



Fatima Jinnah Women University

Opening Portals of Excellence Through Higher Education

DEPARTMENT OF SOFTWARE ENGINEERING

LAB#9

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REG NO: 2021-BSE-024

Task 1

Windows PowerShell

```
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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

```
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
>>
  ⚠ Codespaces usage for this repository is paid for by neha-121
expert-lamp-jjqjvgwqwj4x3q749
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
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Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

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

Windows PowerShell

```
Windows PowerShell
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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...
Authenticating...
- 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-

```
c: Command Prompt - gh codespace ssh  
es not match the signature you provided. Check your key and signing method.  
@neha-121 eworkspaces/Lab9 (main) $ rm -rf ~/.aws  
@neha-121 eworkspaces/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 eworkspaces/Lab9 (main) $ aws s3 ls  
@neha-121 eworkspaces/Lab9 (main) $ cat ~/.aws/credentials  
[default]  
aws_access_key_id = AKIAYGZVAOQUXB7AFA4K  
aws_secret_access_key = 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  
@neha-121 eworkspaces/Lab9 (main) $ cat ~/.aws/config  
[default]  
region = ap-east-1  
output = json  
@neha-121 eworkspaces/Lab9 (main) $ aws sts get-caller-identity  
{  
    "UserId": "AIDAYGZVAOQUTW5QEFTXD",  
    "Account": "564362507305",  
    "Arn": "arn:aws:iam::564362507305:user/terraform-user"  
}  
@neha-121 eworkspaces/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 eworkspaces/Lab9 (main) $ sudo ./aws/install  
You can now run: /usr/local/bin/aws --version  
@neha-121 eworkspaces/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 eworkspaces/Lab9 (main) $
```

Task -3

```
}
```

```
@neha-121 ② /workspaces/Lab9 (main) $ curl ifconfig.me
```

```
4.240.39.196@neha-121 ② /workspaces/Lab9 (main) $
```

```
Command Prompt - gh codespace ssh
```

```
@neha-121 ② /workspaces/Lab9 (main) $ aws ec2 describe-security-groups --group-ids <SG_ID>
-bash: syntax error near unexpected token `newline'
```

```
@neha-121 ② /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": [
```

```
                ]
```

```
}
```

```
@neha-121 ② /workspaces/Lab9 (main) $ aws ec2 describe-vpcs --query "Vpcs[0].VpcId" --output text
```

```
vpc-046bb809a918eff2
```

```
@neha-121 ② /workspaces/Lab9 (main) $
```

```
cmd Select Command Prompt - gh codespace ssh
aws_access_key_id = AKIAYGZVAOQQUXB7AFA4K
aws_secret_access_key = 55AxUGRPkhRcmuK6IMMoBLK087ncXg1wf6s2qT2Q
@neha-121 ② /workspaces/Lab9 (main) $ cat ~/.aws/config
[default]
region = ap-east-1
output = json
@neha-121 ② /workspaces/Lab9 (main) $ aws sts get-caller-identity
{
    "UserId": "AIDAYGZVAOQUTW5QEFTXD",
    "Account": "564362507305",
    "Arn": "arn:aws:iam::564362507305:user/terraform-user"
}
@neha-121 ② /workspaces/Lab9 (main) $ aws ec2 describe-vpcs --query "Vpcs[0].VpcId" --output text
vpc-046bb809a918eff2
@neha-121 ② /workspaces/Lab9 (main) $ aws ec2 create-security-group \
> --group-name Lab9-SG \
> --description "Lab9 Security Group" \
> --vpc-id vpc-046bb809a918eff2
{
    "GroupId": "sg-031db90b499970e01",
    "SecurityGroupArn": "arn:aws:ec2:ap-east-1:564362507305:security-group/sg-031db90b499970e01"
}
@neha-121 ② /workspaces/Lab9 (main) $
```

```
cmd Command Prompt - gh codespace ssh
@neha-121 ② /workspaces/Lab9 (main) $ curl ifconfig.me
4.240.39.196@neha-121 ② /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 ② /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,
            "InterfaceType": "aws",
            "MacAddress": "00:0C:29:3D:18:89"
        }
    }
]
@neha-121 ~ /workspaces/Lab9 (main) $ aws ec2 describe-instances \
> --query "Reservations[*].Instances[*].[InstanceId,PublicIpAddress,State.Name,Tags[?Key=='Name'].Value|[0]]" \
> --output table
+-----+-----+-----+-----+
| 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-0afc1e09b0c02f7fc",
  "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,
            "Status": "attached"
          }
        }
      ]
    }
  ]
}
@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+NFiqlF0I4.
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.
/_m/ https://aws.amazon.com/linux/amazon-linux-2023/

```

```
@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.
/m/      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 ② /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:~$ 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"
                            }
                        }
                    ]
                }
            ]
        }
    ]
}
```

```
on ec2-user@ip-172-31-12-85:~  
      }  
    ],  
    "Ipv6Addresses": [],  
    "MacAddress": "0a:f1:f0:48:43:5b",  
    "NetworkInterfaceId": "eni-09dcdb8aa9a717d2d",  
@neha-121 ② /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 ② /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-046bb809a918eff2",  
      "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-046bb809a918eef2",
            "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"
            }
        }
    ]
}
```

```
@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-046bb809a918eef2",
            "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": "AGPAYGZVAOQU2WIJJMDYO",
    "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:~ - X
  "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": "AKIAYGZVAOQRCE5D4XB",
    "Status": "Active",
    "SecretAccessKey": "BSUkj5CKrVDWbDAx4FKFGezY0GrxvTLU70JCF0Jo",
    "CreateDate": "2026-01-18T15:07:41+00:00"
  }
}
@neha-121 ~ /workspaces/Lab9 (main) $
```

```
}
```

```
@neha-121 ② /workspaces/Lab9 (main) $ aws iam get-group --group-name MyGroupCli
```

```
{
```

```
    "Users": [],
```

```
    "Group": {
```

```
        "Path": "/",
```

```
        "GroupName": "MyGroupCli",
```

```
        "GroupId": "AGPAYGZVAOQU2WIJJMDYO",
```

```
        "Arn": "arn:aws:iam::564362507305:group/MyGroupCli",
```

```
        "CreateDate": "2026-01-18T14:42:27+00:00"
```

```
    }
```

```
}
```

```
@neha-121 ② /workspaces/Lab9 (main) $ aws iam attach-group-policy \
```

```
>   --group-name MyGroupCli \
```

```
>   --policy-arn arn:aws:iam::aws:policy/AmazonEC2FullAccess
```

```
@neha-121 ② /workspaces/Lab9 (main) $ aws iam list-attached-group-policies -
```

```
-group-name MyGroupCli
```

```
{
```

```
    "AttachedPolicies": [
```

```
        {
```

```
            "PolicyName": "AmazonEC2FullAccess",
```

```
            "PolicyArn": "arn:aws:iam::aws:policy/AmazonEC2FullAccess"
```

```
        }
```

```
    ]
```

```
}
```

```
@neha-121 ② /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 ② /workspaces/Lab9 (main) $
```

```

AWS_SECRET_ACCESS_KEY=55AxUGRPkhRcmuK61MMoBLK08/ncXg1wt+6s2q12Q
AWS_ACCESS_KEY_ID=AKIAYGZVAOQUXB7AFA4K
@neha-121 ② /workspaces/Lab9 (main) $
@neha-121 ② /workspaces/Lab9 (main) $ # Test IAM user access
@neha-121 ② /workspaces/Lab9 (main) $ aws iam get-user --user-name MyUserCli

    "User": {
        "Path": "/",
        "UserName": "MyUserCli",
        "UserId": "AIDAYGZVAOQUXB7AFA4K",
        "Arn": "arn:aws:iam::564362507305:user/MyUserCli",
        "CreateDate": "2026-01-18T14:43:32+00:00"
    }
}

@neha-121 ② /workspaces/Lab9 (main) $

@neha-121 ② /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 |
+-----+-----+

```

Task-7:

```

@neha-121 ② /workspaces/Lab9 (main) $ aws ec2 describe-instances \
>   --filters "Name=subnet-id,Values=subnet-0600df5fa8ce60857" \
>   --query "Reservations[*].Instances[*].InstanceId" \
>   --output table
@neha-121 ② /workspaces/Lab9 (main) $

@neha-121 ② /workspaces/Lab9 (main) $ aws ec2 describe-instances \
>   --filters "Name>tag:Name,Values=MyServer" \
>   --query "Reservations[*].Instances[*].PublicIpAddress" \
>   --output text
@neha-121 ② /workspaces/Lab9 (main) $

```

```

@neha-121 ② /workspaces/Lab9 (main) $ aws ec2 describe-instances \
--filters "Name=vpc-id,Values=vpc-06be85cd81b657192" \
--query "Reservations[*].Instances[*].InstanceId" \
--output table
@neha-121 ② /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) $
```