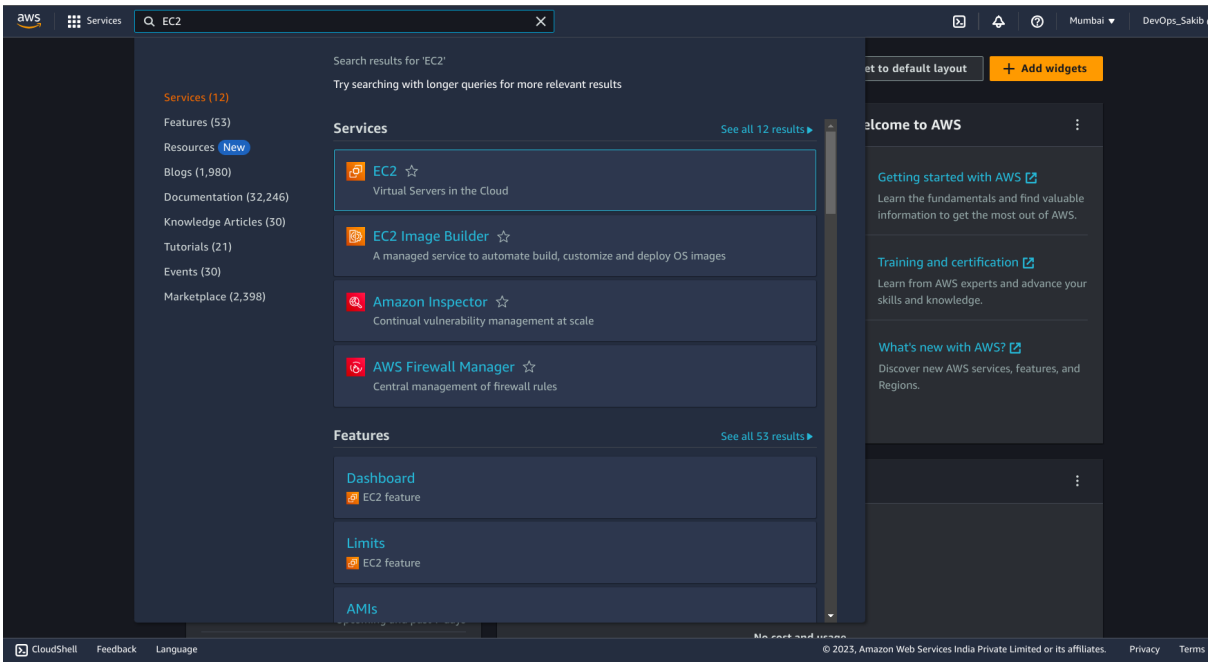
15. What is the purpose of an IAM access key?
   a) To authenticate IAM users.
   b) To encrypt IAM policies.
   c) To grant temporary access to IAM users.
   d) To generate IAM user names.

Assignment 4:- Launch your linux instance in IAM and update your machine.

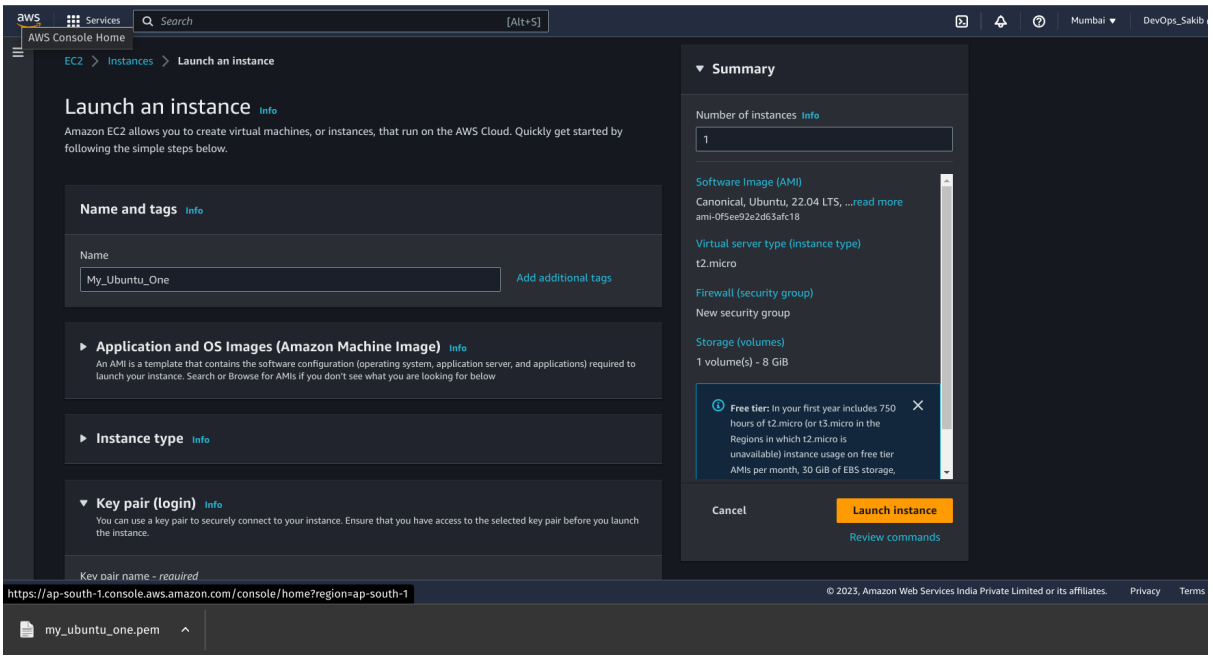
I have logged in as an IAM user account but not as a root account.



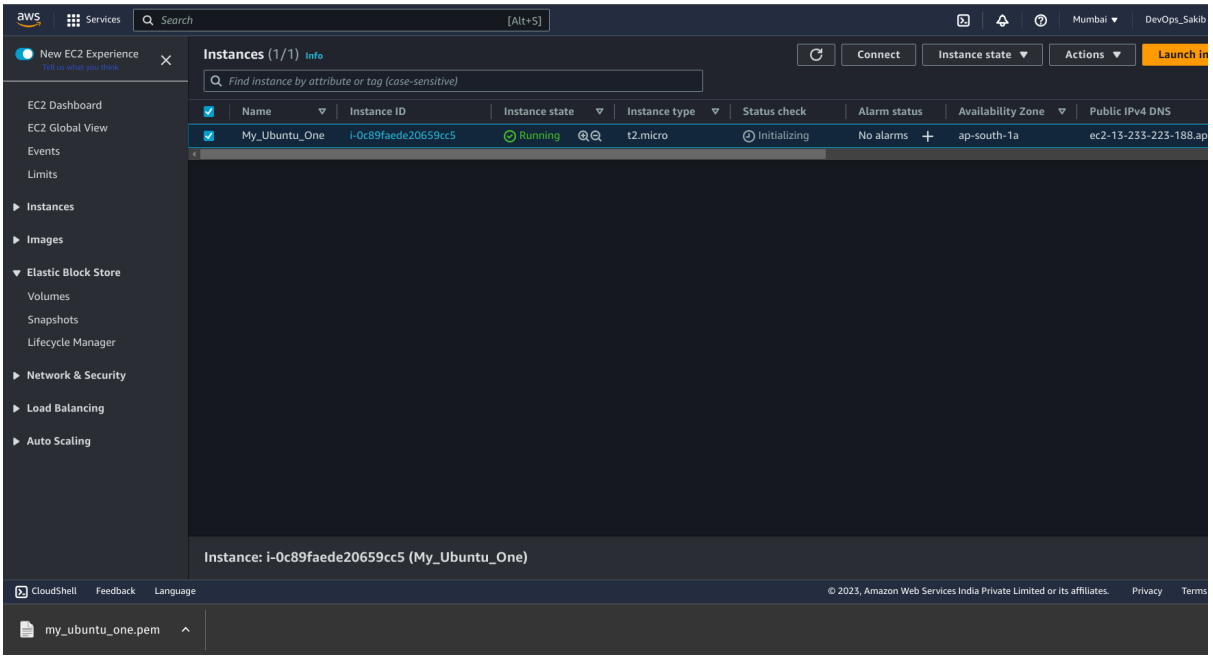
Searching for the EC2 service



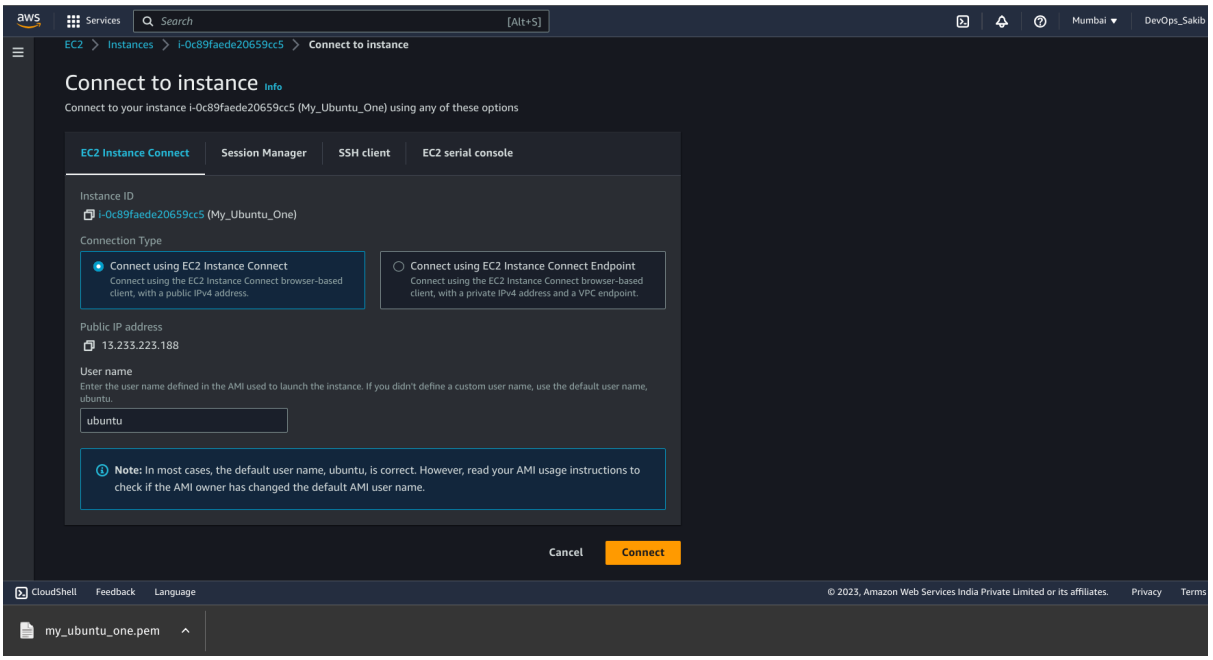
Here an instance named My_Ubuntu_One is going to be created:



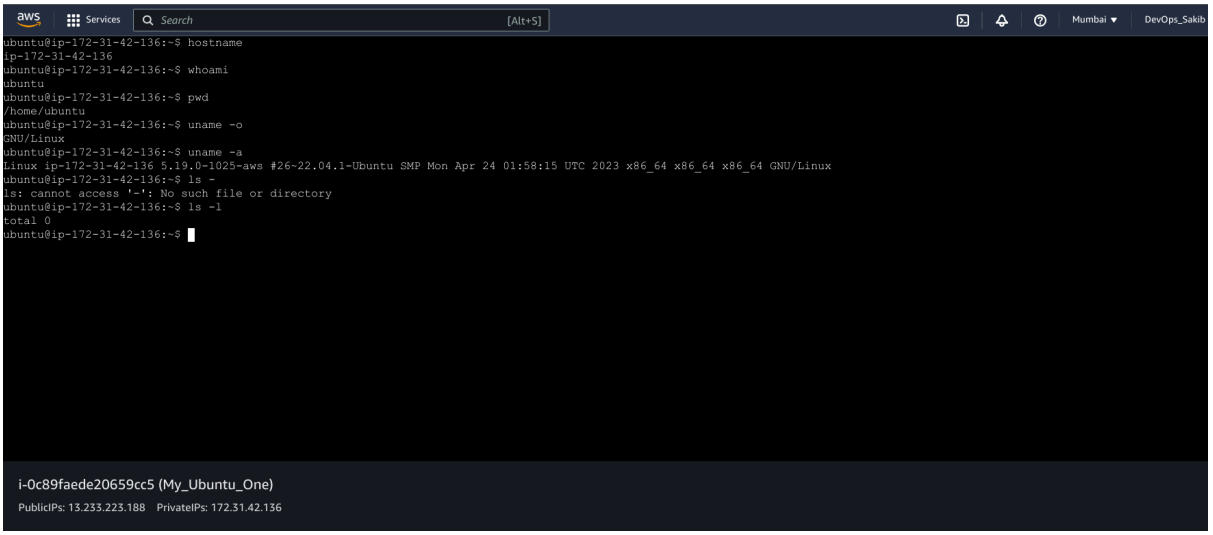
The instance has been created successfully and it is in running state:



Now the running instance has been connected via EC2 instance connect:

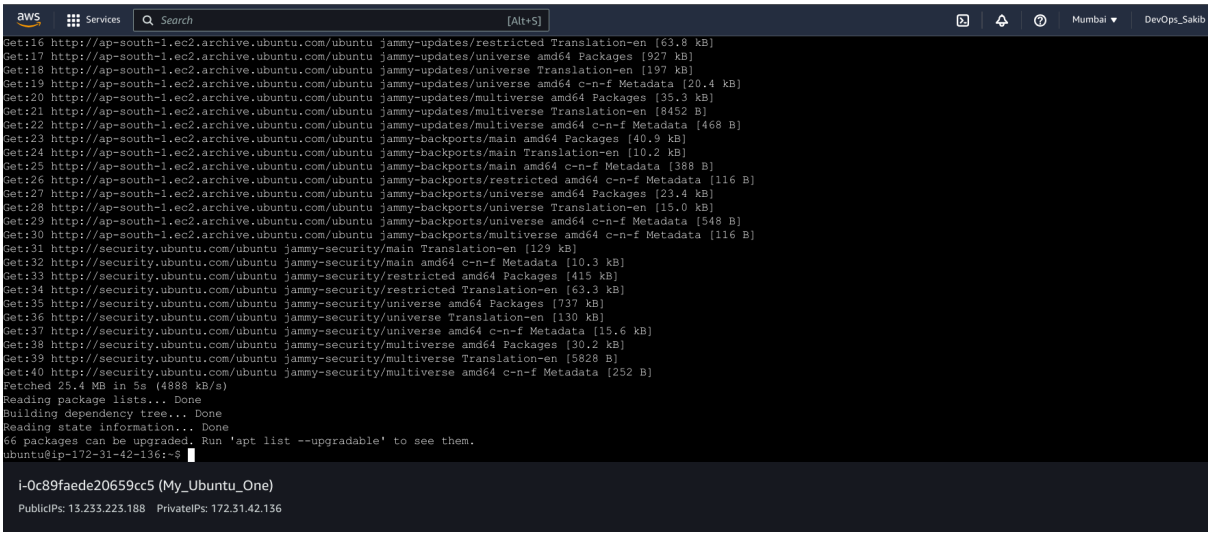


The instance has been successfully connected and the terminal appears on the browser window:



Sudo apt update → has been given for update the instance.

The updation of EC2 instance machine has been done successfully:



End of Assignment