

Fatima Jinnah Women University

Subject: Cloud Computing



Lab 9

Name:

Tehreem khan(5-B)

Registration number:

2023-BSE-064

Submitted To:

Sir Shoaib

Task 1:

```
PS C:\Users\tehre> winget install --id GitHub.cli
The `msstore` source requires that you view the following agreements before using.
Terms of Transaction: https://aka.ms/microsoft-store-terms-of-transaction
The source requires the current machine's 2-letter geographic region to be sent to the back
end service to function properly (ex. "US").

Do you agree to all the source agreements terms?
[Y] Yes [N] No:
[Y] Yes [N] No: y
Found GitHub CLI [GitHub.cli] Version 2.83.2
This application is licensed to you by its owner.
Microsoft is not responsible for, nor does it grant any licenses to, third-party packages.
Downloading https://github.com/cli/cli/releases/download/v2.83.2/gh_2.83.2_windows_amd64.msi
[██████████] 17.7 MB / 17.7 MB
Successfully verified installer hash
Starting package install...
Successfully installed
PS C:\Users\tehre>

PS C:\Users\tehre> gh auth login -s codespace
? Where do you use GitHub? GitHub.com
? What is your preferred protocol for Git operations on this host? HTTPS
? Authenticate Git with your GitHub credentials? Yes
? How would you like to authenticate GitHub CLI? Login with a web browser

! First copy your one-time code: ACAE-B3AF
Press Enter to open https://github.com/login/device in your browser...
? Authentication complete.
- gh config set -h github.com git_protocol https
? Configured git protocol
? Logged in as tehreem-0514
PS C:\Users\tehre> 

PS C:\Users\tehre> gh codespace list
no codespaces found
PS C:\Users\tehre>

PS C:\Users\tehre> gh codespace list


| NAME                             | CREATED AT                                       | DISPLAY NAME    | REPOSITORY                      | BRANCH | ST |
|----------------------------------|--------------------------------------------------|-----------------|---------------------------------|--------|----|
| symmetrical-cod-9664p55vpjph95gv | symmetrical cod<br>available about 2 minutes ago | symmetrical cod | tehreem-0514/CC_TehreemKhan_064 | main   | Av |


PS C:\Users\tehre> gh codespace ssh -c symmetrical-cod-9664p55vpjph95gv
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.

@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $
```

Task 2:

```

inflating: aws/dist/prompt_toolkit-3.0.51.dist-info/licenses/AUTHORS.rst
inflating: aws/dist/wheel-0.45.1.dist-info/LICENSE.txt
inflating: aws/dist/wheel-0.45.1.dist-info/INSTALLER
inflating: aws/dist/wheel-0.45.1.dist-info/RECORD
inflating: aws/dist/wheel-0.45.1.dist-info/entry_points.txt
inflating: aws/dist/wheel-0.45.1.dist-info/WHEEL
inflating: aws/dist/wheel-0.45.1.dist-info/METADATA
inflating: aws/dist/wheel-0.45.1.dist-info/REQUESTED
inflating: aws/dist/wheel-0.45.1.dist-info/direct_url.json
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ sudo ./aws/install
You can now run: /usr/local/bin/aws --version
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $

@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ @tehreem-0514 ② /workspaces/CC_Tehreem
Khan_064 (main) $ aws --version
aws-cli/2.32.26 Python/3.13.11 Linux/6.8.0-1030-azure exe/x86_64.ubuntu.24
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $

@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws configure
AWS Access Key ID [*****reem]: AKIA27EVSW27EU3I5XX3
AWS Secret Access Key [*****reem]: 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
Default region name [me-central-1]: me-central-1
Default output format [json]: json
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ cat ~/.aws/credentials
[default]
aws_access_key_id = AKIA27EVSW27EU3I5XX3
aws_secret_access_key = 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
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ cat ~/.aws/config
[default]
region = me-central-1
output = json
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws sts get-caller-identity
{
    "UserId": "AIDA27EVSW27LJBMAWGMB",
    "Account": "754080462526",
    "Arn": "arn:aws:iam::754080462526:user/tehreem0514"
}
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $

```

Task 3:

```

+-----+
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws ec2 create-security-group \
> --group-name "MySecurityGroup" \
> --description "My Security Group" \
> --vpc-id "vpc-0d668582150defbf9"
{
    "GroupId": "sg-0827d0ea07eab9fff",
    "SecurityGroupArn": "arn:aws:ec2:me-central-1:754080462526:security-group/sg-0827d0ea07eab9fff"
}
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws ec2 describe-security-groups --group-ids sg-0

```

```
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws ec2 describe-security-groups --group-ids sg-0827d0ea07eab9fff
{
    "SecurityGroups": [
        {
            "GroupId": "sg-0827d0ea07eab9fff",
            "IpPermissionsEgress": [
                {
                    "IpProtocol": "-1",
                    "UserIdGroupPairs": [],
                    "IpRanges": [
                        {
                            "CidrIp": "0.0.0.0/0"
                        }
                    ],
                    "Ipv6Ranges": [],
                    "PrefixListIds": []
                }
            ],
            "VpcId": "vpc-0d668582150defbf9",
            "SecurityGroupArn": "arn:aws:ec2:me-central-1:754080462526:security-group/sg-0827d0ea07eab9fff",
            "OwnerId": "754080462526",
            "GroupName": "MySecurityGroup",
            "Description": "My Security Group",
            "IpPermissions": []
        }
    ]
}
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ curl icanhazip.com
20.192.21.48
```

```
Khan_064 (main) $ aws ec2 authorize-security-group-ingress \
>   --group-id sg-0827d0ea07eab9fff \
>   --protocol tcp \
>   --port 22 \
>   --cidr 4.240.39.199/32
{
    "Return": true,
    "SecurityGroupRules": [
        {
            "SecurityGroupRuleId": "sgr-01393a65f8a76aba3",
            "GroupId": "sg-0827d0ea07eab9fff",
            "GroupOwnerId": "754080462526",
            "IsEgress": false,
            "IpProtocol": "tcp",
            "FromPort": 22,
            "ToPort": 22,
            "CidrIpv4": "4.240.39.199/32",
            "SecurityGroupRuleArn": "arn:aws:ec2:me-central-1:754080462526:security-group-rule
/sgr-01393a65f8a76aba3"
        }
    ]
}
```

```
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws ec2 describe-security-groups --group-ids sg-0827d0ea07eab9fff
{
    "SecurityGroups": [
        {
            "GroupId": "sg-0827d0ea07eab9fff",
            "IpPermissionsEgress": [
                {
                    "IpProtocol": "-1",
                    "UserIdGroupPairs": [],
                    "IpRanges": [
                        {
                            "CidrIp": "0.0.0.0/0"
                        }
                    ],
                    "Ipv6Ranges": [],
                    "PrefixListIds": []
                }
            ],
            "VpcId": "vpc-0d668582150defbf9",
            "SecurityGroupArn": "arn:aws:ec2:me-central-1:754080462526:security-group/sg-0827d0ea07eab9fff",
            "OwnerId": "754080462526",
            "GroupName": "MySecurityGroup",
            "Description": "My Security Group",
            "IpPermissions": [
                {
                    "IpProtocol": "tcp",
                    "FromPort": 80,
                    "ToPort": 80,
                    "UserIdGroupPairs": [],
                    "IpRanges": [
                        {
                            "CidrIp": "0.0.0.0/0"
                        }
                    ],
                    "Ipv6Ranges": [],
                    "PrefixListIds": []
                },
                {
                    "IpProtocol": "tcp",
                    "FromPort": 22,
                    "ToPort": 22,
                    "UserIdGroupPairs": [],
                    "IpRanges": [
                        {
                            "CidrIp": "20.192.21.48/32"
                        }
                    ],
                    "Ipv6Ranges": [],
                    "PrefixListIds": []
                }
            ]
        }
    ]
}
```

```

@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws ec2 authorize-security-group-ingress \
>   --group-id 'sg-0827d0ea07eab9fff' \
>   --ip-permissions '[{"FromPort":80,"ToPort":80,"IpProtocol":"tcp","IpRanges":[{"CidrIp":"20.192.21.48/32"}]}'
{
  "Return": true,
  "SecurityGroupRules": [
    {
      "SecurityGroupRuleId": "sgr-0fcac525f754a123f",
      "GroupId": "sg-0827d0ea07eab9fff",
      "GroupOwnerId": "754080462526",
      "IsEgress": false,
      "IpProtocol": "tcp",
      "FromPort": 80,
      "ToPort": 80,
      "CidrIpv4": "20.192.21.48/32",
      "SecurityGroupRuleArn": "arn:aws:ec2:me-central-1:754080462526:security-group-rule/sgr-0fcac525f754a123f"
    }
  ]
}
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $

{
  "SecurityGroups": [
    {
      "GroupId": "sg-0827d0ea07eab9fff",
      "IpPermissionsEgress": [
        {
          "IpProtocol": "-1",
          "UserIdGroupPairs": [],
          "IpRanges": [
            {
              "CidrIp": "0.0.0.0/0"
            }
          ],
          "Ipv6Ranges": [],
          "PrefixListIds": []
        }
      ],
      "VpcId": "vpc-0d668582150defbf9",
      "SecurityGroupArn": "arn:aws:ec2:me-central-1:754080462526:security-group/sg-0827d0ea07eab9fff",
      "OwnerId": "754080462526",
      "GroupName": "MySecurityGroup",
      "Description": "My Security Group",
      "IpPermissions": [
        {
          "IpProtocol": "tcp",
          "FromPort": 80,
          "ToPort": 80,
          "UserIdGroupPairs": [],
          "IpRanges": [
            {
              "CidrIp": "0.0.0.0/0"
            },
            {
              "CidrIp": "20.192.21.48/32"
            }
          ],
          "Ipv6Ranges": [],
          "PrefixListIds": []
        },
        {
          "IpProtocol": "tcp",
          "FromPort": 22,
          "ToPort": 22,
          "UserIdGroupPairs": [],
          "IpRanges": [
            {
              "CidrIp": "20.192.21.48/32"
            }
          ],
          "Ipv6Ranges": [],
          "PrefixListIds": []
        },
        ...
      ],
      ...
    }
  ]
}

```

Task 4:

```

@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ (
Khan_064 (main) $ aws ec2 create-key-pair \
>   --key-name MyED25519Key \
>   --key-type ed25519 \
>   --key-format pem \
>   --query 'KeyMaterial' \
>   --output text > MyED25519Key.pem

```

```
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws ec2 describe-key-pairs
{
    "KeyPairs": [
        {
            "KeyPairId": "key-0d0fb8357d777bef0",
            "KeyType": "ed25519",
            "Tags": [],
            "CreateTime": "2026-01-02T08:28:12.296000+00:00",
            "KeyName": "MyED25519Key",
            "KeyFingerprint": "rgBuRA8mRgKb1zyFVklo9s3KmJvWA3GvvUKBXD4zhY0="
        }
    ]
}

@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws ec2 delete-key-pair --key-name MyED25519Key
{
    "Return": true,
    "KeyPairId": "key-0d0fb8357d777bef0"
}

{
    "ReservationId": "r-02792028f98ca793b",
    "OwnerId": "754080462526",
    "Groups": [],
    "Instances": [
        {
            "Architecture": "x86_64",
            "BlockDeviceMappings": [],
            "ClientToken": "c4f4cc2a-e2fd-4e8f-88c4-e8034e775346",
            "EbsOptimized": false,
            "EnaSupport": true,
            "Hypervisor": "xen",
            "NetworkInterfaces": [
                {
                    "Attachment": {
                        "AttachTime": "2026-01-02T08:34:31+00:00",
                        "AttachmentId": "eni-attach-0652ebab7c1be371f",
                        "DeleteOnTermination": true,
                        "DeviceIndex": 0,
                        "Status": "attaching",
                        "NetworkCardIndex": 0
                    },
                    "Description": "",
                    "Groups": [
                        {
                            "GroupId": "sg-0827d0ea07eab9fff",
                            "GroupName": "MySecurityGroup"
                        }
                    ],
                    "Ipv6Addresses": [],
                    "MacAddress": "0a:2c:54:7f:fc:a5",
                    "NetworkInterfaceId": "eni-0422a7fd3103d7afb",
                    "OwnerId": "754080462526",
                    "PrivateDnsName": "ip-172-31-20-19.me-central-1.compute.internal",
                    "PrivateIpAddress": "172.31.20.19",
                    "PrivateIpAddresses": [
                        {
                            "Primary": true,
                            "PrivateDnsName": "ip-172-31-20-19.me-central-1.compute.internal",
                            "PrivateIpAddress": "172.31.20.19"
                        }
                    ],
                    "SourceDestCheck": true,
                    "Status": "in-use",
                    "SubnetId": "subnet-0ea69c20931e5ec1",
                    "VpcId": "vpc-0d668582150defbf9",
                    "InterfaceType": "interface",
                    "Operator": {
                        "Managed": false
                    }
                }
            ]
        }
    ]
}
```

```
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws ec2 describe-instances \
>   --query "Reservations[*].Instances[*].[InstanceId,PublicIpAddress]" \
>   --output table
-----
|           DescribeInstances           |
+-----+-----+
| i-07f4c7667b7eb6f74 | 51.112.248.146 |
+-----+-----+
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $
```

```
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ ssh -i MyED25519Key.pem ec2-user@51.11
2.248.146
The authenticity of host '51.112.248.146 (51.112.248.146)' can't be established.
ED25519 key fingerprint is SHA256:X7kJrF8YroR1G8TfiQec0XyZBYqotnIk+Q577qsIps.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '51.112.248.146' (ED25519) to the list of known hosts.

,
#_
~\_\_\#\_\_      Amazon Linux 2023
~~ \_\#\#\#\_\\
~~ \#\#\|
~~ \#/ \_\_\_ https://aws.amazon.com/linux/amazon-linux-2023
~~ \_\_\_ \_\-\>
~~ \_\_\_ \_\_
~~ \_\_\_ \_\_
~~ \_\_\_ \_\_
[ec2-user@ip-172-31-20-19 ~]$
```

```
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws ec2 stop-instances --instance-ids
i-07f4c7667b7eb6f74
{
  "StoppingInstances": [
    {
      "InstanceId": "i-07f4c7667b7eb6f74",
      "CurrentState": {
        "Code": 80,
        "Name": "stopped"
      },
      "PreviousState": {
        "Code": 80,
        "Name": "stopped"
      }
    }
  ]
}
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $
```

```
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws ec2 start-instances --instance-ids
i-07f4c7667b7eb6f74
{
  "StartingInstances": [
    {
      "InstanceId": "i-07f4c7667b7eb6f74",
      "CurrentState": {
        "Code": 16,
        "Name": "running"
      },
      "PreviousState": {
        "Code": 16,
        "Name": "running"
      }
    }
  ]
}
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $
```

Task 5:

```
{  
    "SecurityGroups": [  
        {  
            "GroupId": "sg-0827d0ea07eab9fff",  
            "IpPermissionsEgress": [  
                {  
                    "IpProtocol": "-1",  
                    "UserIdGroupPairs": [],  
                    "IpRanges": [  
                        {  
                            "CidrIp": "0.0.0.0/0"  
                        }  
                    ],  
                    "Ipv6Ranges": [],  
                    "PrefixListIds": []  
                }  
            ],  
            "VpcId": "vpc-0d668582150defbf9",  
            "SecurityGroupArn": "arn:aws:ec2:me-central-1:754080462526:security-group/sg-0827d  
0ea07eab9fff",  
            "OwnerId": "754080462526",  
            "GroupName": "MySecurityGroup",  
            "Description": "My Security Group",  
            "IpPermissions": [  
                {  
                    "IpProtocol": "tcp",  
                    "FromPort": 80,  
                    "ToPort": 80,  
                    "UserIdGroupPairs": [],  
                    "IpRanges": [  
                        {  
                            "CidrIp": "0.0.0.0/0"  
                        },  
                        {  
                            "CidrIp": "20.192.21.48/32"  
                        }  
                    ],  
                    "Ipv6Ranges": [],  
                    "PrefixListIds": []  
                },  
                {  
                    "IpProtocol": "tcp",  
                    "FromPort": 22,  
                    "ToPort": 22,  
                    "UserIdGroupPairs": [],  
                    "IpRanges": [  
                        {  
                            "CidrIp": "20.192.21.48/32"  
                        }  
                    ]  
                }  
            ]  
        }  
    ]
```

```
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws ec2 describe-vpcs
{
    "Vpcs": [
        {
            "OwnerId": "754080462526",
            "InstanceTenancy": "default",
            "CidrBlockAssociationSet": [
                {
                    "AssociationId": "vpc-cidr-assoc-014213f2f7599a6d7",
                    "CidrBlock": "172.31.0.0/16",
                    "CidrBlockState": {
                        "State": "associated"
                    }
                }
            ],
            "IsDefault": true,
            "BlockPublicAccessStates": {
                "InternetGatewayBlockMode": "off"
            },
            "VpcId": "vpc-0d668582150defbf9",
            "State": "available",
            "CidrBlock": "172.31.0.0/16",
            "DhcpOptionsId": "dopt-0c226be11fcb44d5b"
        }
    ]
}
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $
```

```
{
    "Subnets": [
        {
            "AvailabilityZoneId": "mec1-az1",
            "MapCustomerOwnedIpOnLaunch": false,
            "OwnerId": "754080462526",
            "AssignIpv6AddressOnCreation": false,
            "Ipv6CidrBlockAssociationSet": [],
            "SubnetArn": "arn:aws:ec2:me-central-1:754080462526:subnet/subnet-0f472d3a2c5367c0
6",
            "EnableDns64": false,
            "Ipv6Native": false,
            "PrivateDnsNameOptionsOnLaunch": {
                "HostnameType": "ip-name",
                "EnableResourceNameDnsARecord": false,
                "EnableResourceNameDnsAAAARecord": false
            },
            "BlockPublicAccessStates": {
                "InternetGatewayBlockMode": "off"
            },
            "SubnetId": "subnet-0f472d3a2c5367c06",
            "State": "available",
            "VpcId": "vpc-0d668582150defbf9",
            "CidrBlock": "172.31.32.0/20",
            "AvailableIpAddressCount": 4091,
            "AvailabilityZone": "me-central-1a",
            "DefaultForAz": true,
            "MapPublicIpOnLaunch": true
        },
        {
            "AvailabilityZoneId": "mec1-az3",
            "MapCustomerOwnedIpOnLaunch": false,
            "OwnerId": "754080462526",
            "AssignIpv6AddressOnCreation": false,
            "Ipv6CidrBlockAssociationSet": [],
            "SubnetArn": "arn:aws:ec2:me-central-1:754080462526:subnet/subnet-020363ba1a454da3
a",
            "EnableDns64": false,
            "Ipv6Native": false,
            "PrivateDnsNameOptionsOnLaunch": {
                "HostnameType": "ip-name",
                "EnableResourceNameDnsARecord": false,
                "EnableResourceNameDnsAAAARecord": false
            },
            "BlockPublicAccessStates": {
                "InternetGatewayBlockMode": "off"
            },
            "SubnetId": "subnet-020363ba1a454da3a",
        }
    ]
}
```

```
{  
    "Reservations": [  
        {  
            "ReservationId": "r-02792028f98ca793b",  
            "OwnerId": "754080462526",  
            "Groups": [],  
            "Instances": [  
                {  
                    "Architecture": "x86_64",  
                    "BlockDeviceMappings": [  
                        {  
                            "DeviceName": "/dev/xvda",  
                            "Ebs": {  
                                "AttachTime": "2026-01-02T08:34:32+00:00",  
                                "DeleteOnTermination": true,  
                                "Status": "attached",  
                                "VolumeId": "vol-0c7b612e2daa7ef7c"  
                            }  
                        }  
                    ],  
                    "ClientToken": "c4f4cc2a-e2fd-4e8f-88c4-e8034e775346",  
                    "EbsOptimized": false,  
                    "EnaSupport": true,  
                    "Hypervisor": "xen",  
                    "NetworkInterfaces": [  
                        {  
                            "Association": {  
                                "IpOwnerId": "amazon",  
                                "PublicDnsName": "ec2-3-29-32-181.me-central-1.compute.amazonaws.com",  
                                "PublicIp": "3.29.32.181"  
                            },  
                            "Attachment": {  
                                "AttachTime": "2026-01-02T08:34:31+00:00",  
                                "AttachmentId": "eni-attach-0652ebab7c1be371f",  
                                "DeleteOnTermination": true,  
                                "DeviceIndex": 0,  
                                "Status": "attached",  
                                "NetworkCardIndex": 0  
                            },  
                            "Description": "",  
                            "Groups": [  
                                {  
                                    "GroupId": "sg-0827d0ea07eab9fff",  
                                    "GroupName": "MySecurityGroup"  
                                }  
                            ],  
                            "Ipv6Addresses": []  
                        }  
                    ]  
                }  
            ]  
        }  
    ]  
}
```

```
{  
    "Regions": [  
        {  
            "OptInStatus": "opt-in-not-required",  
            "RegionName": "ap-south-1",  
            "Endpoint": "ec2.ap-south-1.amazonaws.com"  
        },  
        {  
            "OptInStatus": "opt-in-not-required",  
            "RegionName": "eu-north-1",  
            "Endpoint": "ec2.eu-north-1.amazonaws.com"  
        },  
        {  
            "OptInStatus": "opt-in-not-required",  
            "RegionName": "eu-west-3",  
            "Endpoint": "ec2.eu-west-3.amazonaws.com"  
        },  
        {  
            "OptInStatus": "opt-in-not-required",  
            "RegionName": "eu-west-2",  
            "Endpoint": "ec2.eu-west-2.amazonaws.com"  
        },  
        {  
            "OptInStatus": "opt-in-not-required",  
            "RegionName": "eu-west-1",  
            "Endpoint": "ec2.eu-west-1.amazonaws.com"  
        },  
        {  
            "OptInStatus": "opt-in-not-required",  
            "RegionName": "ap-northeast-3",  
            "Endpoint": "ec2.ap-northeast-3.amazonaws.com"  
        },  
        {  
            "OptInStatus": "opt-in-not-required",  
            "RegionName": "ap-northeast-2",  
            "Endpoint": "ec2.ap-northeast-2.amazonaws.com"  
        },  
        {  
            "OptInStatus": "opt-in-not-required",  
            "RegionName": "ap-northeast-1",  
            "Endpoint": "ec2.ap-northeast-1.amazonaws.com"  
        },  
        {  
            "OptInStatus": "opted-in",  
            "RegionName": "me-central-1",  
            "Endpoint": "ec2.me-central-1.amazonaws.com"  
        },  
        :  
    ]  
}
```

```
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws ec2 describe-availability-zones
{
    "AvailabilityZones": [
        {
            "OptInStatus": "opt-in-not-required",
            "Messages": [],
            "RegionName": "me-central-1",
            "ZoneName": "me-central-1a",
            "ZoneId": "mec1-az1",
            "GroupName": "me-central-1-zg-1",
            "NetworkBorderGroup": "me-central-1",
            "ZoneType": "availability-zone",
            "GroupLongName": "Middle East (UAE) 1",
            "State": "available"
        },
        {
            "OptInStatus": "opt-in-not-required",
            "Messages": [],
            "RegionName": "me-central-1",
            "ZoneName": "me-central-1b",
            "ZoneId": "mec1-az2",
            "GroupName": "me-central-1-zg-1",
            "NetworkBorderGroup": "me-central-1",
            "ZoneType": "availability-zone",
            "GroupLongName": "Middle East (UAE) 1",
            "State": "available"
        },
        {
            "OptInStatus": "opt-in-not-required",
            "Messages": [],
            "RegionName": "me-central-1",
            "ZoneName": "me-central-1c",
            "ZoneId": "mec1-az3",
            "GroupName": "me-central-1-zg-1",
            "NetworkBorderGroup": "me-central-1",
            "ZoneType": "availability-zone",
            "GroupLongName": "Middle East (UAE) 1",
            "State": "available"
        }
    ]
}
```

Task 6:

```
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ @tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws iam create-group --group-name MyGroupCli
An error occurred (EntityAlreadyExists) when calling the CreateGroup operation: Group with name MyGroupCli already exists.

@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws iam get-group --group-name MyGroupCli
{
  "Users": [
    {
      "Path": "/",
      "UserName": "MyUserCli",
      "UserId": "AIDA27EVSW27DA63JDUE6",
      "Arn": "arn:aws:iam::754080462526:user/MyUserCli",
      "CreateDate": "2026-01-01T22:17:12+00:00"
    }
  ],
  "Group": {
    "Path": "/",
    "GroupName": "MyGroupCli",
    "GroupId": "AGPA27EVSW27DRZOL5ML4",
    "Arn": "arn:aws:iam::754080462526:group/MyGroupCli",
    "CreateDate": "2026-01-01T22:17:09+00:00"
  }
}
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws iam create-user --user-name MyUserCli
An error occurred (EntityAlreadyExists) when calling the CreateUser operation: User with name MyUserCli already exists.

@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws iam get-user --user-name MyUserCli
{
  "User": {
    "Path": "/",
    "UserName": "MyUserCli",
    "UserId": "AIDA27EVSW27DA63JDUE6",
    "Arn": "arn:aws:iam::754080462526:user/MyUserCli",
    "CreateDate": "2026-01-01T22:17:12+00:00"
  }
}
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws iam add-user-to-group --user-name MyUserCli --group-name MyGroupCli
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ Khan_064 (main) $ aws iam get-group --group-name MyGroupCli
{
  "Users": [
    {
      "Path": "/",
      "UserName": "MyUserCli",
      "UserId": "AIDA27EVSW27DA63JDUE6",
      "Arn": "arn:aws:iam::754080462526:user/MyUserCli",
      "CreateDate": "2026-01-01T22:17:12+00:00"
    }
  ],
  "Group": {
    "Path": "/",
    "GroupName": "MyGroupCli",
    "GroupId": "AGPA27EVSW27DRZOL5ML4",
    "Arn": "arn:aws:iam::754080462526:group/MyGroupCli",
    "CreateDate": "2026-01-01T22:17:09+00:00"
  }
}
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $
```

```
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws iam list-policies \
>   --query "Policies[?contains(PolicyName, 'EC2')].{Name:PolicyName}" \
>   --output text
AmazonEC2FullAccess
AmazonEC2ReadOnlyAccess
AmazonElasticMapReduceforEC2Role
AmazonEC2RoleforDataPipelineRole
AmazonEC2ContainerServiceforEC2Role
AmazonEC2ContainerServiceRole
AmazonEC2RoleforAWSCodeDeploy
AmazonEC2RoleforSSM
CloudWatchActionsEC2Access
AmazonEC2ContainerRegistryReadOnly
AmazonEC2ContainerRegistryPowerUser
AmazonEC2ContainerRegistryFullAccess
AmazonEC2ContainerServiceAutoscaleRole
AmazonEC2SpotFleetAutoscaleRole
AWSElasticBeanstalkCustomPlatformforEC2Role
AmazonEC2ContainerServiceEventsRole
AmazonEC2SpotFleetTaggingRole
AWSEC2SpotServiceRolePolicy
AWSServiceRoleForEC2ScheduledInstances
AWSEC2SpotFleetServiceRolePolicy
AWSApplicationAutoscalingEC2SpotFleetRequestPolicy
AWSEC2FleetServiceRolePolicy
AWSAutoScalingPlansEC2AutoScalingPolicy
EC2InstanceConnect
AmazonEC2RolePolicyForLaunchWizard
EC2InstanceProfileForImageBuilder
EC2FleetTimeShiftableServiceRolePolicy
AmazonEC2RoleforAWSCodeDeployLimited
EC2InstanceProfileForImageBuilderECRContainerBuilds
AWSApplicationMigrationEC2Access
AWSEC2CapacityReservationFleetRolePolicy
EC2FastLaunchServiceRolePolicy
AmazonSSMManagedEC2InstanceDefaultPolicy
AWSFaultInjectionSimulatorEC2Access
EC2ImageBuilderLifecycleExecutionPolicy
AWSEC2VssSnapshotPolicy
EC2FastLaunchFullAccess
AmazonEC2ContainerRegistryPullOnly
DeclarativePoliciesEC2Report
AmazonEC2ImageReferencesAccessPolicy
AWSEC2CapacityManagerServiceRolePolicy
AWSEC2Sql1HaServiceRolePolicy
AWSEC2Sql1HaInstancePolicy
AWSLambdaManagedEC2ResourceOperator
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $
```

```
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (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

```
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ .
```

```
!arn:aws:policy/tenreem does not exist or is not attachable.
```

```
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws iam attach-group-policy \
>   --group-name MyGroupCli \
>   --policy-arn arn:aws:iam::aws:policy/AmazonEC2FullAccess
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $
```

```
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws iam list-attached-group-policies --group-name MyGroupCli
{
    "AttachedPolicies": [
        {
            "PolicyName": "AmazonEC2FullAccess",
            "PolicyArn": "arn:aws:iam::aws:policy/AmazonEC2FullAccess"
        }
    ]
}
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $

@tehreem-0514 ③ /workspaces/CC_TehreemKhan_064 (main) $ aws iam create-login-profile \
>   --user-name MyUserCli \
>   --password cc@lab9task\
>   --password-reset-required
{
    "LoginProfile": {
        "UserName": "MyUserCli",
        "CreateDate": "2026-01-02T09:16:54+00:00",
        "PasswordResetRequired": true
    }
}
@tehreem-0514 ④ /workspaces/CC_TehreemKhan_064 (main) $

@tehreem-0514 ⑤ /workspaces/CC_TehreemKhan_064 (main) $ aws iam attach-group-policy --group-name MyGroupCli --policy-arn arn:aws:iam::aws:policy/IAMUserChangePassword
@tehreem-0514 ⑥ /workspaces/CC_TehreemKhan_064 (main) $ aws iam detach-group-policy --group-name MyGroupCli --policy-arn arn:aws:iam::aws:policy/IAMUserChangePassword
@tehreem-0514 ⑦ /workspaces/CC_TehreemKhan_064 (main) $
```

```
@tehreem-0514 ⑧ /workspaces/CC_TehreemKhan_064 (main) $ aws iam create-access-key --user-name MyUserCli
{
    "AccessKey": {
        "UserName": "MyUserCli",
        "AccessKeyId": "AKIA27EVSW27GZ444U5K",
        "Status": "Active",
        "SecretAccessKey": "mc66AZJLm2ZWV2pzbdb3YsMJ7fRE6c1BgU7f3WCmS",
        "CreateDate": "2026-01-02T09:23:13+00:00"
    }
}
@tehreem-0514 ⑨ /workspaces/CC_TehreemKhan_064 (main) $
@tehreem-0514 ⑩ /workspaces/CC_TehreemKhan_064 (main) $
```

```
@tehreem-0514 ⑪ /workspaces/CC_TehreemKhan_064 (main) $ aws iam list-access-keys --user-name MyUserCli
{
    "AccessKeyMetadata": [
        {
            "UserName": "MyUserCli",
            "AccessKeyId": "AKIA27EVSW27GZ444U5K",
            "Status": "Active",
            "CreateDate": "2026-01-02T09:23:13+00:00"
        },
        {
            "UserName": "MyUserCli",
            "AccessKeyId": "AKIA27EVSW2707VGKDOE",
            "Status": "Active",
            "CreateDate": "2026-01-02T09:18:06+00:00"
        }
    ]
}
@tehreem-0514 ⑫ /workspaces/CC_TehreemKhan_064 (main) $ aws iam delete-access-key --user-name MyUserCli --access-key-id AKIA27EVSW2707VGKDOE
@tehreem-0514 ⑬ /workspaces/CC_TehreemKhan_064 (main) $ aws iam delete-access-key --user-name MyUserCli --access-key-id AKIA27EVSW2707VGKDOE
```

```

@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ @tehreem-0514 ② /workspaces/CC_Tehreem
Z444U5K^C(main) $ export AWS_ACCESS_KEY_ID=AKIA27EVSW27G
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ export AWS_SECRET_ACCESS_KEY=mc66AZJLm
2ZWV2pzb3YsMJ7fRE6c1BgU7f3WCmS
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ printenv | grep AWS_
AWS_SECRET_ACCESS_KEY=mc66AZJLm2ZWV2pzb3YsMJ7fRE6c1BgU7f3WCmS
AWS_ACCESS_KEY_ID=AKIA27EVSW27GZ444U5K
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws iam get-user --user-name MyUserCli

An error occurred (AccessDenied) when calling the GetUser operation: User: arn:aws:iam::754080
462526:user/MyUserCli is not authorized to perform: iam:GetUser on resource: user MyUserCli be
cause no identity-based policy allows the iam:GetUser action
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $

cause no identity-based policy allows the iam:GetUser action
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ exit
logout
Connection to localhost closed.
shell closed: exit status 254
PS C:\Users\tehre> aws iam get-user --user-name MyUserCli
{
    "User": {
        "Path": "/",
        "UserName": "MyUserCli",
        "UserId": "AIDA27EVSW27DA63JDUE6",
        "Arn": "arn:aws:iam::754080462526:user/MyUserCli",
        "CreateDate": "2026-01-01T22:17:12+00:00"
    }
}
PS C:\Users\tehre>

```

Task 7:

```

@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws ec2 describe-instances \
>   --filters "Name>tag:Name,Values=MyServer" \
>   --query "Reservations[*].Instances[*].PublicIpAddress" \
>   --output text
3.29.32.181

@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws ec2 describe-instances \
>   --filters "Name=instance-type,Values=t3.micro" \
>   --query "Reservations[].Instances[].InstanceId" \
>   --output table
-----
|  DescribeInstances  |
+-----+
|  i-07f4c7667b7eb6f74  |
+-----+

@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws ec2 describe-instances \
>   --query "Reservations[].Instances[].SubnetId" \
>   --output text
subnet-0ea69c20931e5ece1

@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws ec2 describe-instances \
>   --query "Reservations[].Instances[].VpcId" \
>   --output text
vpc-0d668582150defbf9
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $

```

Task 8:

```
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws ec2 describe-instances \
>   --filters "Name=tag:Name,Values=MyServer" \
>   --query "Reservations[*].Instances[*].[InstanceId,PublicIpAddress,Tags[?Key=='Name'].Value
|[0]]" \
>   --output table
-----
|           DescribeInstances           |
+-----+-----+
| i-07f4c7667b7eb6f74 | 3.29.32.181 | MyServer |
+-----+-----+
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws ec2 describe-instances \
>   --query "Reservations[*].Instances[*].[InstanceId,State.Name]" \
>   --output table
-----
|           DescribeInstances           |
+-----+-----+
| i-07f4c7667b7eb6f74 | running    |
+-----+-----+
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws ec2 describe-instances \
>   --query "Reservations[*].Instances[*].[InstanceId,InstanceType,Placement.AvailabilityZone]"
` \
>   --output table
-----
|           DescribeInstances           |
+-----+-----+
| i-07f4c7667b7eb6f74 | t3.micro | me-central-1b |
+-----+-----+
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $
```

Cleanup:

```
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws ec2 terminate-instances --instance
-ids i-07f4c7667b7eb6f74
{
  "TerminatingInstances": [
    {
      "InstanceId": "i-07f4c7667b7eb6f74",
      "CurrentState": {
        "Code": 32,
        "Name": "shutting-down"
      },
      "PreviousState": {
        "Code": 16,
        "Name": "running"
      }
    }
  ]
}
```

```
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws ec2 describe-volumes \
>   --query "Volumes[].[VolumeId]" \
>   --output table
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $

@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws ec2 delete-security-group --group-
id sg-0827d0ea07eab9fff
{
    "Return": true,
    "GroupId": "sg-0827d0ea07eab9fff"
}
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws ec2 delete-key-pair --key-name MyE
D25519Key
{
    "Return": true,
    "KeyPairId": "key-045fb30839e4c8199"
}
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ rm -f MyED25519Key.pem
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $

@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws iam delete-access-key --user-name
MyUserCli --access-key-id <AccessKeyId>
-bash: syntax error near unexpected token `newline'
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws iam delete-access-key --user-name
MyUserCli --access-key-id <AccessKeyId>
-bash: syntax error near unexpected token `newline'
iam remove-user-from-group --user-name MyUserCli --group-name MyGroupCli
aws iam delete-user --user-name MyUserCli
aws iam detach-group-policy @tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws iam de
lete-login-profile --user-name MyUserCli
--group-name MyGroupCli --policy-arn arn:aws:iam::aws:policy/EXAMPLEPolicyName
aws iam delete-group --group-name MyGroupCli
An error occurred (NoSuchEntity) when calling the DeleteLoginProfile operation: The user with
name MyUserCli cannot be found.
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws iam remove-user-from-group --user-
name MyUserCli --group-name MyGroupCli

An error occurred (NoSuchEntity) when calling the RemoveUserFromGroup operation: The user with
name MyUserCli cannot be found.
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws iam delete-user --user-name MyUser
Cli

An error occurred (NoSuchEntity) when calling the DeleteUser operation: The user with name MyU
serCli cannot be found.
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws iam detach-group-policy --group-na
me MyGroupCli --policy-arn arn:aws:iam::aws:policy/EXAMPLEPolicyName

An error occurred (NoSuchEntity) when calling the DetachGroupPolicy operation: The group with
name MyGroupCli cannot be found.
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $ aws iam delete-group --group-name MyGr
oupCli

An error occurred (NoSuchEntity) when calling the DeleteGroup operation: The group with name M
yGroupCli cannot be found.
@tehreem-0514 ② /workspaces/CC_TehreemKhan_064 (main) $
```