
LAB 10

NAME: SHUMAIL ZAHRA

REGISTRATION #: 2023-BSE-061

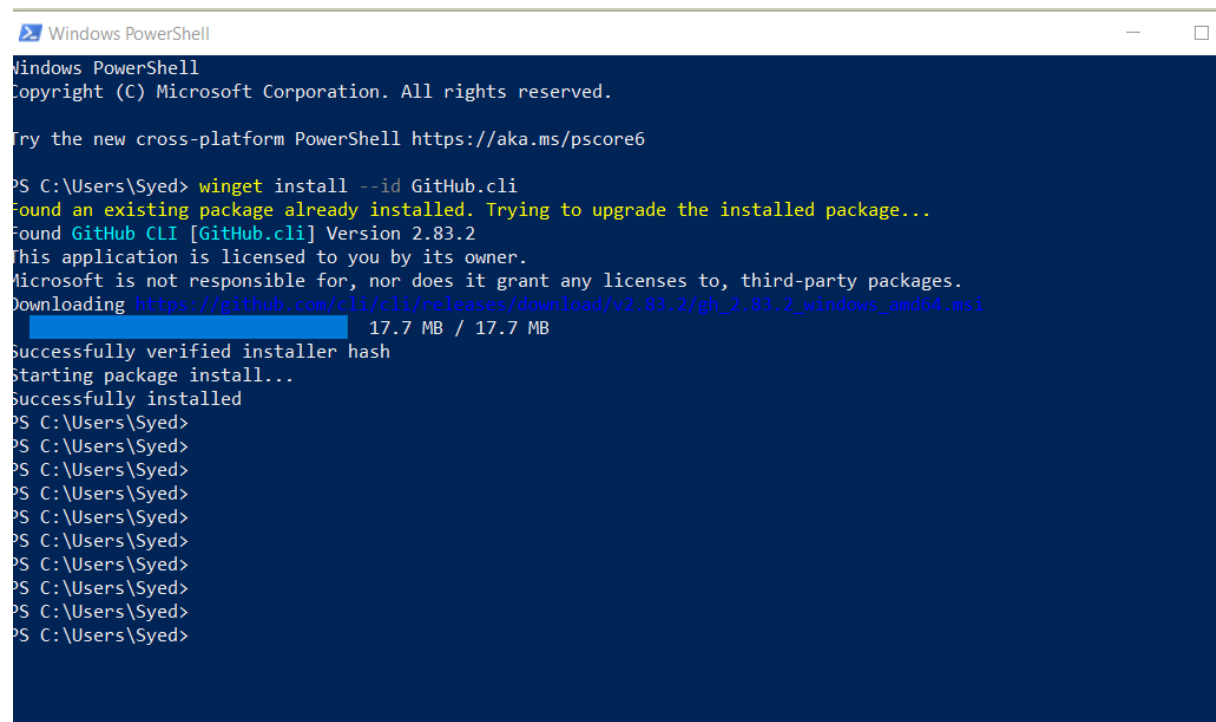
DEPARTMENT: BSE(5B)

LAB TASK

GH CLI Codespaces + AWS + Terraform: CLI Automation of VPC/Subnet Creation

Task 1 — GitHub CLI Codespace Setup & Authentication

task1_gh_install



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

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

PS C:\Users\Syed> winget install --id GitHub.cli
Found an existing package already installed. Trying to upgrade the installed package...
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\Syed>
PS C:\Users\Syed>
PS C:\Users\Syed>
PS C:\Users\Syed>
PS C:\Users\Syed>
PS C:\Users\Syed>
PS C:\Users\Syed>
PS C:\Users\Syed>
PS C:\Users\Syed>
PS C:\Users\Syed>
```

task1_gh_auth_login

```

PS C:\Users\Syed> 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? Paste an authentication token
Tip: you can generate a Personal Access Token here https://github.com/settings/tokens
The minimum required scopes are 'repo', 'read:org', 'workflow'.
? Paste your authentication token:
X Sorry, your reply was invalid: Value is required
? Paste your authentication token: *****
- gh config set -h github.com git_protocol https
? Configured git protocol
? Logged in as 23-22411-061-rgb
! You were already logged in to this account
PS C:\Users\Syed>

```

task1_codespace_list

```

PS C:\Users\Syed> gh codespace list

```

NAME	DISPLAY NAME	REPOSITORY	BRANCH	STATE	CREATED AT
special-space-funicular-97g7wxvqr97x2pgxr	special space funicular	23-22411-061-rgb/CC_-Shumail-zahra-_--2023-BSE-061-	main	Shutdown	about 15 days ago
studious-spork-5g7g59647vv4cvjg	studious spork	23-22411-061-rgb/CC_-Shumail-zahra-_--2023-BSE-061-	main*	Shutdown	about 15 days ago

```

PS C:\Users\Syed>

```

task1_codespace_ssh_connected

```

PS C:\Users\Syed> gh codespace ssh -c special-space-funicular-97g7wxvqr97x2pgxr
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)

 * Documentation:  https://help.ubuntu.com
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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.

23-22411-061-rgb @ /workspaces/CC_-Shumail-zahra-_--2023-BSE-061- (main) $

```

Task 2 — Install AWS CLI, Terraform CLI, Provider Setup

A. Install AWS CLI (Skip if already installed)

task2_aws_install_and_version

```

Windows PowerShell
Inflating: aws/dist/awscli/examples/ses/list-identities.rst
Inflating: aws/dist/awscli/examples/xray/get-service-graph.rst
Inflating: aws/dist/awscli/examples/xray/update-group.rst
Inflating: aws/dist/awscli/examples/xray/update-sampling-rule.rst
Inflating: aws/dist/awscli/examples/xray/delete-sampling-rule.rst
Inflating: aws/dist/awscli/examples/xray/get-sampling-rules.rst
Inflating: aws/dist/awscli/examples/xray/create-group.rst
Inflating: aws/dist/awscli/examples/xray/get-encryption-config.rst
Inflating: aws/dist/awscli/examples/xray/put-trace-segments.rst
Inflating: aws/dist/awscli/examples/xray/create-sampling-rule.rst
Inflating: aws/dist/awscli/examples/xray/get-sampling-targets.rst
Inflating: aws/dist/awscli/examples/xray/get-groups.rst
Inflating: aws/dist/awscli/examples/xray/batch-traces-get.rst
Inflating: aws/dist/awscli/examples/xray/delete-group.rst
Inflating: aws/dist/awscli/examples/guardduty/get-group.rst
Inflating: aws/dist/awscli/examples/guardduty/dissociate-from-master-account.rst
Inflating: aws/dist/awscli/examples/guardduty/create-filter.rst
Inflating: aws/dist/awscli/examples/guardduty/get-detector.rst
Inflating: aws/dist/awscli/examples/guardduty/get-findings.rst
Inflating: aws/dist/awscli/examples/guardduty/decline-invitations.rst
Inflating: aws/dist/awscli/examples/guardduty/update-ip-set.rst
Inflating: aws/dist/awscli/examples/guardduty/delete-detector.rst
Inflating: aws/dist/awscli/examples/guardduty/create-sample-findings.rst
Inflating: aws/dist/awscli/examples/guardduty/get-ip-set.rst
Inflating: aws/dist/awscli/examples/guardduty/create-ip-set.rst
Inflating: aws/dist/awscli/examples/guardduty/list-invitations.rst
Inflating: aws/dist/awscli/examples/guardduty/delete-filter.rst
Inflating: aws/dist/awscli/examples/guardduty/create-members.rst
Inflating: aws/dist/awscli/examples/guardduty/create-detector.rst
Inflating: aws/dist/awscli/examples/guardduty/archive-findings.rst
Inflating: aws/dist/awscli/examples/guardduty/list-members.rst
Inflating: aws/dist/awscli/examples/guardduty/accept-invitation.rst
Inflating: aws/dist/awscli/examples/guardduty/list-findings.rst
Inflating: aws/dist/awscli/examples/guardduty/list-detectors.rst
Inflating: aws/dist/awscli/examples/guardduty/disable-organization-admin-account.rst
Inflating: aws/dist/awscli/examples/guardduty/list-ip-sets.rst
Inflating: aws/dist/awscli/examples/guardduty/create-threat-intel-set.rst
Inflating: aws/dist/awscli/examples/guardduty/create-publishing-destination.rst
Inflating: aws/dist/awscli/examples/ivschat/untag-resource.rst
Inflating: aws/dist/awscli/examples/ivschat/disconnect-user.rst
Inflating: aws/dist/awscli/examples/ivschat/delete-message.rst
Inflating: aws/dist/awscli/examples/ivschat/get-room.rst
Inflating: aws/dist/awscli/examples/ivschat/create-chat-token.rst
Inflating: aws/dist/awscli/examples/ivschat/delete-logging-configuration.rst
Inflating: aws/dist/awscli/examples/ivschat/delete-room.rst
Inflating: aws/dist/awscli/examples/ivschat/send-event.rst
Inflating: aws/dist/awscli/examples/ivschat/update-logging-configuration.rst
Inflating: aws/dist/awscli/examples/ivschat/list-logging-configurations.rst
Inflating: aws/dist/awscli/examples/ivschat/create-logging-configuration.rst
Inflating: aws/dist/awscli/examples/ivschat/create-room.rst
Inflating: aws/dist/awscli/examples/ivschat/update-room.rst
Inflating: aws/dist/awscli/examples/ivschat/tag-resource.rst
Inflating: aws/dist/awscli/botocore/data/fis/2020-12-01/service-2.json
Inflating: aws/dist/awscli/botocore/data/fis/2020-12-01/paginators-1.json
Inflating: aws/dist/awscli/botocore/data/fis/2020-12-01/endpoint-rule-set-1.json
creating: aws/dist/awscli/botocore/data/s3outposts/2017-07-25/
Inflating: aws/dist/awscli/botocore/data/s3outposts/2017-07-25/endpoint-rule-set-1.json
Inflating: aws/dist/awscli/botocore/data/s3outposts/2017-07-25/service-2.json
Inflating: aws/dist/awscli/botocore/data/s3outposts/2017-07-25/paginators-1.json
creating: aws/dist/awscli/botocore/.changes/next-release/
Inflating: aws/dist/awscli/botocore/.changes/next-release/api-change-connect-59117.json
Inflating: aws/dist/awscli/data/cli.json
Inflating: aws/dist/awscli/data/metadata.json
Inflating: aws/dist/awscli/data/ac-index
creating: aws/dist/awscli/customizations/sso/
creating: aws/dist/awscli/customizations/wizard/
creating: aws/dist/awscli/customizations/wizard/wizards/
creating: aws/dist/awscli/customizations/wizard/wizards/configure/
creating: aws/dist/awscli/customizations/wizard/wizards/dynamodb/
creating: aws/dist/awscli/customizations/wizard/wizards/events/
creating: aws/dist/awscli/customizations/wizard/wizards/iam/
creating: aws/dist/awscli/customizations/wizard/wizards/lambda/
Inflating: aws/dist/awscli/customizations/wizard/wizards/configure/_main.yml
Inflating: aws/dist/awscli/customizations/wizard/wizards/events/new-rule.yml
Inflating: aws/dist/awscli/customizations/wizard/wizards/lambda/new-function.yml
Inflating: aws/dist/awscli/customizations/wizard/wizards/dynamodb/new-table.yml
Inflating: aws/dist/awscli/customizations/wizard/wizards/iam/new-role.yml
Inflating: aws/dist/awscli/customizations/sso/index.html
Inflating: aws/dist/awscli/topics/db-expressions.rst
Inflating: aws/dist/awscli/topics/return-codes.rst
Inflating: aws/dist/awscli/topics/config-vars.rst
Inflating: aws/dist/awscli/topics/s3-config.rst
Inflating: aws/dist/awscli/topics/topic-tags.json
Inflating: aws/dist/awscli/topics/s3-faq.rst
creating: aws/dist/prompt_toolkit-3.0.51.dist-info/licenses/
Inflating: aws/dist/prompt_toolkit-3.0.51.dist-info/RECORD
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/licenses/LICENSE
Inflating: aws/dist/wheel-0.45.1.dist-info/AUTHORS.rst
Inflating: aws/dist/wheel-0.45.1.dist-info/WHEEL
Inflating: aws/dist/wheel-0.45.1.dist-info/RECORD
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/direct_url.json
Inflating: aws/dist/wheel-0.45.1.dist-info/entry_points.txt
Inflating: aws/dist/wheel-0.45.1.dist-info/INSTALLER
Inflating: aws/dist/wheel-0.45.1.dist-info/REQUESTED
git-2.24.1-061-rgb @ /workspaces/CC_Shomail-zahra -- 2023-BSE-061- (main) $ sudo ./aws/install
You can now run: /usr/local/bin/aws --version
git-2.24.1-061-rgb @ /workspaces/CC_Shomail-zahra -- 2023-BSE-061- (main) $ aws --version
aws-cli/2.32.21 Python/3.13.11 Linux/6.8.0-1030-azure exe/x86_64.ubuntu.24
git-2.24.1-061-rgb @ /workspaces/CC_Shomail-zahra -- 2023-BSE-061- (main) $

```

task2_aws configure_and_files

```

q23-22411-061-rgb @ /workspaces/CC-Shumail-zahra-_2023-BSE-061- (main) $ aws configure
AWS Access Key ID [None]: [REDACTED]
AWS Secret Access Key [None]: [REDACTED]
Default region name [None]: us-east-1
Default output format [None]: json
q23-22411-061-rgb @ /workspaces/CC-Shumail-zahra-_2023-BSE-061- (main) $ cat ~/.aws/credentials
[default]
aws_access_key_id = [REDACTED]
aws_secret_access_key = [REDACTED]
q23-22411-061-rgb @ /workspaces/CC-Shumail-zahra-_2023-BSE-061- (main) $ cat ~/.aws/config
[default]
region = us-east-1
output = json
q23-22411-061-rgb @ /workspaces/CC-Shumail-zahra-_2023-BSE-061- (main) $

```

task2_aws_get_caller_identity

```

q23-22411-061-rgb @ /workspaces/CC-Shumail-zahra-_2023-BSE-061- (main) $ aws sts get-caller-identity
{
  "UserId": "AIDARC5V6TLZX20EULWJY",
  "Account": "075006647027",
  "Arn": "arn:aws:iam:075006647027:user/terraform-user"
}

```

B. Install Terraform CLI

task2_terraform_install_and_version

```

q23-22411-061-rgb @ /workspaces/CC-Shumail-zahra-_2023-BSE-061- (main) $ echo "deb [arch=$(dpkg --print-architecture) signed-by=/usr/share/keyrings/hashicorp-archive-keyring.gpg] https://apt.releases.hashicorp.com $(grep -oP '(?<Ubuntu|
CODENAME=) .*' /etc/os-release | sed -e 's/ /-cs/' | sed -e 's/ /-main/' | sudo tee /etc/apt/sources.list.d/hashicorp.list" >/dev/null
deb [arch=amd64 signed-by=/usr/share/keyrings/hashicorp-archive-keyring.gpg] https://apt.releases.hashicorp.com noble main
q23-22411-061-rgb @ /workspaces/CC-Shumail-zahra-_2023-BSE-061- (main) $ sudo apt update
Get:1 https://dl.yarnpkg.com/debian stable InRelease
Get:2 https://apt.releases.hashicorp.com noble InRelease [12.9 kB]
Get:3 https://packages.microsoft.com/repos/microsoft-ubuntu-noble-prod noble InRelease [3680 B]
Get:4 https://repo.anaconda.com/pkgs/misc/debrepo/conda stable InRelease [3961 B]
Get:5 https://dl.yarnpkg.com/debian stable/main amd64 Packages [11.8 kB]
Get:6 https://dl.yarnpkg.com/debian stable/main all Packages [11.8 kB]
Get:7 https://apt.releases.hashicorp.com noble/main amd64 Packages [254 kB]
Get:8 https://packages.microsoft.com/repos/microsoft-ubuntu-noble-prod noble/main all Packages [643 B]
Get:9 https://packages.microsoft.com/repos/microsoft-ubuntu-noble-prod noble/main amd64 Packages [77.3 kB]
Get:10 https://repo.anaconda.com/pkgs/misc/debrepo/conda stable/main amd64 Packages [4557 B]
Get:11 http://archive.ubuntu.com/ubuntu noble InRelease [256 kB]
Get:12 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:13 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Packages [2898 kB]
Get:14 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:15 http://archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:16 http://archive.ubuntu.com/ubuntu noble/multiverse amd64 Packages [331 kB]
Get:17 http://archive.ubuntu.com/ubuntu noble/restricted amd64 Packages [117 kB]
Get:18 http://archive.ubuntu.com/ubuntu noble/main amd64 Packages [1888 kB]
Get:19 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [1183 kB]
Get:20 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Packages [33.1 kB]
Get:21 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [1352 kB]
Get:22 http://archive.ubuntu.com/ubuntu noble/universe amd64 Packages [19.3 MB]
Get:23 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [1950 kB]
Get:24 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [2130 kB]
Get:25 http://archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Packages [3859 kB]
Get:26 http://archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Packages [35.9 kB]
Get:27 http://archive.ubuntu.com/ubuntu noble-backports/main amd64 Packages [49.5 kB]
Get:28 http://archive.ubuntu.com/ubuntu noble-backports/universe amd64 Packages [34.6 kB]
Fetched 35.7 MB in 5s (7560 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
67 packages can be upgraded. Run 'apt list --upgradable' to see them.
q23-22411-061-rgb @ /workspaces/CC-Shumail-zahra-_2023-BSE-061- (main) $ sudo apt install terraform
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  terraform
0 upgraded, 1 newly installed, 0 to remove and 67 not upgraded.
Need to get 30.6 MB of archives.
After this operation, 101 MB of additional disk space will be used.
Get:1 https://apt.releases.hashicorp.com noble/main amd64 terraform amd64 1.14.3-1 [30.6 MB]
Fetched 30.6 MB in 0s (151 MB/s)
Selecting previously unselected package terraform.
Reading database ... 90%

```

```

Windows PowerShell
Get:2 https://apt.releases.hashicorp.com noble InRelease [12.9 kB]
Get:3 https://packages.microsoft.com/repos/microsoft-ubuntu-noble-prod noble InRelease [3680 B]
Get:4 https://repo.anaconda.com/pkgs/misc/delepro/conda stable InRelease [3961 B]
Get:5 https://dl.yarnpkg.com/debian stable/main amd64 Packages [11.8 kB]
Get:6 https://dl.yarnpkg.com/debian stable/main all Packages [11.8 kB]
Get:7 https://apt.releases.hashicorp.com noble/main amd64 Packages [264 kB]
Get:8 https://packages.microsoft.com/repos/microsoft-ubuntu-noble-prod noble/main all Packages [643 B]
Get:9 https://packages.microsoft.com/repos/microsoft-ubuntu-noble-prod noble/main amd64 Packages [77.3 kB]
Get:10 https://repo.anaconda.com/pkgs/misc/delepro/conda stable/main amd64 Packages [4557 B]
Get:11 http://archive.ubuntu.com/ubuntu noble InRelease [256 kB]
Get:12 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:13 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Packages [2898 kB]
Get:14 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:15 http://archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:16 http://archive.ubuntu.com/ubuntu noble/multiverse amd64 Packages [333 kB]
Get:17 http://archive.ubuntu.com/ubuntu noble/restricted amd64 Packages [117 kB]
Get:18 http://archive.ubuntu.com/ubuntu noble/main amd64 Packages [1888 kB]
Get:19 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [1183 kB]
Get:20 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Packages [33.1 kB]
Get:21 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [1792 kB]
Get:22 http://archive.ubuntu.com/ubuntu noble/universe amd64 Packages [19.3 MB]
Get:23 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [1950 kB]
Get:24 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [2130 kB]
Get:25 http://archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Packages [3059 kB]
Get:26 http://archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Packages [35.9 kB]
Get:27 http://archive.ubuntu.com/ubuntu noble-backports/main amd64 Packages [49.5 kB]
Get:28 http://archive.ubuntu.com/ubuntu noble-backports/universe amd64 Packages [34.6 kB]
Fetched 35.7 MB in 5s (7560 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
67 packages can be upgraded. Run 'apt list --upgradable' to see them.
$ apt list --upgradable
Package
libssl3tls (1.1.1-1ubuntu2.1) amd64
libssl3tls (1.1.1-1ubuntu2.1) amd64
libssl3tls (1.1.1-1ubuntu2.1) amd64
$ sudo apt install terraform
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  terraform
0 upgraded, 1 newly installed, 0 to remove and 67 not upgraded.
Need to get 30.6 MB of archives.
After this operation, 101 MB of additional disk space will be used.
Get:1 https://apt.releases.hashicorp.com noble/main amd64 terraform amd64 1.14.3-1 [30.6 MB]
Fetched 30.6 MB in 8s (151 MB/s)
Selecting previously unselected package terraform.
(Reading database ... 38631 files and directories currently installed.)
Preparing to unpack .../terraform_1.14.3-1_amd64.deb ...
Unpacking terraform (1.14.3-1) ...
Setting up terraform (1.14.3-1) ...
$ which terraform
/usr/bin/terraform
$ terraform --version
Terraform v1.14.3
on linux_amd64
$

```

C. Provider Configuration (main.tf)

task2_provider_file_creation

on linux_amd64

```

$23-22411-061-rgb @ /workspaces/CC_-Shumail-zahra_-2023-BSE-061- (main) $ vim main.tf
$23-22411-061-rgb @ /workspaces/CC_-Shumail-zahra_-2023-BSE-061- (main) $

```

task2_provider_block

```

Windows PowerShell
provider "aws" {
  shared_config_files = ["~/aws/config"]
  shared_credentials_files = ["~/aws/credentials"]
}

"main.tf" 3l, 116B
3,52 All

```

task2_vim_save_main_tf

```
Windows PowerShell
provider "aws" {
  shared_config_files = ["~/aws/config"]
  shared_credentials_files = ["~/aws/credentials"]
}
```

task2_terraform_init_output

```
223-22411-001-rgb @ /workspaces/CC-Shumail-zahna-2023-BSE-061- (main) $ vim main.tf
223-22411-001-rgb @ /workspaces/CC-Shumail-zahna-2023-BSE-061- (main) $ terraform init
Initializing the backend...

Error: Terraform encountered problems during initialisation, including problems
with the configuration, described below.

The Terraform configuration must be valid before initialization so that
Terraform can determine which modules and providers need to be installed.

Error: Missing newline after argument

   on main.tf line 3, in provider "aws":
    3:   shared_credentials_files = ["~/aws/credentials"]}

An argument definition must end with a newline.

223-22411-001-rgb @ /workspaces/CC-Shumail-zahna-2023-BSE-061- (main) $ vim main.tf
223-22411-001-rgb @ /workspaces/CC-Shumail-zahna-2023-BSE-061- (main) $ terraform init
Initializing the backend...
Initializing provider plugins...
- Finding latest version of hashicorp/aws...
- Installing hashicorp/aws v6.27.0...
- Installed hashicorp/aws v6.27.0 (signed by HashiCorp)
Terraform has created a lock file .terraform.lock.hcl to record the provider
selections it made above. Include this file in your version control repository
so that Terraform can guarantee to make the same selections by default when
you run "terraform init" in the future.

Terraform has been successfully initialized!

You may now begin working with Terraform. Try running "terraform plan" to see
any changes that are required for your infrastructure. All Terraform commands
should now work.

If you ever set or change modules or backend configuration for Terraform,
rerun this command to reinitialize your working directory. If you forget, other
commands will detect it and remind you to do so if necessary.
223-22411-001-rgb @ /workspaces/CC-Shumail-zahna-2023-BSE-061- (main) $
```

task2_terraform_lock_hcl

```

223-22411-061-rgb /workspaces/CC_-Shumail-zahra-_2023-BSE-061- (main) $ cat .terraform.lock.hcl
# This file is maintained automatically by "terraform init".
# Manual edits may be lost in future updates.

provider "registry.terraform.io/hashicorp/aws" {
  version = "6.27.0"
  hashes = [
    "h1:bixp2PSsP5ZGbcz6CxcbsDn6lF5QFLUXlNroq9cdab4=",
    "zh:177a24b806c72e8484b5cab93b2b38e3d770ae6f745a998b54d6619fd0e8129",
    "zh:4ac4a85c14fb868a3306b542e6a56c10bd6c6d5a67bc0c9b8f6a9060cf5f3be7",
    "zh:552652185bc85c8ba1da1d65dea47c454728a5c6839c458b6dcd3ce71c19ccfc",
    "zh:60284b8172d09aee91eae0856f09855eaf040ce3a58d6933602ae17c53f8ed04",
    "zh:6be38d156756ca61fb8e7c752cc5d769cd709686700ac4b230f40a6e95b5dbc9",
    "zh:7a409138fae4ef42e3a637e37cb9efedf96459e28a3c764fc4e855e8db9a7485",
    "zh:8070cf5224ed1ed3a3e9a59f7c30ff88bf071c7567165275d477c1738a56c064",
    "zh:894439ef340a9a79f69cd759e27ad11c7826adeca27be1b1ca82b3c9702fa300",
    "zh:89d035eeb08a97c89374ff06040955ddc09f275ecca609d0c9d58d149bef5cf",
    "zh:985b1145d724fc1f38369099e4a5087141885740fd6c0b1dbc492171e73c2e49",
    "zh:9b12af85486a96aedd8d7984b0ff811a4b42e3d88dad1a3fb4c0b580d04fa425",
    "zh:a80b47ae8d1475201c86bd94a5dcb9dd4da5e8b73102a90820b68b66b76d50fd",
    "zh:d3395be1556210f82199b9166a6b2e677cee9c4b67e96e63f6c3a98325ad7ab0",
    "zh:db0b869d09657f6f1e4110b56093c5fcd9dbdd97c020db1e577b239c0adcbce",
    "zh:ffc72e680370ae7c21f9bd3082c6317730df805c6797427839a6b6b7e9a26a01",
  ]
}
223-22411-061-rgb /workspaces/CC_-Shumail-zahra-_2023-BSE-061- (main) $

```

task2_terraform_dir_ls

```

}
}
223-22411-061-rgb /workspaces/CC_-Shumail-zahra-_2023-BSE-061- (main) $ ls .terraform/
providers
223-22411-061-rgb /workspaces/CC_-Shumail-zahra-_2023-BSE-061- (main) $

```

Task 3 — VPC/Subnet Creation, Initialization, Verification

task3_main_tf_resource_add

```

Windows PowerShell
resource "aws_vpc" "development_vpc" {
  cidr_block = "10.0.0.0/16"
}

resource "aws_subnet" "dev_subnet_1" {
  vpc_id      = aws_vpc.development_vpc.id
  cidr_block = "10.0.10.0/24"
  availability_zone = "us-east-1a"
}

!

```

task3_terraform_apply_vpc_subnet

```

073-22411-001-rgb @ /workspaces/CC_-_Shumail-zahra-_-2023-BSE-061- (main) $ vim main.tf
073-22411-001-rgb @ /workspaces/CC_-_Shumail-zahra-_-2023-BSE-061- (main) $ terraform apply
aws_vpc.development_vpc: Refreshing state... [id=vpc-07247fc26abe28036]

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
  create

Terraform will perform the following actions:

  # aws_subnet.dev_subnet_1 will be created
  + resource "aws_subnet" "dev_subnet_1" {
    + arn                                = (known after apply)
    + assign_ipv6_address_on_creation    = false
    + availability_zone                  = "us-east-1a"
    + availability_zone_id                = (known after apply)
    + cidr_block                         = "10.0.10.0/24"
    + enable_dns64                       = false
    + enable_resource_name_dns_a_record_on_launch = false
    + enable_resource_name_dns_aaaa_record_on_launch = false
    + id                                 = (known after apply)
    + ipv6_cidr_block_association_id     = (known after apply)
    + ipv6_native                        = false
    + map_public_ip_on_launch            = false
    + owner_id                           = (known after apply)
    + private_dns_hostname_type_on_launch = (known after apply)
    + region                             = "us-east-1"
    + tags_all                           = (known after apply)
    + vpc_id                             = "vpc-07247fc26abe28036"
  }

Plan: 1 to add, 0 to change, 0 to destroy.

Do you want to perform these actions?
  Terraform will perform the actions described above.
  Only 'yes' will be accepted to approve.

  Enter a value: yes

aws_subnet.dev_subnet_1: Creating...
aws_subnet.dev_subnet_1: Creation complete after 1s [id=subnet-0c94fd37eeb79ea89]

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
073-22411-001-rgb @ /workspaces/CC_-_Shumail-zahra-_-2023-BSE-061- (main) $

```

task3_aws_cli_verify_subnet

```

073-22411-001-rgb @ /workspaces/CC_-_Shumail-zahra-_-2023-BSE-061- (main) $ aws ec2 describe-subnets --filter "Name=subnet-id,Values=subnet-0c94fd37eeb79ea89"
{
  "Subnets": [
    {
      "AvailabilityZoneId": "use1-az1",
      "MapCustomerOwnedIpOnLaunch": false,
      "OwnerId": "075006647027",
      "AssignIpv6AddressOnCreation": false,
      "Ipv6CidrBlockAssociationSet": [],
      "SubnetArn": "arn:aws:ec2:us-east-1:075006647027:subnet/subnet-0c94fd37eeb79ea89",
      "EnableDns64": false,
      "Ipv6Native": false,
      "PrivateDnsNameOptionsOnLaunch": {
        "HostnameType": "ip-name",
        "EnableResourceNameDnsARecord": false,
        "EnableResourceNameDnsAAAARecord": false
      },
      "BlockPublicAccessStates": {
        "InternetGatewayBlockMode": "off"
      },
      "SubnetId": "subnet-0c94fd37eeb79ea89",
      "State": "available",
      "VpcId": "vpc-07247fc26abe28036",
      "CidrBlock": "10.0.10.0/24",
      "AvailableIpAddressCount": 251,
    }
  ]
}

```

task3_aws_cli_verify_vpc

```

073-22411-001-rgb @ /workspaces/CC_-_Shumail-zahra-_-2023-BSE-061- (main) $ aws ec2 describe-vpcs --filter "Name=vpc-id,Values=vpc-07247fc26abe28036"
{
  "Vpcs": [
    {
      "OwnerId": "075006647027",
      "InstanceTenancy": "default",
      "CidrBlockAssociationSet": [
        {
          "AssociationId": "vpc-cidr-assoc-089b2e5c3a01463de",
          "CidrBlock": "10.0.0.0/16",
          "CidrBlockState": {
            "State": "associated"
          }
        }
      ],
      "IsDefault": false,
      "BlockPublicAccessStates": {
        "InternetGatewayBlockMode": "off"
      },
      "VpcId": "vpc-07247fc26abe28036",
    }
  ]
}

```

Task 4 — Data Source, Targeted Destroy, Tags

A. Data Source & Resource Creation

task4_main_tf_datasource_resource_add


```
Windows PowerShell
resource "aws_vpc" "development_vpc" {
  cidr_block = "10.0.0.0/16"
}

resource "aws_subnet" "dev_subnet_1" {
  vpc_id     = aws_vpc.development_vpc.id
  cidr_block = "10.0.10.0/24"
  availability_zone = "us-east-1a"
}

data "aws_vpc" "existing_vpc" {
  default = true
}

resource "aws_subnet" "dev_subnet_1_existing" {
  vpc_id     = data.aws_vpc.existing_vpc.id
  cidr_block = "172.31.48.0/24"
  availability_zone = "us-east-1a"
}

:wg!

Windows PowerShell
resource "aws_vpc" "development_vpc" {
  cidr_block = "10.0.0.0/16"
}

resource "aws_subnet" "dev_subnet_1" {
  vpc_id     = aws_vpc.development_vpc.id
  cidr_block = "10.0.10.0/24"
  availability_zone = "us-east-1a"
}

data "aws_vpc" "existing_vpc" {
  default = true
}

resource "aws_subnet" "dev_subnet_1_existing" {
  vpc_id     = data.aws_vpc.existing_vpc.id
  cidr_block = "172.31.240.0/24"
  availability_zone = "us-east-1a"
}

:wg!
```

task4_terraform_apply_datasource_resource

```

071-22411-061-rgb @ /workspaces/CC_Shumail-zahra_2023-BSE-061- (main) $ vim main.tf
071-22411-061-rgb @ /workspaces/CC_Shumail-zahra_2023-BSE-061- (main) $ terraform apply
data.aws_vpc.existing_vpc: Reading...
aws_vpc.development_vpc: Refreshing state... [id=vpc-07247fc26abe28036]
data.aws_vpc.existing_vpc: Read complete after 2s [id=vpc-0cc0868d02cdd5863]
aws_subnet.dev_subnet_1: Refreshing state... [id=subnet-0c94fd37eeb79ea89]

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
  create

Terraform will perform the following actions:

# aws_subnet.dev_subnet_1_existing will be created
resource "aws_subnet" "dev_subnet_1_existing" {
  arn                                = (known after apply)
  assign_ipv6_address_on_creation    = false
  availability_zone                  = "us-east-1a"
  availability_zone_id               = (known after apply)
  cidr_block                        = "172.31.48.0/24"
  enable_dns64                      = false
  enable_resource_name_dns_a_record_on_launch = false
  enable_resource_name_dns_aaaa_record_on_launch = false
  id                                 = (known after apply)
  ipv6_cidr_block_association_id     = (known after apply)
  ipv6_native                       = false
  map_public_ip_on_launch           = false
  owner_id                          = (known after apply)
  private_dns_hostname_type_on_launch = (known after apply)
  region                            = "us-east-1"
  tags_all                          = (known after apply)
  vpc_id                            = "vpc-0cc0868d02cdd5863"
}

Plan: 1 to add, 0 to change, 0 to destroy.

Do you want to perform these actions?
  Terraform will perform the actions described above.
  Only 'yes' will be accepted to approve.

Enter a value: yes

aws_subnet.dev_subnet_1_existing: Creating...
Error: creating EC2 Subnet: operation error EC2: CreateSubnet, https response error StatusCode: 400, RequestID: 8553c422-1bd0-4429-9e7f-6d486abb6d41, api error InvalidSubnet.Conflict: The CIDR '172.31.48.0/24' conflicts with another
subnet

with aws_subnet.dev_subnet_1_existing,
on main.tf line 14, in resource "aws_subnet" "dev_subnet_1_existing":
14: resource "aws_subnet" "dev_subnet_1_existing" {
    }

071-22411-061-rgb @ /workspaces/CC_Shumail-zahra_2023-BSE-061- (main) $ vim main.tf
071-22411-061-rgb @ /workspaces/CC_Shumail-zahra_2023-BSE-061- (main) $ terraform apply
data.aws_vpc.existing_vpc: Reading...

#
071-22411-061-rgb @ /workspaces/CC_Shumail-zahra_2023-BSE-061- (main) $ vim main.tf
071-22411-061-rgb @ /workspaces/CC_Shumail-zahra_2023-BSE-061- (main) $ terraform apply
data.aws_vpc.existing_vpc: Reading...
aws_vpc.development_vpc: Refreshing state... [id=vpc-07247fc26abe28036]
data.aws_vpc.existing_vpc: Read complete after 2s [id=vpc-0cc0868d02cdd5863]
aws_subnet.dev_subnet_1: Refreshing state... [id=subnet-0c94fd37eeb79ea89]

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
  create

Terraform will perform the following actions:

# aws_subnet.dev_subnet_1_existing will be created
resource "aws_subnet" "dev_subnet_1_existing" {
  arn                                = (known after apply)
  assign_ipv6_address_on_creation    = false
  availability_zone                  = "us-east-1a"
  availability_zone_id               = (known after apply)
  cidr_block                        = "172.31.240.0/24"
  enable_dns64                      = false
  enable_resource_name_dns_a_record_on_launch = false
  enable_resource_name_dns_aaaa_record_on_launch = false
  id                                 = (known after apply)
  ipv6_cidr_block_association_id     = (known after apply)
  ipv6_native                       = false
  map_public_ip_on_launch           = false
  owner_id                          = (known after apply)
  private_dns_hostname_type_on_launch = (known after apply)
  region                            = "us-east-1"
  tags_all                          = (known after apply)
  vpc_id                            = "vpc-0cc0868d02cdd5863"
}

Plan: 1 to add, 0 to change, 0 to destroy.

Do you want to perform these actions?
  Terraform will perform the actions described above.
  Only 'yes' will be accepted to approve.

Enter a value: yes

aws_subnet.dev_subnet_1_existing: Creating...
aws_subnet.dev_subnet_1_existing: Creation complete after 2s [id=subnet-0aeb798fc35b4eafa]

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
071-22411-061-rgb @ /workspaces/CC_Shumail-zahra_2023-BSE-061- (main) $

```

B. Targeted Destroy & Refresh

task4_terraform_destroy_targeted

```

Only complete! Resources: 1 added, 0 changed, 0 destroyed.
data.aws_vpc.existing_vpc: Reading... [id=vpc-0cc0868d02cdd5863]
data.aws_vpc.existing_vpc: Read complete after 2s [id=vpc-0cc0868d02cdd5863]
aws_subnet.dev_subnet_1_existing: Refreshing state... [id=subnet-8aeb798fc35b4eafa]

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
destroy

Terraform will perform the following actions:

# aws_subnet.dev_subnet_1_existing will be destroyed
resource "aws_subnet" "dev_subnet_1_existing" {
  arm          = "arn:aws:ec2:us-east-1:075906647027:subnet/subnet-8aeb798fc35b4eafa" -> null
  assign_ipv6_address_on_creation = false -> null
  availability_zone                = "us-east-1a" -> null
  availability_zone_id             = "us-east-1a" -> null
  cidr_block                      = "172.31.240.0/24" -> null
  enable_dns64                   = false -> null
  enable_inl_at_device_index     = 0 -> null
  enable_resource_name_dns_a_record_on_launch = false -> null
  enable_resource_name_dns_aaaa_record_on_launch = false -> null
  id                             = "subnet-8aeb798fc35b4eafa" -> null
  ipv6_native                    = false -> null
  map_customer_owned_ip_on_launch = false -> null
  map_public_ip_on_launch        = false -> null
  owner_id                      = "075906647027" -> null
  private_dns_hostname_type_on_launch = "ip-name" -> null
  region                        = "us-east-1" -> null
  tags_all                      = {} -> null
  vpc_id                        = {} -> null
  # (4 unchanged attributes hidden)
}

Plan: 0 to add, 0 to change, 1 to destroy.

Warning: Resource targeting is in effect

You are creating a plan with the -target option, which means that the result of this plan may not represent all of the changes requested by the current configuration.

The -target option is not for routine use, and is provided only for exceptional situations such as recovering from errors or mistakes, or when Terraform specifically suggests to use it as part of an error message.

Do you really want to destroy all resources?
Terraform will destroy all your managed infrastructure, as shown above.
There is no undo. Only 'yes' will be accepted to confirm.

Enter a value: yes
aws_subnet.dev_subnet_1_existing: Destroying... [id=subnet-8aeb798fc35b4eafa]
aws_subnet.dev_subnet_1_existing: Destruction complete after 1s

Warning: Applied changes may be incomplete

Warning: Resource targeting is in effect

You are creating a plan with the -target option, which means that the result of this plan may not represent all of the changes requested by the current configuration.

The -target option is not for routine use, and is provided only for exceptional situations such as recovering from errors or mistakes, or when Terraform specifically suggests to use it as part of an error message.

Do you really want to destroy all resources?
Terraform will destroy all your managed infrastructure, as shown above.
There is no undo. Only 'yes' will be accepted to confirm.

Enter a value: yes
aws_subnet.dev_subnet_1_existing: Destroying... [id=subnet-8aeb798fc35b4eafa]
aws_subnet.dev_subnet_1_existing: Destruction complete after 1s

Warning: Applied changes may be incomplete

The plan was created with the -target option in effect, so some changes requested in the configuration may have been ignored and the output values may not be fully updated. Run the following command to verify that no other changes are pending:
terraform plan

Note that the -target option is not suitable for routine use, and is provided only for exceptional situations such as recovering from errors or mistakes, or when Terraform specifically suggests to use it as part of an error message.

Destroy complete! Resources: 1 destroyed.
075-22011-061-rgb @ /workspaces/CC_-Shumail-zahra_-2023-BSE-061- (main) $

```

task4_terraform_refresh_state

```

Only complete! Resources: 1 added, 0 changed, 0 destroyed.
073-22411-061-rgb @ /workspaces/CC_-Shumail-zahra_-2023-BSE-061- (main) $ terraform refresh
data.aws_vpc.existing_vpc: Reading...
aws_vpc.development_vpc: Refreshing state... [id=vpc-07247fc26abe28036]
data.aws_vpc.existing_vpc: Read complete after 2s [id=vpc-0cc0868d02cdd5863]
aws_subnet.dev_subnet_1: Refreshing state... [id=subnet-0c94fd37eeb79ea89]
073-22411-061-rgb @ /workspaces/CC_-Shumail-zahra_-2023-BSE-061- (main) $

```

task4_terraform_apply_after_refresh

```
data.aws_vpc.existing_vpc: Reading...
aws_vpc.development_vpc: Refreshing state... [id=vpc-07247fc26abe28036]
data.aws_vpc.existing_vpc: Read complete after 2s [id=vpc-0cc0868d02cdd5863]
aws_subnet.dev_subnet_1: Refreshing state... [id=subnet-0c94fd37eeb79ea89]

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
  + create

Terraform will perform the following actions:

# aws_subnet.dev_subnet_1_existing will be created
+ resource "aws_subnet" "dev_subnet_1_existing" {
  + ann                                     = (known after apply)
  + assign_ipv6_address_on_creation        = false
  + availability_zone                      = "us-east-1a"
  + availability_zone_id                   = (known after apply)
  + cidr_block                             = "172.31.240.0/24"
  + enable_dns64                           = false
  + enable_resource_name_dns_a_record_on_launch = false
  + enable_resource_name_dns_aaaa_record_on_launch = false
  + id                                     = (known after apply)
  + ipv6_cidr_block_association_id         = (known after apply)
  + ipv6_native                            = false
  + map_public_ip_on_launch                = false
  + owner_id                               = (known after apply)
  + private_dns_hostname_type_on_launch    = (known after apply)
  + region                                 = "us-east-1"
  + tags_all                               = (known after apply)
  + vpc_id                                 = "vpc-0cc0868d02cdd5863"
}

Plan: 1 to add, 0 to change, 0 to destroy.

Do you want to perform these actions?
  Terraform will perform the actions described above.
  Only 'yes' will be accepted to approve.

Enter a value: yes

aws_subnet.dev_subnet_1_existing: Creating...
aws_subnet.dev_subnet_1_existing: Creation complete after 2s [id=subnet-073e11ef6a14665a0]

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
root@kali:~/workspaces/CC- Shumail-zahra-2023-05-06-1 (main) $
```

task4 terraform destroy all

```

$ cd /Users/shumail-zahra/.aws/workspace/CX --Shumail-zahra@CX-2023-BSE-061:~$ terraform destroy
data.aws_vpc.existing_vpc: Reading...
aws_vpc.development_vpc: Refreshing state... [id=vpc-07247fc26abe28036]
data.aws_vpc.existing_vpc: Read complete after 2s [id=vpc-0cc0868d0cdd5863]
aws_subnet.dev_subnet_1_existing: Refreshing state... [id=subnet-073e1ef6a14665a0]
aws_subnet.dev_subnet_1: Refreshing state... [id=subnet-0c94fd37eeb79ea89]

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
  destroy

Terraform will perform the following actions:

# aws_subnet.dev_subnet_1 will be destroyed
+ resource "aws_subnet" "dev_subnet_1" {
    arm
      assign_ipv6_address_on_creation = false -> null
      availability_zone               = "us-east-1a" -> null
      availability_zone_id            = "use1-az1" -> null
      cidr_block                      = "10.0.10.0/24" -> null
      enable_dns64                    = false -> null
      enable_in_i_at_device_index     = 0 -> null
      enable_resource_name_dns_a_record_on_launch = false -> null
      enable_resource_name_dns_aaaa_record_on_launch = false -> null
      id                             = "subnet-0c94fd37eeb79ea89" -> null
      ipv6_native                     = false -> null
      map_customer_owned_ip_on_launch = false -> null
      map_public_ip_on_launch         = false -> null
      owner_id                        = "075006647027" -> null
      private_dns_hostname_type_on_launch = "ip-name" -> null
      region                          = "us-east-1" -> null
      tags                            = {} -> null
      tags_all                        = {} -> null
      vpc_id                          = "vpc-07247fc26abe28036" -> null
    } # (4 unchanged attributes hidden)

}

# aws_subnet.dev_subnet_1_existing will be destroyed
+ resource "aws_subnet" "dev_subnet_1_existing" {
    arm
      assign_ipv6_address_on_creation = false -> null
      availability_zone               = "us-east-1a" -> null
      availability_zone_id            = "use1-az1" -> null
      cidr_block                      = "172.31.240.0/24" -> null
      enable_dns64                    = false -> null
      enable_in_i_at_device_index     = 0 -> null
      enable_resource_name_dns_a_record_on_launch = false -> null
      enable_resource_name_dns_aaaa_record_on_launch = false -> null
      id                             = "subnet-073e1ef6a14665a0" -> null
      ipv6_native                     = false -> null
      map_customer_owned_ip_on_launch = false -> null
      map_public_ip_on_launch         = false -> null
      owner_id                        = "075006647027" -> null

```

```

    ipv6_native = false -> null
    map_customer_owned_ip_on_launch = false -> null
    map_public_ip_on_launch = false -> null
    owner_id = "075086647027" -> null
    private_dns_hostname_type_on_launch = "ip-name" -> null
    region = "us-east-1" -> null
    tags = {} -> null
    tags_all = {} -> null
    vpc_id = "vpc-0cc0868d02cdd5863" -> null
  }
  # (4 unchanged attributes hidden)
}

# aws_vpc.development_vpc will be destroyed
resource "aws_vpc" "development_vpc" {
  arn = "arn:aws:ec2:us-east-1:075086647027:vpc/vpc-07247fc26abe28036" -> null
  assign_generated_ipv6_cidr_block = false -> null
  cidr_block = "10.0.0.0/16" -> null
  default_network_acl_id = "acl-0b11e583c5ad12cf3" -> null
  default_route_table_id = "rtb-0ed043ce7674474dd" -> null
  default_security_group_id = "sg-06a613c667bad775" -> null
  dhcp_options_id = "dopt-03e04818ff645a2df" -> null
  enable_dns_hostnames = false -> null
  enable_dns_support = true -> null
  enable_network_address_usage_metrics = false -> null
  id = "vpc-07247fc26abe28036" -> null
  instance_tenancy = "default" -> null
  ipv6_netmask_length = 0 -> null
  main_route_table_id = "rtb-0ed043ce7674474dd" -> null
  owner_id = "075086647027" -> null
  region = "us-east-1" -> null
  tags = {} -> null
  tags_all = {} -> null
  # (4 unchanged attributes hidden)
}

Plan: 0 to add, 0 to change, 3 to destroy.

Do you really want to destroy all resources?
  Terraform will destroy all your managed infrastructure, as shown above.
  There is no undo. Only 'yes' will be accepted to confirm.

Enter a value: yes

aws_subnet.dev_subnet_1: Destroying... [id=subnet-0c94fd37eeb79ea09]
aws_subnet.dev_subnet_1_existing: Destroying... [id=subnet-07311ef6a14665a0]
aws_subnet.dev_subnet_1: Destruction complete after 2s
aws_vpc.development_vpc: Destroying... [id=vpc-07247fc26abe28036]
aws_subnet.dev_subnet_1_existing: Destruction complete after 2s
aws_vpc.development_vpc: Destruction complete after 1s

Destroy complete! Resources: 3 destroyed.
$ terraform destroy -auto-approve -var-file=.tfvars -var=dev-aws (main) $

```

task4_terraform_plan_output

```

Destroy complete! Resources: 3 destroyed.
$ terraform destroy -auto-approve -var-file=.tfvars -var=dev-aws (main) $ terraform plan
data.aws_vpc.existing_vpc: Reading...
data.aws_vpc.existing_vpc: Read complete after 2s [id=vpc-0cc0868d02cdd5863]

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
  create

Terraform will perform the following actions:

# aws_subnet.dev_subnet_1 will be created
resource "aws_subnet" "dev_subnet_1" {
  arn = (known after apply)
  assign_ipv6_address_on_creation = false
  availability_zone = "us-east-1a"
  availability_zone_id = (known after apply)
  cidr_block = "10.0.10.0/24"
  enable_dns64 = false
  enable_resource_name_dns_a_record_on_launch = false
  enable_resource_name_dns_aaaa_record_on_launch = false
  id = (known after apply)
  ipv6_cidr_block_association_id = (known after apply)
  ipv6_native = false
  map_public_ip_on_launch = false
  owner_id = (known after apply)
  private_dns_hostname_type_on_launch = (known after apply)
  region = "us-east-1"
  tags_all = (known after apply)
  vpc_id = (known after apply)
}

# aws_subnet.dev_subnet_1_existing will be created
resource "aws_subnet" "dev_subnet_1_existing" {
  arn = (known after apply)
  assign_ipv6_address_on_creation = false
  availability_zone = "us-east-1a"
  availability_zone_id = (known after apply)
  cidr_block = "172.31.240.0/24"
  enable_dns64 = false
  enable_resource_name_dns_a_record_on_launch = false
  enable_resource_name_dns_aaaa_record_on_launch = false
  id = (known after apply)
  ipv6_cidr_block_association_id = (known after apply)
  ipv6_native = false
  map_public_ip_on_launch = false
  owner_id = (known after apply)
  private_dns_hostname_type_on_launch = (known after apply)
  region = "us-east-1"
  tags_all = (known after apply)
  vpc_id = "vpc-0cc0868d02cdd5863"
}

# aws_vpc.development_vpc will be created
resource "aws_vpc" "development_vpc" {

```

```

    owner_id = (known after apply)
    private_dns_hostname_type_on_launch = (known after apply)
    region = "us-east-1"
    tags_all = (known after apply)
    vpc_id = "vpc-0cc0868d02cdd5863"
  }

# aws_vpc.development_vpc will be created
resource "aws_vpc" "development_vpc" {
  arn = (known after apply)
  cidr_block = "10.0.0.0/16"
  default_network_acl_id = (known after apply)
  default_route_table_id = (known after apply)
  default_security_group_id = (known after apply)
  dhcp_options_id = (known after apply)
  enable_dns_hostnames = (known after apply)
  enable_dns_support = true
  enable_network_address_usage_metrics = (known after apply)
  id = (known after apply)
  instance_tenancy = "default"
  ipv6_association_id = (known after apply)
  ipv6_cidr_block = (known after apply)
  ipv6_cidr_block_network_border_group = (known after apply)
  main_route_table_id = (known after apply)
  owner_id = (known after apply)
  region = "us-east-1"
  tags_all = (known after apply)
}

```

Plan: 3 to add, 0 to change, 0 to destroy.

Note: You didn't use the -out option to save this plan, so Terraform can't guarantee to take exactly these actions if you run "terraform apply" now.

git-202411-001-ops @ /workspaces/CC-Shumail-rahra-2023-05E-001- (main) \$ terraform apply

task4_terraform_apply_after_destroy

Note: You didn't use the -out option to save this plan, so Terraform can't guarantee to take exactly these actions if you run "terraform apply" now.

git-202411-001-ops @ /workspaces/CC-Shumail-rahra-2023-05E-001- (main) \$ terraform apply

data.aws_vpc.existing_vpc: Reading...

data.aws_vpc.existing_vpc: Read complete after 2s [id=vpc-0cc0868d02cdd5863]

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
create

Terraform will perform the following actions:

```

# aws_subnet.dev_subnet_1 will be created
resource "aws_subnet" "dev_subnet_1" {
  arn = (known after apply)
  assign_ipv6_address_on_creation = false
  availability_zone = "us-east-1a"
  availability_zone_id = (known after apply)
  cidr_block = "10.0.10.0/24"
  enable_dns64 = false
  enable_resource_name_dns_a_record_on_launch = false
  enable_resource_name_dns_aaaa_record_on_launch = false
  id = (known after apply)
  ipv6_cidr_block_association_id = (known after apply)
  ipv6_native = false
  map_public_ip_on_launch = false
  owner_id = (known after apply)
  private_dns_hostname_type_on_launch = (known after apply)
  region = "us-east-1"
  tags_all = (known after apply)
  vpc_id = (known after apply)
}

# aws_subnet.dev_subnet_1_existing will be created
resource "aws_subnet" "dev_subnet_1_existing" {
  arn = (known after apply)
  assign_ipv6_address_on_creation = false
  availability_zone = "us-east-1a"
  availability_zone_id = (known after apply)
  cidr_block = "172.31.240.0/24"
  enable_dns64 = false
  enable_resource_name_dns_a_record_on_launch = false
  enable_resource_name_dns_aaaa_record_on_launch = false
  id = (known after apply)
  ipv6_cidr_block_association_id = (known after apply)
  ipv6_native = false
  map_public_ip_on_launch = false
  owner_id = (known after apply)
  private_dns_hostname_type_on_launch = (known after apply)
  region = "us-east-1"
  tags_all = (known after apply)
  vpc_id = "vpc-0cc0868d02cdd5863"
}

# aws_vpc.development_vpc will be created
resource "aws_vpc" "development_vpc" {
  arn = (known after apply)
  cidr_block = "10.0.0.0/16"
  default_network_acl_id = (known after apply)
  default_route_table_id = (known after apply)
  default_security_group_id = (known after apply)
  dhcp_options_id = (known after apply)
  enable_dns_hostnames = (known after apply)
}

```

```

    map_public_ip_on_launch = false
    owner_id                 = (known after apply)
    private_dns_hostname_type_on_launch = (known after apply)
    region                   = "us-east-1"
    tags_all                 = (known after apply)
    vpc_id                   = "vpc-0cc0868d02cdd5863"
  }

# aws_vpc.development_vpc will be created
resource "aws_vpc" "development_vpc" {
  arn = (known after apply)
  cidr_block = "10.0.0.0/16"
  default_network_acl_id = (known after apply)
  default_route_table_id = (known after apply)
  default_security_group_id = (known after apply)
  dhcp_options_id = (known after apply)
  enable_dns_hostnames = (known after apply)
  enable_dns_support = true
  enable_network_address_usage_metrics = (known after apply)
  id = (known after apply)
  instance_tenancy = "default"
  ipv6_association_id = (known after apply)
  ipv6_cidr_block = (known after apply)
  ipv6_cidr_block_network_border_group = (known after apply)
  main_route_table_id = (known after apply)
  owner_id = (known after apply)
  region = "us-east-1"
  tags_all = (known after apply)
}

Plan: 3 to add, 0 to change, 0 to destroy.

Do you want to perform these actions?
  Terraform will perform the actions described above.
  Only 'yes' will be accepted to approve.

  Enter a value: yes

aws_subnet.dev_subnet_1_existing: Creating...
aws_vpc.development_vpc: Creating...
aws_subnet.dev_subnet_1_existing: Creation complete after 2s [id=subnet-003896b7c0fc729fd]
aws_vpc.development_vpc: Creation complete after 3s [id=vpc-0de3a57dcd315b6a5]
aws_subnet.dev_subnet_1: Creating...
aws_subnet.dev_subnet_1: Creation complete after 1s [id=subnet-0f289c8b436bf2012]

Apply complete! Resources: 3 added, 0 changed, 0 destroyed.
root@22411-061-rg1: /workspaces/CC_Shumail-zahira_2023-BSE-061- (main) $

```

C. Tagging Resources

task4_main_tf_tagging

```

Windows PowerShell
resource "aws_vpc" "development_vpc" {
  cidr_block = "10.0.0.0/16"

  tags = {
    Name = "development"
    vpc_env = "dev"
  }
}

resource "aws_subnet" "dev_subnet_1" {
  vpc_id = aws_vpc.development_vpc.id
  cidr_block = "10.0.10.0/24"
  availability_zone = "us-east-1a"

  tags = {
    Name = "subnet-1-dev"
  }
}

resource "aws_subnet" "dev_subnet_1_existing" {
  vpc_id = data.aws_vpc.existing_vpc.id
  cidr_block = "172.31.240.0/24"
  availability_zone = "us-east-1a"

  tags = {
    Name = "subnet-1-default"
  }
}

```

```
Windows PowerShell
data "aws_vpc" "existing_vpc" {
  default = true
}

resource "aws_vpc" "development_vpc" {
  cidr_block = "10.0.0.0/16"

  tags = {
    Name     = "development"
    vpc_env = "dev"
  }
}

resource "aws_subnet" "dev_subnet_1" {
  vpc_id         = aws_vpc.development_vpc.id
  cidr_block     = "10.0.10.0/24"
  availability_zone = "us-east-1a"

  tags = {
    Name = "subnet-1-dev"
  }
}

resource "aws_subnet" "dev_subnet_1_existing" {
  vpc_id         = data.aws_vpc.existing_vpc.id
  cidr_block     = "172.31.240.0/24"
  availability_zone = "us-east-1a"

  tags = {
    Name = "subnet-1-default"
  }
}
```

task4_terraform_apply_tagging

```
063-22411-061-rgp @ /workspaces/CC_-Shumail-zahra_-2023-BSE-061- (main) $ vim main.tf
063-22411-061-rgp @ /workspaces/CC_-Shumail-zahra_-2023-BSE-061- (main) $ cat main.tf
063-22411-061-rgp @ /workspaces/CC_-Shumail-zahra_-2023-BSE-061- (main) $ vim main.tf
063-22411-061-rgp @ /workspaces/CC_-Shumail-zahra_-2023-BSE-061- (main) $ terraform refresh

Error: Reference to undeclared resource

  on main.tf line 21, in resource "aws_subnet" "dev_subnet_1_existing":
  21:   vpc_id         = data.aws_vpc.existing_vpc.id

A data resource "aws_vpc" "existing_vpc" has not been declared in the root module.

063-22411-061-rgp @ /workspaces/CC_-Shumail-zahra_-2023-BSE-061- (main) $ vim main.tf
063-22411-061-rgp @ /workspaces/CC_-Shumail-zahra_-2023-BSE-061- (main) $ terraform refresh
aws_vpc.development_vpc: Refreshing state... [id=vpc-0de3a57dcd315b6a5]
data.aws_vpc.existing_vpc: Reading...
data.aws_vpc.existing_vpc: Read complete after 2s [id=vpc-0cc0868d02cdd5863]
aws_subnet.dev_subnet_1_existing: Refreshing state... [id=subnet-003896b7c0fc729fd]
aws_subnet.dev_subnet_1: Refreshing state... [id=subnet-0f289c8b436bf2012]
063-22411-061-rgp @ /workspaces/CC_-Shumail-zahra_-2023-BSE-061- (main) $
```



```

aws_vpc.development_vpc: Refreshing state... [id=vpc-0de3a57dcd315b6a5]
data.aws_vpc.existing_vpc: Reading...
data.aws_vpc.existing_vpc: Read complete after 2s [id=vpc-0cc0868d02cdd5863]
aws_subnet.dev_subnet_1_existing: Refreshing state... [id=subnet-003896b7c0fc729fd]
aws_subnet.dev_subnet_1: Refreshing state... [id=subnet-0f289c8b436bf2012]
073-22411-061-rgb @ /workspaces/CC--Shumail-zahna-...-2023-BSE-061- (main) $ terraform apply -auto-approve
data.aws_vpc.existing_vpc: Reading...
aws_vpc.development_vpc: Refreshing state... [id=vpc-0de3a57dcd315b6a5]
data.aws_vpc.existing_vpc: Read complete after 2s [id=vpc-0cc0868d02cdd5863]
aws_subnet.dev_subnet_1_existing: Refreshing state... [id=subnet-003896b7c0fc729fd]
aws_subnet.dev_subnet_1: Refreshing state... [id=subnet-0f289c8b436bf2012]

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
~ update in-place

Terraform will perform the following actions:

# aws_subnet.dev_subnet_1 will be updated in-place
~ resource "aws_subnet" "dev_subnet_1" {
  id = "subnet-0f289c8b436bf2012"
  ~ tags = {
    + "Name" = "subnet-1-dev"
  }
  ~ tags_all = {
    + "Name" = "subnet-1-dev"
  }
  # (20 unchanged attributes hidden)
}

# aws_subnet.dev_subnet_1_existing will be updated in-place
~ resource "aws_subnet" "dev_subnet_1_existing" {
  id = "subnet-003896b7c0fc729fd"
  ~ tags = {
    + "Name" = "subnet-1-default"
  }
  ~ tags_all = {
    + "Name" = "subnet-1-default"
  }
  # (20 unchanged attributes hidden)
}

# aws_vpc.development_vpc will be updated in-place
~ resource "aws_vpc" "development_vpc" {
  id = "vpc-0de3a57dcd315b6a5"
  ~ tags = {
    + "Name" = "development"
    + "vpc_env" = "dev"
  }
  ~ tags_all = {
    + "Name" = "development"
    + "vpc_env" = "dev"
  }
  # (19 unchanged attributes hidden)
}

~ tags_all = {
  + "Name" = "subnet-1-default"
}
# (20 unchanged attributes hidden)
}

# aws_vpc.development_vpc will be updated in-place
~ resource "aws_vpc" "development_vpc" {
  id = "vpc-0de3a57dcd315b6a5"
  ~ tags = {
    + "Name" = "development"
    + "vpc_env" = "dev"
  }
  ~ tags_all = {
    + "Name" = "development"
    + "vpc_env" = "dev"
  }
  # (19 unchanged attributes hidden)
}
}

Plan: 0 to add, 3 to change, 0 to destroy.
aws_subnet.dev_subnet_1_existing: Modifying... [id=subnet-003896b7c0fc729fd]
aws_vpc.development_vpc: Modifying... [id=vpc-0de3a57dcd315b6a5]
aws_subnet.dev_subnet_1_existing: Modifications complete after 2s [id=subnet-003896b7c0fc729fd]
aws_vpc.development_vpc: Modifications complete after 3s [id=vpc-0de3a57dcd315b6a5]
aws_subnet.dev_subnet_1: Modifying... [id=subnet-0f289c8b436bf2012]
aws_subnet.dev_subnet_1: Modifications complete after 1s [id=subnet-0f289c8b436bf2012]

Apply complete! Resources: 0 added, 3 changed, 0 destroyed.
073-22411-061-rgb @ /workspaces/CC--Shumail-zahna-...-2023-BSE-061- (main) $

```

task4_terraform_plan_remove_tag

```

root@kali:~# cd /workspaces/CC-Shumail-zahra-2023-BSE-061- (main) $ terraform plan
data.aws_vpc.existing_vpc: Reading...
aws_vpc.development_vpc: Refreshing state... [id=vpc-0de3a57dcd315b6a5]
data.aws_vpc.existing_vpc: Read complete after 2s [id=vpc-0cc0868d02cdd5863]
aws_subnet.dev_subnet_1_existing: Refreshing state... [id=subnet-003896b7c0fc729fd]
aws_subnet.dev_subnet_1: Refreshing state... [id=subnet-0f289c8b436bf2012]

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
~ update in-place

Terraform will perform the following actions:

  # aws_vpc.development_vpc will be updated in-place
  ~ resource "aws_vpc" "development_vpc" {
    id           = "vpc-0de3a57dcd315b6a5"
    ~ tags       = {
        "Name" = "development"
        "vpc_env" = "dev" -> null
      }
    ~ tags_all   = {
        "vpc_env" = "dev" -> null
        # (1 unchanged element hidden)
      }
    # (19 unchanged attributes hidden)
  }

Plan: 0 to add, 1 to change, 0 to destroy.

Note: You didn't use the -out option to save this plan, so Terraform can't guarantee to take exactly these actions if you run "terraform apply" now.

```

task4_terraform_apply_remove_tag

```

root@kali:~# cd /workspaces/CC-Shumail-zahra-2023-BSE-061- (main) $ terraform apply
data.aws_vpc.existing_vpc: Reading...
aws_vpc.development_vpc: Refreshing state... [id=vpc-0de3a57dcd315b6a5]
data.aws_vpc.existing_vpc: Read complete after 2s [id=vpc-0cc0868d02cdd5863]
aws_subnet.dev_subnet_1_existing: Refreshing state... [id=subnet-003896b7c0fc729fd]
aws_subnet.dev_subnet_1: Refreshing state... [id=subnet-0f289c8b436bf2012]

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
~ update in-place

Terraform will perform the following actions:

  # aws_vpc.development_vpc will be updated in-place
  ~ resource "aws_vpc" "development_vpc" {
    id           = "vpc-0de3a57dcd315b6a5"
    ~ tags       = {
        "Name" = "development"
        "vpc_env" = "dev" -> null
      }
    ~ tags_all   = {
        "vpc_env" = "dev" -> null
        # (1 unchanged element hidden)
      }
    # (19 unchanged attributes hidden)
  }

Plan: 0 to add, 1 to change, 0 to destroy.

Do you want to perform these actions?
  Terraform will perform the actions described above.
  Only 'yes' will be accepted to approve.

  Enter a value: yes

aws_vpc.development_vpc: Modifying... [id=vpc-0de3a57dcd315b6a5]
aws_vpc.development_vpc: Modifications complete after 3s [id=vpc-0de3a57dcd315b6a5]

Apply complete! Resources: 0 added, 1 changed, 0 destroyed.
root@kali:~# cd /workspaces/CC-Shumail-zahra-2023-BSE-061- (main) $

```

Task 5 — State File Inspection & Terraform State Commands

task5_terraform_destroy

```

@23-22411-061-rgb @ /workspaces/CC_-Shumail-zahra_-2023-BSE-061- (main) $ terraform destroy
data.aws_vpc.existing_vpc: Reading...
aws_vpc.development_vpc: Refreshing state... [id=vpc-0de3a57dcd315b6a5]
data.aws_vpc.existing_vpc: Read complete after 2s [id=vpc-0cc0868d02cdd5863]
aws_subnet.dev_subnet_1_existing: Refreshing state... [id=subnet-003896b7c0fc729fd]
aws_subnet.dev_subnet_1: Refreshing state... [id=subnet-0f289c8b436bf2012]

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
destroy

Terraform will perform the following actions:

# aws_subnet.dev_subnet_1 will be destroyed
resource "aws_subnet" "dev_subnet_1" {
  arn                                = "arn:aws:ec2:us-east-1:075006647027:subnet/subnet-0f289c8b436bf2012" -> null
  assign_ipv6_address_on_creation    = false -> null
  availability_zone                  = "us-east-1a" -> null
  availability_zone_id               = "usel-az1" -> null
  cidr_block                        = "10.0.10.0/24" -> null
  enable_dns64                      = false -> null
  enable_lni_at_device_index        = 0 -> null
  enable_resource_name_dns_a_record_on_launch = false -> null
  enable_resource_name_dns_aaaa_record_on_launch = false -> null
  id                                 = "subnet-0f289c8b436bf2012" -> null
  ipv6_native                        = false -> null
  map_customer_owned_ip_on_launch   = false -> null
  map_public_ip_on_launch           = false -> null
  owner_id                          = "075006647027" -> null
  private_dns_hostname_type_on_launch = "ip-name" -> null
  region                            = "us-east-1" -> null
  tags                              = {
    "Name" = "subnet-1-dev"
  } -> null
  tags_all                          = {
    "Name" = "subnet-1-dev"
  } -> null
  vpc_id                            = "vpc-0de3a57dcd315b6a5" -> null
}
# aws_subnet.dev_subnet_1_existing will be destroyed
resource "aws_subnet" "dev_subnet_1_existing" {
  arn                                = "arn:aws:ec2:us-east-1:075006647027:subnet/subnet-003896b7c0fc729fd" -> null
  assign_ipv6_address_on_creation    = false -> null
  availability_zone                  = "us-east-1a" -> null
  availability_zone_id               = "usel-az1" -> null
  cidr_block                        = "172.31.240.0/24" -> null
  enable_dns64                      = false -> null
  enable_lni_at_device_index        = 0 -> null
  enable_resource_name_dns_a_record_on_launch = false -> null
  enable_resource_name_dns_aaaa_record_on_launch = false -> null
  tags                              = {
    "Name" = "subnet-1-default"
  } -> null
  tags_all                          = {
    "Name" = "subnet-1-default"
  } -> null
  vpc_id                            = "vpc-0cc0868d02cdd5863" -> null
}
# aws_vpc.development_vpc will be destroyed
resource "aws_vpc" "development_vpc" {
  arn                                = "arn:aws:ec2:us-east-1:075006647027:vpc/vpc-0de3a57dcd315b6a5" -> null
  assign_generated_ipv6_cidr_block    = false -> null
  cidr_block                        = "10.0.0.0/16" -> null
  default_network_acl_id             = "acl-0d98bd577f83c3fe" -> null
  default_route_table_id             = "rtb-0262e4d7eeca0e6ac" -> null
  default_security_group_id          = "sg-0faaffa8804ac2b0" -> null
  dhcp_options_id                   = "dopt-03c04818ffb45a2df" -> null
  enable_dns_hostnames               = false -> null
  enable_dns_support                  = true -> null
  enable_network_address_usage_metrics = false -> null
  id                                 = "vpc-0de3a57dcd315b6a5" -> null
  instance_tenancy                   = "default" -> null
  ipv6_address_length                = 0 -> null
  main_route_table_id                = "rtb-0262e4d7eeca0e6ac" -> null
  owner_id                          = "075006647027" -> null
  region                            = "us-east-1" -> null
  tags                              = {
    "Name" = "development"
  } -> null
  tags_all                          = {
    "Name" = "development"
  } -> null
}
Plan: 0 to add, 0 to change, 3 to destroy.

Do you really want to destroy all resources?
Terraform will destroy all your managed infrastructure, as shown above.
There is no undo. Only 'yes' will be accepted to confirm.

Enter a value: yes

aws_subnet.dev_subnet_1: Destroying... [id=subnet-0f289c8b436bf2012]
aws_subnet.dev_subnet_1_existing: Destroying... [id=subnet-003896b7c0fc729fd]
aws_subnet.dev_subnet_1: Destruction complete after 1s
aws_subnet.dev_subnet_1_existing: Destruction complete after 1s
aws_vpc.development_vpc: Destroying... [id=vpc-0de3a57dcd315b6a5]
aws_vpc.development_vpc: Destruction complete after 1s

```

task5_terraform_state_file_empty

```

@23-22411-061-rgb @ /workspaces/CC_-Shumail-zahra_-2023-BSE-061- (main) $ cat terraform.tfstate
{
  "version": 4,
  "terraform_version": "1.14.3",
  "serial": 43,
  "lineage": "b2bbb1dc-152e-02bb-6bcd-9bfdeb3e4f0a",
  "outputs": {},
  "resources": [],
  "check_results": null
}
@23-22411-061-rgb @ /workspaces/CC_-Shumail-zahra_-2023-BSE-061- (main) $

```

task5_terraform_state_backup_prev

```

}
073-22811-061-rgbl @ /workspaces/CC_-Shumail-zahra_-2023-BSE-061- (main) $ cat terraform.tfstate.backup
{
  "version": 4,
  "terraform_version": "1.14.3",
  "serial": 38,
  "lineage": "b2bbb1dc-152e-02bb-6bcd-9bfdeb3e4f0a",
  "outputs": {},
  "resources": [
    {
      "mode": "data",
      "type": "aws_vpc",
      "name": "existing_vpc",
      "provider": "provider[\"registry.terraform.io/hashicorp/aws\"]",
      "instances": [
        {
          "schema_version": 0,
          "attributes": {
            "arn": "arn:aws:ec2:us-east-1:075006647027:vpc/vpc-0cc0868d02cdd5863",
            "cidr_block": "172.31.0.0/16",
            "cidr_block_associations": [
              {
                "association_id": "vpc-cidr-assoc-0fc958c81ad4ea610",
                "cidr_block": "172.31.0.0/16",
                "state": "associated"
              }
            ],
            "default": true,
            "dhcp_options_id": "dopt-03c04818ffb45a2df",
            "enable_dns_hostnames": true,
            "enable_dns_support": true,
            "enable_network_address_usage_metrics": false,
            "filter": null,
            "id": "vpc-0cc0868d02cdd5863",
            "instance_tenancy": "default",
            "ipv6_association_id": "",
            "ipv6_cidr_block": "",
            "main_route_table_id": "rtb-0dd69f9eeaffa80ff",
            "owner_id": "075006647027",
            "region": "us-east-1",
            "state": null,
            "tags": {},
            "timeouts": null
          },
          "sensitive_attributes": [],
          "identity_schema_version": 0
        }
      ],
      "mode": "managed",
      "type": "aws_subnet",
      "provider": "provider[\"registry.terraform.io/hashicorp/aws\"]",
      "instances": [
        {
          "schema_version": 1,
          "attributes": {
            "arn": "arn:aws:ec2:us-east-1:075006647027:subnet/subnet-0f289c8b436bf2012",
            "assign_ipv6_address_on_creation": false,
            "availability_zone": "us-east-1a",
            "availability_zone_id": "use1-az1",
            "cidr_block": "10.0.10.0/24",
            "customer_owned_ipv4_pool": "",
            "enable_dns64": false,
            "enable_lni_at_device_index": 0,
            "enable_resource_name_dns_a_record_on_launch": false,
            "enable_resource_name_dns_aaaa_record_on_launch": false,
            "id": "subnet-0f289c8b436bf2012",
            "ipv6_cidr_block": "",
            "ipv6_cidr_block_association_id": "",
            "ipv6_native": false,
            "map_customer_owned_ip_on_launch": false,
            "map_public_ip_on_launch": false,
            "outpost_arn": "",
            "owner_id": "075006647027",
            "private_dns_hostname_type_on_launch": "ip-name",
            "region": "us-east-1",
            "tags": {
              "Name": "subnet-1-dev"
            },
            "tags_all": {
              "Name": "subnet-1-dev"
            },
            "timeouts": null,
            "vpc_id": "vpc-0de3a57dcd315b6a5"
          },
          "sensitive_attributes": [],
          "identity_schema_version": 0,
          "identity": {
            "account_id": "075006647027",
            "id": "subnet-0f289c8b436bf2012",
            "region": "us-east-1"
          },
          "private": "ayJlMmJmYjc2MCI1Y2FhLTExZTYtOGY4OC0zNDM2M2JjN2M0YzAiOmsiY3JlYXRlIjo2MDAwMDAwMDAwMDAsImRlbGV0ZS16MTIwMDAwMDAwMDAwMDAsInNjaGVtYV92ZXJzaW9uIjo1MSJ9",
          "dependencies": [
            "aws_vpc.development_vpc"
          ]
        }
      ],
      "check_results": null
    }
  ]
}

```

```

{
  "mode": "managed",
  "type": "aws_subnet",
  "name": "dev_subnet_1_existing",
  "provider": "provider[\\\"registry.terraform.io/hashicorp/aws\\\"]",
  "instances": [
    {
      "schema_version": 1,
      "attributes": {
        "arn": "arn:aws:ec2:us-east-1:075006647027:subnet/subnet-003896b7c0fc729fd",
        "assign_ipv6_address_on_creation": false,
        "availability_zone": "us-east-1a",
        "availability_zone_id": "usol-a2l",
        "cidr_block": "172.31.240.0/24",
        "customer_owned_ipv4_pool": "",
        "enable_dns64": false,
        "enable_int_ip_device_index": 0,
        "enable_resource_name_dns_a_record_on_launch": false,
        "enable_resource_name_dns_aaaa_record_on_launch": false,
        "id": "subnet-003896b7c0fc729fd",
        "ipv6_cidr_block": "",
        "ipv6_cidr_block_association_id": "",
        "ipv6_native": false,
        "map_customer_owned_ip_on_launch": false,
        "map_public_ip_on_launch": false,
        "outpost_arn": "",
        "owner_id": "075006647027",
        "private_dns_hostnames_type_on_launch": "ip-name",
        "region": "us-east-1",
        "tags": {
          "Name": "subnet-1-default"
        },
        "tags_all": {
          "Name": "subnet-1-default"
        },
        "timeouts": null,
        "vpc_id": "vpc-0cc0868d02cdd5863"
      },
      "sensitive_attributes": [],
      "identity_schema_version": 0,
      "identity": {
        "account_id": "075006647027",
        "id": "subnet-003896b7c0fc729fd",
        "region": "us-east-1"
      },
      "private": "eyJ1M2h1bWFFdmVyc2lvbiI6IjEiEifQ=="
    }
  ],
  "dependencies": [
    "data.aws_vpc.existing_vpc"
  ]
}

```

Windows PowerShell

```

"mode": "managed",
"provider": "provider[\\\"registry.terraform.io/hashicorp/aws\\\"]",
"instances": [
  {
    "schema_version": 1,
    "attributes": {
      "arn": "arn:aws:ec2:us-east-1:075006647027:vpc/vpc-0de3a57dcd315b6a5",
      "assign_generated_ipv6_cidr_block": false,
      "cidr_block": "10.0.0.0/16",
      "default_network_acl_id": "acl-0d98bdb77ff83c3fe",
      "default_route_table_id": "rtb-0262e4d7eeca0e6ac",
      "default_security_group_id": "sg-0faaffe8804acb2b0",
      "dhcp_options_id": "dopt-03c04818ffb45a2df",
      "enable_dns_hostnames": false,
      "enable_dns_support": true,
      "enable_network_address_usage_metrics": false,
      "id": "vpc-0de3a57dcd315b6a5",
      "instance_tenancy": "default",
      "ipv4_ipam_pool_id": null,
      "ipv4_netmask_length": null,
      "ipv6_association_id": "",
      "ipv6_cidr_block": "",
      "ipv6_cidr_block_network_border_group": "",
      "ipv6_ipam_pool_id": "",
      "ipv6_netmask_length": 0,
      "main_route_table_id": "rtb-0262e4d7eeca0e6ac",
      "owner_id": "075006647027",
      "region": "us-east-1",
      "tags": {
        "Name": "development"
      },
      "tags_all": {
        "Name": "development"
      },
      "sensitive_attributes": [],
      "identity_schema_version": 0,
      "identity": {
        "account_id": "075006647027",
        "id": "vpc-0de3a57dcd315b6a5",
        "region": "us-east-1"
      },
      "private": "eyJ1M2h1bWFFdmVyc2lvbiI6IjEiEifQ=="
    }
  ],
  "dependencies": null
}

```

03-22411-001-rgb @ /workspaces/CC-Shumail-zahra-2023-BSE-061- (main) \$

task5_terraform_apply_recreated

```

061-12411-061-rgp @ /workspaces/CC--Shumail-zahra--2023-BSE-061- (main) $ terraform apply
data.aws_vpc.existing_vpc: Reading...
data.aws_vpc.existing_vpc: Read complete after 2s [id=vpc-0cc0868d02cdd5863]

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
+ create

Terraform will perform the following actions:

# aws_subnet.dev_subnet_1 will be created
+ resource "aws_subnet" "dev_subnet_1" {
  arn                                = (known after apply)
  assign_ipv6_address_on_creation    = false
  availability_zone                  = "us-east-1a"
  availability_zone_id               = (known after apply)
  cidr_block                         = "10.0.10.0/24"
  enable_dns64                       = false
  enable_resource_name_dns_a_record_on_launch = false
  enable_resource_name_dns_aaaa_record_on_launch = false
  id                                 = (known after apply)
  ipv6_cidr_block_association_id     = (known after apply)
  ipv6_native                        = false
  map_public_ip_on_launch            = false
  owner_id                           = (known after apply)
  private_dns_hostname_type_on_launch = (known after apply)
  region                             = "us-east-1"
  tags                               = {
    "Name" = "subnet-1-dev"
  }
  tags_all                           = {
    "Name" = "subnet-1-dev"
  }
  vpc_id                             = (known after apply)
}

# aws_subnet.dev_subnet_1_existing will be created
+ resource "aws_subnet" "dev_subnet_1_existing" {
  arn                                = (known after apply)
  assign_ipv6_address_on_creation    = false
  availability_zone                  = "us-east-1a"
  availability_zone_id               = (known after apply)
  cidr_block                         = "172.31.240.0/24"
  enable_dns64                       = false
  enable_resource_name_dns_a_record_on_launch = false
  enable_resource_name_dns_aaaa_record_on_launch = false
  id                                 = (known after apply)
  ipv6_cidr_block_association_id     = (known after apply)
  ipv6_native                        = false
  map_public_ip_on_launch            = false
  owner_id                           = (known after apply)
  private_dns_hostname_type_on_launch = (known after apply)
}

Only 'yes' will be accepted to approve.

```

```

+ resource "aws_vpc" "development_vpc" {
  arn                                = (known after apply)
  cidr_block                         = "10.0.0.0/16"
  default_network_acl_id             = (known after apply)
  default_route_table_id             = (known after apply)
  default_security_group_id          = (known after apply)
  dhcp_options_id                   = (known after apply)
  enable_dns_hostnames               = (known after apply)
  enable_dns_support                 = true
  enable_network_address_usage_metrics = (known after apply)
  id                                 = (known after apply)
  instance_tenancy                   = "default"
  ipv6_association_id               = (known after apply)
  ipv6_cidr_block                   = (known after apply)
  ipv6_cidr_block_network_border_group = (known after apply)
  main_route_table_id               = (known after apply)
  owner_id                           = (known after apply)
  region                             = "us-east-1"
  tags                               = {
    "Name" = "development"
  }
  tags_all                           = {
    "Name" = "development"
  }
}

```

Plan: 3 to add, 0 to change, 0 to destroy.

Do you want to perform these actions?

Terraform will perform the actions described above.
Only 'yes' will be accepted to approve.

Enter a value: yes

```

aws_vpc.development_vpc: Creating...
aws_subnet.dev_subnet_1_existing: Creating...
aws_subnet.dev_subnet_1_existing: Creation complete after 2s [id=subnet-087bb9ce4639b318e]
aws_vpc.development_vpc: Creation complete after 4s [id=vpc-06707647cde717658]
aws_subnet.dev_subnet_1: Creating...
aws_subnet.dev_subnet_1: Creation complete after 1s [id=subnet-0bd212b6a8a657171]

```

Apply complete! Resources: 3 added, 0 changed, 0 destroyed.

```

061-12411-061-rgp @ /workspaces/CC--Shumail-zahra--2023-BSE-061- (main) $

```

task5_terraform_state_file_populated

```

011-22411-061-rgh @ /workspaces/CC_Shumail-zahra_2023-BSE-061- (main) % cat terraform.tfstate
{
  "version": 4,
  "terraform_version": "1.14.3",
  "serial": 47,
  "lineage": "b2bbb1dc-152e-02bb-6bcd-9bfdeb3e4f0a",
  "outputs": {},
  "resources": [
    {
      "mode": "data",
      "type": "aws_vpc",
      "name": "existing_vpc",
      "provider": "provider[\"registry.terraform.io/hashicorp/aws\"]",
      "instances": [
        {
          "schema_version": 0,
          "attributes": {
            "arn": "arn:aws:ec2:us-east-1:075006647027:vpc/vpc-0cc0868d02cdd5863",
            "cidr_block": "172.31.0.0/16",
            "cidr_block_associations": [
              {
                "association_id": "vpc-cidr-assoc-0fc958c81ad4ea610",
                "cidr_block": "172.31.0.0/16",
                "state": "associated"
              }
            ],
            "default": true,
            "dhcp_options_id": "dopt-03c04818ffb45a2df",
            "enable_dns_hostnames": true,
            "enable_dns_support": true,
            "enable_network_address_usage_metrics": false,
            "filter": null,
            "id": "vpc-0cc0868d02cdd5863",
            "instance_tenancy": "default",
            "ipv6_association_id": "",
            "ipv6_cidr_block": "",
            "main_route_table_id": "rtb-0dd69f9eeaffa80ff",
            "owner_id": "075006647027",
            "region": "us-east-1",
            "state": null,
            "tags": {},
            "timeouts": null
          },
          "sensitive_attributes": [],
          "identity_schema_version": 0
        }
      ]
    },
    {
      "mode": "managed",
      "type": "aws_subnet",
      "name": "dev_subnet_1",
      "provider": "provider[\"registry.terraform.io/hashicorp/aws\"]",
      "instances": [
        {
          "schema_version": 1,
          "attributes": {
            "arn": "arn:aws:ec2:us-east-1:075006647027:subnet/subnet-0bd212b6a8a657171",
            "assign_ipv6_address_on_creation": false,
            "availability_zone": "us-east-1a",
            "availability_zone_id": "use1-az1",
            "cidr_block": "10.0.10.0/24",
            "customer_owned_ipv4_pool": "",
            "enable_dns64": false,
            "enable_lni_at_device_index": 0,
            "enable_resource_name_dns_a_record_on_launch": false,
            "enable_resource_name_dns_aaaa_record_on_launch": false,
            "id": "subnet-0bd212b6a8a657171",
            "ipv6_cidr_block": "",
            "ipv6_cidr_block_association_id": "",
            "ipv6_native": false,
            "map_customer_owned_ip_on_launch": false,
            "map_public_ip_on_launch": false,
            "outpost_arn": "",
            "owner_id": "075006647027",
            "private_dns_hostname_type_on_launch": "ip-name",
            "region": "us-east-1",
            "tags": {
              "Name": "subnet-1-dev"
            },
            "tags_all": {
              "Name": "subnet-1-dev"
            },
            "timeouts": null,
            "vpc_id": "vpc-06707647cde717658"
          },
          "sensitive_attributes": [],
          "identity_schema_version": 0,
          "identity": {
            "account_id": "075006647027",
            "id": "subnet-0bd212b6a8a657171",
            "region": "us-east-1"
          },
          "private": ["eyJ1bmJycjMlY2FhLExTExZTYtOGY4OCzNDM2MzIjN2M0YzAiOnsiY3JlYXRlIjo2MDAwMDAwMDAwImRlbGV0ZS1GMTIwMDAwMDAwMDAwMH0sInRjaGVtYV9yZWZKXzZh9uIjo1MSJ9",
            "dependencies": [
              "aws_vpc.development_vpc"
            ]
          }
        }
      ]
    }
  ]
}

```

```
2023-22411-061-rgb @ /workspaces/CC_-Shumail-zahra_-2023-BSE-061- (main) $
"check_results": null
```

task5 terraform state show resource


```

aws_vpc.development_vpc
# aws_vpc.development_vpc:
resource "aws_vpc" "development_vpc" {
  arn              = "arn:aws:ec2:us-east-1:075006647027:vpc/vpc-06707647cde717658"
  assign_generated_ip_v6_cidr_block = false
  cidr_block       = "10.0.0.0/16"
  default_network_acl_id = "acl-0fa6be3ca9b02b734"
  default_route_table_id = "rtb-0bb4dd2adbc0d2a7e"
  default_security_group_id = "sg-019401c1b86d6f94e"
  dhcp_options_id = "dopt-03c04818ffb45a2df"
  enable_dns_hostnames = false
  enable_dns_support   = true
  enable_network_address_usage_metrics = false
  id                   = "vpc-06707647cde717658"
  instance_tenancy     = "default"
  ipv6_association_id  = null
  ipv6_cidr_block      = null
  ipv6_cidr_block_network_border_group = null
  ipv6_ipam_pool_id    = null
  ipv6_netmask_length  = 0
  main_route_table_id  = "rtb-0bb4dd2adbc0d2a7e"
  owner_id             = "075006647027"
  region              = "us-east-1"
  tags                = {
    "Name" = "development"
  }
  tags_all = {
    "Name" = "development"
  }
}

```

Task 6 — Terraform Outputs & Attributes Reporting

task6_terraform_outputs_basic

```

Windows PowerShell
provider "aws" {
  region = "us-east-1"
}
data "aws_vpc" "existing_vpc" {
  default = true
}
resource "aws_vpc" "development_vpc" {
  cidr_block = "10.0.0.0/16"

  tags = {
    Name = "development"
  }
}
resource "aws_subnet" "dev_subnet_1" {
  vpc_id      = aws_vpc.development_vpc.id
  cidr_block  = "10.0.10.0/24"
  availability_zone = "us-east-1a"

  tags = {
    Name = "subnet-1-dev"
  }
}
resource "aws_subnet" "dev_subnet_1_existing" {
  vpc_id      = data.aws_vpc.existing_vpc.id
  cidr_block  = "172.31.240.0/24"
  availability_zone = "us-east-1a"

  tags = {
    Name = "subnet-1-default"
  }
}
output "dev-vpc-id" {
  value = aws_vpc.development_vpc.id
}
output "dev-subnet-id" {
  value = aws_subnet.dev_subnet_1.id
}
output "dev-vpc-arn" {
  value = aws_vpc.development_vpc.arn
}
output "dev-subnet-arn" {
  value = aws_subnet.dev_subnet_1.arn
}

```

```

root@22411-061-rgb: /workspaces/CC-Shumail-zahra-2023-05E-061- (main) $ terraform apply
data.aws_vpc.existing_vpc: Reading...
aws_vpc.development_vpc: Refreshing state... [id=vpc-06707647cde717658]
data.aws_vpc.existing_vpc: Read complete after 2s [id=vpc-0cc0868d02cdd5863]
aws_subnet.dev_subnet_1_existing: Refreshing state... [id=subnet-087bb9ce4639b318e]
aws_subnet.dev_subnet_1: Refreshing state... [id=subnet-0bd212b6a8a657171]

Changes to Outputs:
  + dev-subnet-arn = "arn:aws:ec2:us-east-1:075006647027:subnet/subnet-0bd212b6a8a657171"
  + dev-subnet-id  = "subnet-0bd212b6a8a657171"
  + dev-vpc-arn   = "arn:aws:ec2:us-east-1:075006647027:vpc/vpc-06707647cde717658"
  + dev-vpc-id    = "vpc-06707647cde717658"

You can apply this plan to save these new output values to the Terraform state, without changing any real infrastructure.

Do you want to perform these actions?
  Terraform will perform the actions described above.
  Only 'yes' will be accepted to approve.

  Enter a value: yes

Apply complete! Resources: 0 added, 0 changed, 0 destroyed.

Outputs:
dev-subnet-arn = "arn:aws:ec2:us-east-1:075006647027:subnet/subnet-0bd212b6a8a657171"
dev-subnet-id  = "subnet-0bd212b6a8a657171"
dev-vpc-arn   = "arn:aws:ec2:us-east-1:075006647027:vpc/vpc-06707647cde717658"
dev-vpc-id    = "vpc-06707647cde717658"
root@22411-061-rgb: /workspaces/CC-Shumail-zahra-2023-05E-061- (main) $

```

task6_expanded_outputs

```

provider "aws" {
  region = "us-east-1"
}
data "aws_vpc" "existing_vpc" {
  default = true
}
resource "aws_vpc" "development_vpc" {
  cidr_block = "10.0.0.0/16"

  tags = {
    Name = "development"
  }
}
resource "aws_subnet" "dev_subnet_1" {
  vpc_id      = aws_vpc.development_vpc.id
  cidr_block  = "10.0.10.0/24"
  availability_zone = "us-east-1a"

  tags = {
    Name = "subnet-1-dev"
  }
}
resource "aws_subnet" "dev_subnet_1_existing" {
  vpc_id      = data.aws_vpc.existing_vpc.id
  cidr_block  = "172.31.240.0/24"
  availability_zone = "us-east-1a"

  tags = {
    Name = "subnet-1-default"
  }
}
output "dev-vpc-cidr_block" {
  value = aws_vpc.development_vpc.cidr_block
}
output "dev-vpc-region" {
  value = aws_vpc.development_vpc.region
}
output "dev-vpc-tags_name" {
  value = aws_vpc.development_vpc.tags["Name"]
}
output "dev-vpc-tags_all" {
  value = aws_vpc.development_vpc.tags_all
}
output "dev-subnet-cidr_block" {
  value = aws_subnet.dev_subnet_1.cidr_block
}
output "dev-subnet-region" {
  value = aws_subnet.dev_subnet_1.availability_zone
}
}
:wq!

22411-001-rgb @ /workspaces/CC_Shumail-zahra--2023-BSE-061- (main) $ vim main.tf
22411-001-rgb @ /workspaces/CC_Shumail-zahra--2023-BSE-061- (main) $ terraform apply
data.aws_vpc.existing_vpc: Reading...
aws_vpc.development_vpc: Refreshing state... [id=vpc-06707647cde717658]
data.aws_vpc.existing_vpc: Read complete after 2s [id=vpc-0cc0868d02cdd5863]
aws_subnet.dev_subnet_1_existing: Refreshing state... [id=subnet-087bb9ce4639b318e]
aws_subnet.dev_subnet_1: Refreshing state... [id=subnet-0bd212b6a8a657171]

Changes to Outputs:
  dev-subnet-arn      = "arn:aws:ec2:us-east-1:075006647027:subnet/subnet-0bd212b6a8a657171" -> null
  dev-subnet-cidr_block = "10.0.10.0/24"
  dev-subnet-id       = "subnet-0bd212b6a8a657171" -> null
  dev-subnet-region   = "us-east-1a"
  dev-subnet-tags_all = {
    Name = "subnet-1-dev"
  }
  dev-subnet-tags_name = "subnet-1-dev"
  dev-vpc-arn          = "arn:aws:ec2:us-east-1:075006647027:vpc/vpc-06707647cde717658" -> null
  dev-vpc-cidr_block  = "10.0.0.0/16"
  dev-vpc-id          = "vpc-06707647cde717658" -> null
  dev-vpc-region      = "us-east-1"
  dev-vpc-tags_all    = {
    Name = "development"
  }
  dev-vpc-tags_name   = "development"

You can apply this plan to save these new output values to the Terraform state, without changing any real infrastructure.

Do you want to perform these actions?
Terraform will perform the actions described above.
Only 'yes' will be accepted to approve.

Enter a value: yes

Apply complete! Resources: 0 added, 0 changed, 0 destroyed.

Outputs:
dev-subnet-cidr_block = "10.0.10.0/24"
dev-subnet-region    = "us-east-1a"
dev-subnet-tags_all  = tomap({
  "Name" = "subnet-1-dev"
})
dev-subnet-tags_name = "subnet-1-dev"
dev-vpc-cidr_block  = "10.0.0.0/16"
dev-vpc-region      = "us-east-1"
dev-vpc-tags_all    = tomap({
  "Name" = "development"
})
dev-vpc-tags_name   = "development"
22411-001-rgb @ /workspaces/CC_Shumail-zahra--2023-BSE-061- (main) $

```

Cleanup — Delete Resources & State Verification

cleanup_destroy_resources

```

dev_vpc.tags_name = development
root@kali:~/workspaces/CC-Shumail-zahra-2023-BSE-001- (main) $ terraform destroy
data.aws_vpc.existing_vpc: Refreshing state... [id=vpc-06707647cde717658]
data.aws_vpc.existing_vpc: Read complete after 2s [id=vpc-0cc0868d02cdd5863]
aws_subnet.dev_subnet_1_existing: Refreshing state... [id=subnet-087bb9ce4639b318e]
aws_subnet.dev_subnet_1: Refreshing state... [id=subnet-0bd212b6a8a657171]

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
  destroy

Terraform will perform the following actions:

# aws_subnet.dev_subnet_1 will be destroyed
resource "aws_subnet" "dev_subnet_1" {
  arn                                = "arn:aws:ec2:us-east-1:075006647027:subnet/subnet-0bd212b6a8a657171" -> null
  assign_ipv6_address_on_creation    = false -> null
  availability_zone                  = "us-east-1a" -> null
  availability_zone_id               = "use1-az1" -> null
  cidr_block                         = "10.0.10.0/24" -> null
  enable_dns64                      = false -> null
  enable_lni_at_device_index        = 0 -> null
  enable_resource_name_dns_a_record_on_launch = false -> null
  enable_resource_name_dns_aaaa_record_on_launch = false -> null
  id                                 = "subnet-0bd212b6a8a657171" -> null
  ipv6_native                       = false -> null
  map_customer_owned_ip_on_launch   = false -> null
  map_public_ip_on_launch           = false -> null
  owner_id                          = "075006647027" -> null
  private_dns_hostname_type_on_launch = "ip-name" -> null
  region                            = "us-east-1" -> null
  tags                              = {
    "Name" = "subnet-1-dev"
  } -> null
  tags_all                          = {
    "Name" = "subnet-1-dev"
  } -> null
  vpc_id                            = "vpc-06707647cde717658" -> null
  # (4 unchanged attributes hidden)
}

# aws_subnet.dev_subnet_1_existing will be destroyed
resource "aws_subnet" "dev_subnet_1_existing" {
  arn                                = "arn:aws:ec2:us-east-1:075006647027:subnet/subnet-087bb9ce4639b318e" -> null
  assign_ipv6_address_on_creation    = false -> null
  availability_zone                  = "us-east-1a" -> null
  availability_zone_id               = "use1-az1" -> null
  cidr_block                         = "172.31.240.0/24" -> null
  enable_dns64                      = false -> null

```

cleanup_state_files

```

Destroy complete! Resources: 3 destroyed.
root@kali:~/workspaces/CC-Shumail-zahra-2023-BSE-001- (main) $ cat terraform.tfstate
{
  "version": 4,
  "terraform_version": "1.14.3",
  "serial": 54,
  "lineage": "b2bbb1dc-152e-02bb-6bcd-9bfdeb3e4f0a",
  "outputs": {},
  "resources": [],
  "check_results": null
}
root@kali:~/workspaces/CC-Shumail-zahra-2023-BSE-001- (main) $ cat terraform.tfstate.backup
{
  "version": 4,
  "terraform_version": "1.14.3",
  "serial": 49,
  "lineage": "b2bbb1dc-152e-02bb-6bcd-9bfdeb3e4f0a",
  "outputs": {
    "dev-subnet-cidr_block": {
      "value": "10.0.10.0/24",
      "type": "string"
    },
    "dev-subnet-region": {
      "value": "us-east-1a",
      "type": "string"
    },
    "dev-subnet-tags_all": {
      "value": {
        "Name": "subnet-1-dev"
      },
      "type": [
        "map",
        "string"
      ]
    },
    "dev-subnet-tags_name": {
      "value": "subnet-1-dev",
      "type": "string"
    }
  }
}

```

Windows PowerShell

```
"schema_version": 1,
"attributes": {
  "arn": "arn:aws:ec2:us-east-1:075006647027:vpc/vpc-06707647cde717658",
  "assign_generated_ipv6_cidr_block": false,
  "cidr_block": "10.0.0.0/16",
  "default_network_acl_id": "acl-0fa6be3ca9b02b734",
  "default_route_table_id": "rtb-0bb4dd2adbc0d2a7e",
  "default_security_group_id": "sg-019401c1b86d6f94e",
  "dhcp_options_id": "dopt-03c04818ffb45a2df",
  "enable_dns_hostnames": false,
  "enable_dns_support": true,
  "enable_network_address_usage_metrics": false,
  "id": "vpc-06707647cde717658",
  "instance_tenancy": "default",
  "ipv4_ipam_pool_id": null,
  "ipv4_netmask_length": null,
  "ipv6_association_id": "",
  "ipv6_cidr_block": "",
  "ipv6_cidr_block_network_border_group": "",
  "ipv6_ipam_pool_id": "",
  "ipv6_netmask_length": 0,
  "main_route_table_id": "rtb-0bb4dd2adbc0d2a7e",
  "owner_id": "075006647027",
  "region": "us-east-1",
  "tags": {
    "Name": "development"
  },
  "tags_all": {
    "Name": "development"
  }
},
"sensitive_attributes": [],
"identity_schema_version": 0,
"identity": {
  "account_id": "075006647027",
  "id": "vpc-06707647cde717658",
  "region": "us-east-1"
},
"private": "eyJzY2hlbWFFdmVyc2lvbiI6IjEiEifQ=="
}
],
"check_results": null
```

25-22411-061:rgb @ /workspaces/CC_-Shumail-zahra_-2023-BSE-061- (main) \$