



DEPARTMENT OF SOFTWARE ENGINEERING

LAB#9

SUBMITTED TO:

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REG NO: 2021-BSE-024

Task 1

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Try the new cross-platform PowerShell <https://aka.ms/pscore6>

```
PS C:\Users\nehaa> gh --version
```

```
gh version 2.83.2 (2025-12-10)
```

```
https://github.com/cli/cli/releases/tag/v2.83.2
```

```
PS C:\Users\nehaa> gh auth login -s codespace
```

```
>>
```

```
? Where do you use GitHub? GitHub.com
```

```
? What is your preferred protocol for Git operations on this host? SSH
```

```
? Upload your SSH public key to your GitHub account? C:\Users\nehaa\.ssh\id\_ed25519.pub
```

```
? Title for your SSH key: (GitHub CLI)
```

```
? Title for your SSH key: GitHub CLI
```

```
? How would you like to authenticate GitHub CLI? Login with a web browser
```

```
! First copy your one-time code: B051-E2E3
```

```
Press Enter to open https://github.com/login/device in your browser...
```

```
█ Authentication complete.
```

```
- gh config set -h github.com git_protocol ssh
```

```
█ Configured git protocol
```

```
█ SSH key already existed on your GitHub account: C:\Users\nehaa\.ssh\id\_ed25519.pub
```

```
█ Logged in as neha-121
```

```
PS C:\Users\nehaa> gh codespace list
```

```
>>
```

```
no codespaces found
```

```
PS C:\Users\nehaa>
```

Windows PowerShell

```
commit SHA (https://api.github.com/repositories/1136534835/codespaces/devcontainers?per_page=100&ref=main)
PS C:\Users\nehaa> gh repo view neha-121/Lab9 --web
>>
Opening https://github.com/neha-121/Lab9 in your browser.
PS C:\Users\nehaa> gh codespace create --repo neha-121/Lab9 --machine basicLinux32gb
>>
  B Codespaces usage for this repository is paid for by neha-121
expert-lamp-jjqjvgqwqj4x3q749
PS C:\Users\nehaa> gh codespace ssh
>>
? Choose codespace: neha-121/Lab9 [main]: expert lamp
Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.8.0-1030-azure x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.8.0-1030-azure x86_64)

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the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

@neha-121 /workspaces/Lab9 (main) $
```

Windows PowerShell


```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\nehaa> gh --version
gh version 2.83.2 (2025-12-10)
https://github.com/cli/cli/releases/tag/v2.83.2
PS C:\Users\nehaa> gh auth login -s codespace
>>
? Where do you use GitHub? GitHub.com
? What is your preferred protocol for Git operations on this host? SSH
? Upload your SSH public key to your GitHub account? C:\Users\nehaa\.ssh\id_ed25519.pub
? Title for your SSH key: (GitHub CLI)

? Title for your SSH key: GitHub CLI
? How would you like to authenticate GitHub CLI? Login with a web browser

! First copy your one-time code: B051-E2E3
Press Enter to open https://github.com/login/device in your browser...
! Authentication complete.
- gh config set -h github.com git_protocol ssh
! Configured git protocol
! SSH key already existed on your GitHub account: C:\Users\nehaa\.ssh\id_ed25519.pub
! Logged in as neha-121
PS C:\Users\nehaa>
```

 Windows PowerShell

Windows PowerShell

Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell <https://aka.ms/pscore6>

PS C:\Users\nehaa> gh --version

gh version 2.83.2 (2025-12-10)

<https://github.com/cli/cli/releases/tag/v2.83.2>

PS C:\Users\nehaa>

TASK 2-

Command Prompt - gh codespace ssh

```
es not match the signature you provided. Check your key and signing method.
@neha-121 [ ] /workspaces/Lab9 (main) $ rm -rf ~/.aws
@neha-121 [ ] /workspaces/Lab9 (main) $ aws configure
AWS Access Key ID [None]: AKIAYGZVAOQUXB7AFA4K
AWS Secret Access Key [None]: 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
Default region name [None]: ap-east-1
Default output format [None]: json
@neha-121 [ ] /workspaces/Lab9 (main) $ aws s3 ls
@neha-121 [ ] /workspaces/Lab9 (main) $ cat ~/.aws/credentials
[default]
aws_access_key_id = AKIAYGZVAOQUXB7AFA4K
aws_secret_access_key = 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
@neha-121 [ ] /workspaces/Lab9 (main) $ cat ~/.aws/config
[default]
region = ap-east-1
output = json
@neha-121 [ ] /workspaces/Lab9 (main) $ aws sts get-caller-identity
{
  "UserId": "AIDAYGZVAOQUTW5QEFTXD",
  "Account": "564362507305",
  "Arn": "arn:aws:iam::564362507305:user/terraform-user"
}
@neha-121 [ ] /workspaces/Lab9 (main) $
```

Windows PowerShell

```
inflating: aws/dist/awscli/customizations/wizard/wizards/dynamodb/new-table.yml
inflating: aws/dist/awscli/customizations/wizard/wizards/configure/_main.yml
inflating: aws/dist/awscli/customizations/wizard/wizards/iam/new-role.yml
inflating: aws/dist/awscli/customizations/wizard/wizards/events/new-rule.yml
inflating: aws/dist/awscli/customizations/sso/index.html
inflating: aws/dist/awscli/data/ac.index
inflating: aws/dist/awscli/data/metadata.json
inflating: aws/dist/awscli/data/cli.json
creating: aws/dist/prompt_toolkit-3.0.51.dist-info/licenses/
inflating: aws/dist/prompt_toolkit-3.0.51.dist-info/INSTALLER
inflating: aws/dist/prompt_toolkit-3.0.51.dist-info/WHEEL
inflating: aws/dist/prompt_toolkit-3.0.51.dist-info/METADATA
inflating: aws/dist/prompt_toolkit-3.0.51.dist-info/top_level.txt
inflating: aws/dist/prompt_toolkit-3.0.51.dist-info/RECORD
inflating: aws/dist/prompt_toolkit-3.0.51.dist-info/licenses/LICENSE
inflating: aws/dist/prompt_toolkit-3.0.51.dist-info/licenses/AUTHORS.rst
inflating: aws/dist/wheel-0.45.1.dist-info/entry_points.txt
inflating: aws/dist/wheel-0.45.1.dist-info/direct_url.json
inflating: aws/dist/wheel-0.45.1.dist-info/RECORD
inflating: aws/dist/wheel-0.45.1.dist-info/INSTALLER
inflating: aws/dist/wheel-0.45.1.dist-info/WHEEL
inflating: aws/dist/wheel-0.45.1.dist-info/LICENSE.txt
inflating: aws/dist/wheel-0.45.1.dist-info/METADATA
inflating: aws/dist/wheel-0.45.1.dist-info/REQUESTED
@neha-121 [ ] /workspaces/Lab9 (main) $ sudo ./aws/install
You can now run: /usr/local/bin/aws --version
@neha-121 [ ] /workspaces/Lab9 (main) $ aws --version
aws-cli/2.33.2 Python/3.13.11 Linux/6.8.0-1030-azure exe/x86_64.ubuntu.24
@neha-121 [ ] /workspaces/Lab9 (main) $
```

Task -3

```
}  
@neha-121 /workspaces/Lab9 (main) $ curl ifconfig.me  
4.240.39.196@neha-121 /workspaces/Lab9 (main) $
```

Command Prompt - gh codespace ssh

```
@neha-121 /workspaces/Lab9 (main) $ aws ec2 describe-security-groups --group-ids <SG_ID>  
-bash: syntax error near unexpected token `newline'  
@neha-121 /workspaces/Lab9 (main) $ aws ec2 describe-security-groups --group-ids sg-031db90b499970e01
```

```
{  
  "SecurityGroups": [  
    {  
      "GroupId": "sg-031db90b499970e01",  
      "IpPermissionsEgress": [  
        {  
          "IpProtocol": "-1",  
          "UserIdGroupPairs": [],  
          "IpRanges": [  
            {  
              "CidrIp": "0.0.0.0/0"  
            }  
          ],  
          "Ipv6Ranges": [],  
          "PrefixListIds": []  
        }  
      ]  
    }  
  ]  
}
```

:...skipping...

```
{  
  "SecurityGroups": [  
    {  
      "GroupId": "sg-031db90b499970e01",  
      "IpPermissionsEgress": [  
        {  
          "IpProtocol": "-1",  
          "UserIdGroupPairs": [],  
          "IpRanges": [  
            {  
              "CidrIp": "0.0.0.0/0"  
            }  
          ],  
          "Ipv6Ranges": [],  
          "PrefixListIds": []  
        }  
      ]  
    }  
  ]  
}
```

```
@neha-121 /workspaces/Lab9 (main) $ aws ec2 describe-vpcs --query "Vpcs[0].VpcId" --output text  
vpc-046bb809a918eeff2
```

```
@neha-121 /workspaces/Lab9 (main) $
```

```

Select Command Prompt - gh codespace ssh

aws_access_key_id = AKIAYGZVAOQUXB7AFA4K
aws_secret_access_key = 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
@neha-121 [ ] /workspaces/Lab9 (main) $ cat ~/.aws/config
[default]
region = ap-east-1
output = json
@neha-121 [ ] /workspaces/Lab9 (main) $ aws sts get-caller-identity
{
  "UserId": "AIDAYGZVAOQUTW5QEFTXD",
  "Account": "564362507305",
  "Arn": "arn:aws:iam::564362507305:user/terraform-user"
}
@neha-121 [ ] /workspaces/Lab9 (main) $ aws ec2 describe-vpcs --query "Vpcs[0].VpcId" --output text
vpc-046bb809a918eeff2
@neha-121 [ ] /workspaces/Lab9 (main) $ aws ec2 create-security-group \
> --group-name Lab9-SG \
> --description "Lab9 Security Group" \
> --vpc-id vpc-046bb809a918eeff2
{
  "GroupId": "sg-031db90b499970e01",
  "SecurityGroupArn": "arn:aws:ec2:ap-east-1:564362507305:security-group/sg-031db90b499970e01"
}
@neha-121 [ ] /workspaces/Lab9 (main) $

Command Prompt - gh codespace ssh

@neha-121 [ ] /workspaces/Lab9 (main) $ curl ifconfig.me
4.240.39.196@neha-121 [ ] /workspaces/Lab9 (main) $ aws ec2 authorize-security-group-ingress \
> --group-name Lab9-SG \
> --protocol tcp \
> --port 22 \
> --cidr 4.240.39.196/32
{
  "Return": true,
  "SecurityGroupRules": [
    {
      "SecurityGroupRuleId": "sgr-0c61ffdc7e5babd4",
      "GroupId": "sg-031db90b499970e01",
      "GroupOwnerId": "564362507305",
      "IsEgress": false,
      "IpProtocol": "tcp",
      "FromPort": 22,
      "ToPort": 22,
      "CidrIpv4": "4.240.39.196/32",
      "SecurityGroupRuleArn": "arn:aws:ec2:ap-east-1:564362507305:security-group-rule/sgr-0c61ffdc7e5babd4"
    }
  ]
}
@neha-121 [ ] /workspaces/Lab9 (main) $
```

Task-4:

Command Prompt - gh codespace ssh

```
"NetworkInterfaces": [
  {
    "Attachment": {
      "AttachTime": "2026-01-18T14:00:49+00:00",
      "AttachmentId": "eni-attach-0cd490656dc09cf2a",
      "DeleteOnTermination": true,
      "DeviceIndex": 0,
@neha-121 /workspaces/Lab9 (main) $ aws ec2 describe-instances \
> --query "Reservations[*].Instances[*].[InstanceId,PublicIpAddress,State.Name,Tags[?Key=='Name'].Value|[0]]" \
> --output table

-----
|                               DescribeInstances                               |
+-----+-----+-----+-----+-----+-----+
| i-0ccf39d18895829c9 | 18.162.154.161 | running | Lab9Server |
+-----+-----+-----+-----+-----+
@neha-121 /workspaces/Lab9 (main) $
```

Command Prompt - gh codespace ssh

```
| ami-0ff2f3723dee9a89a | amzn2-ami-hvm-2.0.20251105.0-x86_64-gp2 |
+-----+-----+
@neha-121 /workspaces/Lab9 (main) $ aws ec2 run-instances \
> --image-id ami-0c2d06d50ce30b442 \
> count 1 \
> --instance-type t3.micro \
> --key-name Lab9Key \
> security-group-ids sg-031db90b499970e01 \
> --tag-specifications "ResourceType=instance,Tags=[{Key=Name,Value=Lab9Server}]"

usage: aws [options] <command> <subcommand> [<subcommand> ...] [parameters]
To see help text, you can run:

aws help
aws <command> help
aws <command> <subcommand> help

Unknown options: 1, security-group-ids, sg-031db90b499970e01, count
@neha-121 /workspaces/Lab9 (main) $
```

```

ec2-user@ip-172-31-12-85:~
> --security-group-ids sg-031db90b499970e01 \
> --tag-specifications "ResourceType=instance,Tags=[{Key=Name,Value=Lab9Server}]"
{
  "ReservationId": "r-0afcle09b0c02f7fc",
  "OwnerId": "564362507305",
  "Groups": [],
  "Instances": [
    {
      "Architecture": "x86_64",
      "BlockDeviceMappings": [],
      "ClientToken": "fa9e7c15-0079-46e6-8a2d-372fb5f51c1e",
      "EbsOptimized": false,
      "EnaSupport": true,
      "Hypervisor": "xen",
      "NetworkInterfaces": [
        {
          "Attachment": {
            "AttachTime": "2026-01-18T14:00:49+00:00",
            "AttachmentId": "eni-attach-0cd490656dc09cf2a",
            "DeleteOnTermination": true,
            "DeviceIndex": 0,

```

```

@neha-121 [ ] /workspaces/Lab9 (main) $ aws ec2 describe-instances \
> --query "Reservations[*].Instances[*].[InstanceId,PublicIpAddress,State.Name,Tags[?Key=='Name'].Value[0]]" \
> --output table
-----
| DescribeInstances |
|-----+-----+-----+-----+
| i-0ccf39d18895829c9 | 18.162.154.161 | running | Lab9Server |
|-----+-----+-----+-----+
@neha-121 [ ] /workspaces/Lab9 (main) $ ssh -i Lab9Key.pem ec2-user@18.162.154.161
The authenticity of host '18.162.154.161 (18.162.154.161)' can't be established.
ED25519 key fingerprint is SHA256:QafeoANehaj4p8HyUXatDXTj4hBhClak7+NFqlF0I4.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '18.162.154.161' (ED25519) to the list of known hosts.

```

```

#_
~\ #####_ Amazon Linux 2
~~~ \#####\
~~~ \###| AL2 End of Life is 2026-06-30.
~~~ \#/
~~~ V~' '->
~~~~
~~~~_ _/ A newer version of Amazon Linux is available!
~~~~_ _/
~~~~_ _/ Amazon Linux 2023, GA and supported until 2028-03-15.
~~~~_ _/ https://aws.amazon.com/linux/amazon-linux-2023/

```

```

[ec2-user@ip-172-31-12-85 ~]$

```

```

@neha-121 [ ] /workspaces/Lab9 (main) $ ssh -i Lab9Key.pem ec2-user@18.162.154.161
Last login: Sun Jan 18 14:04:17 2026 from 4.240.39.196

```

```

#_
~\ #####_ Amazon Linux 2
~~~ \#####\
~~~ \###| AL2 End of Life is 2026-06-30.
~~~ \#/
~~~ V~' '->
~~~~
~~~~_ _/ A newer version of Amazon Linux is available!
~~~~_ _/
~~~~_ _/ Amazon Linux 2023, GA and supported until 2028-03-15.
~~~~_ _/ https://aws.amazon.com/linux/amazon-linux-2023/

```

```

[ec2-user@ip-172-31-12-85 ~]$ whoami
ec2-user
[ec2-user@ip-172-31-12-85 ~]$ hostname
ip-172-31-12-85.ap-east-1.compute.internal
[ec2-user@ip-172-31-12-85 ~]$ sudo yum update -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core
No packages marked for update
[ec2-user@ip-172-31-12-85 ~]$ echo "Lab9 EC2 connection successful" > lab9_test.txt
[ec2-user@ip-172-31-12-85 ~]$ cat lab9_test.txt
Lab9 EC2 connection successful
[ec2-user@ip-172-31-12-85 ~]$ exit
logout
Connection to 18.162.154.161 closed.
@neha-121 [ ] /workspaces/Lab9 (main) $

```

Task-5:

```
@neha-121 /workspaces/Lab9 (main) $ aws ec2 describe-availability-zones
```

```
{
  "AvailabilityZones": [
    {
      "OptInStatus": "opt-in-not-required",
      "Messages": [],
      "RegionName": "ap-east-1",
      "ZoneName": "ap-east-1a",
      "ZoneId": "ape1-az1",
      "GroupName": "ap-east-1-zg-1",
      "NetworkBorderGroup": "ap-east-1",
      "ZoneType": "availability-zone",
      "GroupLongName": "Asia Pacific (Hong Kong) 1",
      "State": "available"
    },
    {
      "OptInStatus": "opt-in-not-required",
      "Messages": [],
      "RegionName": "ap-east-1",
      "ZoneName": "ap-east-1b",
      "ZoneId": "ape1-az2",
      "GroupName": "ap-east-1-zg-1",
      "NetworkBorderGroup": "ap-east-1",
      "ZoneType": "availability-zone",
      "GroupLongName": "Asia Pacific (Hong Kong) 1",
      "State": "available"
    },
    {
      "OptInStatus": "opt-in-not-required",
      "Messages": [],
      "RegionName": "ap-east-1",
      "ZoneName": "ap-east-1c",
      "ZoneId": "ape1-az3",
      "GroupName": "ap-east-1-zg-1",
      "NetworkBorderGroup": "ap-east-1",
      "ZoneType": "availability-zone",
      "GroupLongName": "Asia Pacific (Hong Kong) 1",
      "State": "available"
    }
  ]
}
```

```
ec2-user@ip-172-31-12-85:~
```

```
"CidrBlock": "172.31.0.0/20",
@neha-121 /workspaces/Lab9 (main) $ aws ec2 describe-instances
```

```
{
  "Reservations": [
    {
      "ReservationId": "r-0afc1e09b0c02f7fc",
      "OwnerId": "564362507305",
      "Groups": [],
      "Instances": [
        {
          "Architecture": "x86_64",
          "BlockDeviceMappings": [
            {
              "DeviceName": "/dev/xvda",
              "Ebs": {
                "AttachTime": "2026-01-18T14:00:50+00:00",
                "DeleteOnTermination": true,
                "Status": "attached",
                "VolumeId": "vol-04b8432ee0edf3c2b"
              }
            }
          ],
          "ClientToken": "fa9e7c15-0079-46e6-8a2d-372fb5f51c1e",
          "EbsOptimized": false,
          "EnaSupport": true,
          "Hypervisor": "xen",
          "NetworkInterfaces": [
            {
              "Association": {
                "IpOwnerId": "amazon",
                "PublicDnsName": "ec2-18-162-154-161.ap-east-1.compute.amazonaws.com"
              }
            }
          ]
        }
      ]
    }
  ]
}
```

ec2-user@ip-172-31-12-85:~

```
    },
    "Ipv6Addresses": [],
    "MacAddress": "0a:f1:f0:48:43:5b",
    "NetworkInterfaceId": "eni-09dcdb8aa9a717d2d",
@neha-121  /workspaces/Lab9 (main) $ aws ec2 describe-regions
```

```
{
  "Regions": [
    {
      "OptInStatus": "opt-in-not-required",
      "RegionName": "ap-south-1",
      "Endpoint": "ec2.ap-south-1.amazonaws.com"
    },
    {
      "OptInStatus": "opted-in",
      "RegionName": "eu-south-1",
      "Endpoint": "ec2.eu-south-1.amazonaws.com"
    },
    {
      "OptInStatus": "opted-in",
      "RegionName": "eu-south-2",
      "Endpoint": "ec2.eu-south-2.amazonaws.com"
    },
    {
      "OptInStatus": "opted-in",
      "RegionName": "me-central-1",
      "Endpoint": "ec2.me-central-1.amazonaws.com"
    }
  ],
}
```

@neha-121 /workspaces/Lab9 (main) \$ aws ec2 describe-security-groups

```
{
  "SecurityGroups": [
    {
      "GroupId": "sg-0e1b6ce9970e3c800",
      "IpPermissionsEgress": [
        {
          "IpProtocol": "-1",
          "UserIdGroupPairs": [],
          "IpRanges": [
            {
              "CidrIp": "0.0.0.0/0"
            }
          ],
          "Ipv6Ranges": [],
          "PrefixListIds": []
        }
      ],
      "VpcId": "vpc-046bb809a918eeff2",
      "SecurityGroupArn": "arn:aws:ec2:ap-east-1:564362507305:security-group/sg-0e1b6ce9970e3c800",
      "OwnerId": "564362507305",
      "GroupName": "default",
      "Description": "default VPC security group",
      "IpPermissions": [
        {
          "IpProtocol": "-1",
          "UserIdGroupPairs": [
            {
              "UserId": "564362507305",
              "GroupId": "sg-0e1b6ce9970e3c800"
            }
          ],
          "IpRanges": [],
          "Ipv6Ranges": [],
          "PrefixListIds": []
        }
      ],
    }
  ],
}
```

```

@neha-121  /workspaces/Lab9 (main) $ aws ec2 describe-subnets
{
  "Subnets": [
    {
      "AvailabilityZoneId": "ape1-az1",
      "MapCustomerOwnedIpOnLaunch": false,
      "OwnerId": "564362507305",
      "AssignIpv6AddressOnCreation": false,
      "Ipv6CidrBlockAssociationSet": [],
      "SubnetArn": "arn:aws:ec2:ap-east-1:564362507305:subnet/subnet-00b47a6f034c9a932",
      "EnableDns64": false,
      "Ipv6Native": false,
      "PrivateDnsNameOptionsOnLaunch": {
        "HostnameType": "ip-name",
        "EnableResourceNameDnsARecord": false,
        "EnableResourceNameDnsAAAARecord": false
      },
      "BlockPublicAccessStates": {
        "InternetGatewayBlockMode": "off"
      },
      "SubnetId": "subnet-00b47a6f034c9a932",
      "State": "available",
      "VpcId": "vpc-046bb809a918eeff2",
      "CidrBlock": "172.31.16.0/20",
      "AvailableIpAddressCount": 4091,
      "AvailabilityZone": "ap-east-1a",
      "DefaultForAz": true,
      "MapPublicIpOnLaunch": true
    },
    {
      "AvailabilityZoneId": "ape1-az2",
      "MapCustomerOwnedIpOnLaunch": false,
      "OwnerId": "564362507305",
      "AssignIpv6AddressOnCreation": false,
      "Ipv6CidrBlockAssociationSet": [],
      "SubnetArn": "arn:aws:ec2:ap-east-1:564362507305:subnet/subnet-023ff11bc3d9e1d8a",
      "EnableDns64": false,
      "Ipv6Native": false,
      "PrivateDnsNameOptionsOnLaunch": {
        "HostnameType": "ip-name",
        "EnableResourceNameDnsARecord": false,
        "EnableResourceNameDnsAAAARecord": false
      },
      "BlockPublicAccessStates": {
        "InternetGatewayBlockMode": "off"
      },
      "SubnetId": "subnet-023ff11bc3d9e1d8a",
      "State": "available",
      "VpcId": "vpc-046bb809a918eeff2",
      "CidrBlock": "172.31.0.0/16",
      "AvailableIpAddressCount": 16382,
      "AvailabilityZone": "ap-east-1b",
      "DefaultForAz": true,
      "MapPublicIpOnLaunch": true
    }
  ]
}

```

```

@neha-121  /workspaces/Lab9 (main) $ aws ec2 describe-vpcs
{
  "Vpcs": [
    {
      "OwnerId": "564362507305",
      "InstanceTenancy": "default",
      "CidrBlockAssociationSet": [
        {
          "AssociationId": "vpc-cidr-assoc-0c071ab31471ecff4",
          "CidrBlock": "172.31.0.0/16",
          "CidrBlockState": {
            "State": "associated"
          }
        }
      ],
      "IsDefault": true,
      "BlockPublicAccessStates": {
        "InternetGatewayBlockMode": "off"
      },
      "VpcId": "vpc-046bb809a918eeff2",
      "State": "available",
      "CidrBlock": "172.31.0.0/16",
      "DhcpOptionsId": "dopt-0823d2ffd96540eb0"
    }
  ]
}

```

Task-6:

```
@neha-121 ~ /workspaces/Lab9 (main) $ aws iam add-user-to-group --user-name MyUserCli --group-name MyGroupCli
@neha-121 ~ /workspaces/Lab9 (main) $ aws iam get-group --group-name MyGroupCli
{
  "Users": [
    {
      "Path": "/",
      "UserName": "MyUserCli",
      "UserId": "AIDAYGZVAOQUSQBQJV3SS",
      "Arn": "arn:aws:iam::564362507305:user/MyUserCli",
      "CreateDate": "2026-01-18T14:43:32+00:00"
    }
  ],
  "Group": {
    "Path": "/",
    "GroupName": "MyGroupCli",
    "GroupId": "AGPAYGZVAOQU2WIIJJMDYO",
    "Arn": "arn:aws:iam::564362507305:group/MyGroupCli",
    "CreateDate": "2026-01-18T14:42:27+00:00"
  }
}
```

```
@neha-121 ~ /workspaces/Lab9 (main) $ unset AWS_ACCESS_KEY_ID
@neha-121 ~ /workspaces/Lab9 (main) $ unset AWS_SECRET_ACCESS_KEY
@neha-121 ~ /workspaces/Lab9 (main) $ aws iam get-user --user-name MyUserCli{
  "User": {
    "Path": "/",
    "UserName": "MyUserCli",
    "UserId": "AIDAYGZVAOQUSQBQJV3SS",
    "Arn": "arn:aws:iam::564362507305:user/MyUserCli",
    "CreateDate": "2026-01-18T14:43:32+00:00"
  }
}
@neha-121 ~ /workspaces/Lab9 (main) $
```

ec2-user@ip-172-31-12-85:~

```
  "UserName": "MyUserCli",
  "CreateDate": "2026-01-18T15:06:30+00:00",
  "PasswordResetRequired": true
}
@neha-121 ~ /workspaces/Lab9 (main) $ aws iam attach-group-policy --group-name MyGroupCli --policy-arn arn:aws:iam::aws:policy/IAMUserChangePassword
@neha-121 ~ /workspaces/Lab9 (main) $ aws iam detach-group-policy --group-name MyGroupCli --policy-arn arn:aws:iam::aws:policy/IAMUserChangePassword
@neha-121 ~ /workspaces/Lab9 (main) $ aws iam create-access-key --user-name MyUserCli
{
  "AccessKey": {
    "UserName": "MyUserCli",
    "AccessKeyId": "AKIAYGZVAOQURCE5D4XB",
    "Status": "Active",
    "SecretAccessKey": "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",
    "CreateDate": "2026-01-18T15:07:41+00:00"
  }
}
@neha-121 ~ /workspaces/Lab9 (main) $
```

```
}
@neha-121 [ ] /workspaces/Lab9 (main) $ aws iam get-group --group-name MyGroupCli
{
  "Users": [],
  "Group": {
    "Path": "/",
    "GroupName": "MyGroupCli",
    "GroupId": "AGPAYGZVA0QU2WIJJMDYO",
    "Arn": "arn:aws:iam::564362507305:group/MyGroupCli",
    "CreateDate": "2026-01-18T14:42:27+00:00"
  }
}
```

```
@neha-121 [ ] /workspaces/Lab9 (main) $ aws iam attach-group-policy \
> --group-name MyGroupCli \
> --policy-arn arn:aws:iam::aws:policy/AmazonEC2FullAccess
@neha-121 [ ] /workspaces/Lab9 (main) $ aws iam list-attached-group-policies --
group-name MyGroupCli
{
  "AttachedPolicies": [
    {
      "PolicyName": "AmazonEC2FullAccess",
      "PolicyArn": "arn:aws:iam::aws:policy/AmazonEC2FullAccess"
    }
  ]
}
@neha-121 [ ] /workspaces/Lab9 (main) $ aws iam create-login-profile \
> --user-name MyUserCli \
> --password "YourStrongPassword123!" \
> --password-reset-required
{
  "LoginProfile": {
    "UserName": "MyUserCli",
    "CreateDate": "2026-01-18T15:06:30+00:00",
    "PasswordResetRequired": true
  }
}
@neha-121 [ ] /workspaces/Lab9 (main) $
```

```

AWS_SECRET_ACCESS_KEY=55AxUGRPkHRCmuK6IMMoBLK087nCkg1Wf6s2q12Q
AWS_ACCESS_KEY_ID=AKIAYGZVAOQUB7AFA4K
@neha-121 █ /workspaces/Lab9 (main) $
@neha-121 █ /workspaces/Lab9 (main) $ # Test IAM user access
@neha-121 █ /workspaces/Lab9 (main) $ aws iam get-user --user-name MyUserCli
{
  "User": {
    "Path": "/",
    "UserName": "MyUserCli",
    "UserId": "AIDAYGZVAOQUSQBQJV3SS",
    "Arn": "arn:aws:iam::564362507305:user/MyUserCli",
    "CreateDate": "2026-01-18T14:43:32+00:00"
  }
}
@neha-121 █ /workspaces/Lab9 (main) $

```

```

@neha-121 █ /workspaces/Lab9 (main) $ aws iam list-policies --query 'Policies[?PolicyName==`AmazonEC2FullAccess`].{Name:PolicyName, ARN:Arn}' --output table
-----
|                                     ListPolicies                                     |
+-----+-----+-----+-----+
|                                     ARN                                     | Name |
+-----+-----+-----+-----+
| arn:aws:iam::aws:policy/AmazonEC2FullAccess | AmazonEC2FullAccess |
+-----+-----+-----+-----+
@neha-121 █ /workspaces/Lab9 (main) $

```

Task-7:

```

@neha-121 █ /workspaces/Lab9 (main) $ aws ec2 describe-instances \
> --filters "Name=subnet-id,Values=subnet-0600df5fa8ce60857" \
> --query "Reservations[*].Instances[*].InstanceId" \
> --output table
@neha-121 █ /workspaces/Lab9 (main) $

```

```

@neha-121 █ /workspaces/Lab9 (main) $ aws ec2 describe-instances \
> --filters "Name=tag:Name,Values=MyServer" \
> --query "Reservations[*].Instances[*].PublicIpAddress" \
> --output text
@neha-121 █ /workspaces/Lab9 (main) $

```

```

neha-121 █ /workspaces/Lab9 (main) $ aws ec2 describe-instances \
--filters "Name=vpc-id,Values=vpc-06be85cd81b657192" \
--query "Reservations[*].Instances[*].InstanceId" \
--output table
neha-121 █ /workspaces/Lab9 (main) $

```

Task-8:

```
@neha-121 [?] /workspaces/Lab9 (main) $ aws ec2 describe-instances \
> --query "Reservations[*].Instances[*].[InstanceId,State.Name]" \
> --output table
```

```
-----+-----+
| DescribeInstances |
+-----+-----+
| i-0ccf39d18895829c9 | running |
+-----+-----+
```

```
@neha-121 [?] /workspaces/Lab9 (main) $
```

```
@neha-121 [?] /workspaces/Lab9 (main) $ aws ec2 describe-instances \
> --query "Reservations[*].Instances[*].[InstanceId,InstanceType,Placement.AvailabilityZone]" \
> --output table
```

```
-----+-----+-----+
| DescribeInstances |
+-----+-----+-----+
| i-0ccf39d18895829c9 | t3.micro | ap-east-1b |
+-----+-----+-----+
```

```
@neha-121 [?] /workspaces/Lab9 (main) $
```

```
@neha-121 [?] /workspaces/Lab9 (main) $ aws ec2 describe-instances \
> --filters "Name=tag:Name,Values=MyServer" \
> --query "Reservations[*].Instances[*].[InstanceId,PublicIpAddress,Tags[?Key=='Name'].Value|[0]]" \
> --output table
```

```
@neha-121 [?] /workspaces/Lab9 (main) $
```

Task-9:

```
@neha-121 [ ] /workspaces/Lab9 (main) $ aws ec2 describe-volumes --query "Volumes[*].[VolumeId,State]" --output table
-----+-----+
| DescribeVolumes |
+-----+-----+
| vol-04b8432ee0edf3c2b | in-use |
+-----+-----+
@neha-121 [ ] /workspaces/Lab9 (main) $
@neha-121 [ ] /workspaces/Lab9 (main) $ # Delete a volume example
@neha-121 [ ] /workspaces/Lab9 (main) $ aws ec2 delete-volume --volume-id <VOLUME_ID>
-bash: syntax error near unexpected token `newline'
@neha-121 [ ] /workspaces/Lab9 (main) $
```

An error occurred (NoSuchEntity) when calling the DeleteAccessKey operation: The Access Key with id AKIAYGZVAOQUXB7AFA4K cannot be found.

```
@neha-121 [ ] /workspaces/Lab9 (main) $
@neha-121 [ ] /workspaces/Lab9 (main) $ # Delete login profile
@neha-121 [ ] /workspaces/Lab9 (main) $ aws iam delete-login-profile --user-name MyUserCli
```

An error occurred (NoSuchEntity) when calling the DeleteLoginProfile operation: Login Profile for User MyUserCli cannot be found.

```
@neha-121 [ ] /workspaces/Lab9 (main) $
@neha-121 [ ] /workspaces/Lab9 (main) $ # Remove user from group
@neha-121 [ ] /workspaces/Lab9 (main) $ aws iam remove-user-from-group --user-name MyUserCli --group-name MyGroupCli
@neha-121 [ ] /workspaces/Lab9 (main) $
@neha-121 [ ] /workspaces/Lab9 (main) $ # Delete IAM user
@neha-121 [ ] /workspaces/Lab9 (main) $ aws iam delete-user --user-name MyUserCli
```

An error occurred (DeleteConflict) when calling the DeleteUser operation: Cannot delete entity, must delete access keys first.

```
@neha-121 [ ] /workspaces/Lab9 (main) $
@neha-121 [ ] /workspaces/Lab9 (main) $ # Detach and delete group policy
@neha-121 [ ] /workspaces/Lab9 (main) $ aws iam detach-group-policy --group-name MyGroupCli --policy-arn arn:aws:iam::aws:policy/AmazonEC2FullAccess
```

```
@neha-121 [ ] /workspaces/Lab9 (main) $ aws ec2 terminate-instances --instance-ids i-0ccf39d18895829c9
{
  "TerminatingInstances": [
    {
      "InstanceId": "i-0ccf39d18895829c9",
      "CurrentState": {
        "Code": 32,
        "Name": "shutting-down"
      },
      "PreviousState": {
        "Code": 16,
        "Name": "running"
      }
    }
  ]
}
```

```
@neha-121 [ ] /workspaces/Lab9 (main) $
```