

CLOUD COMPUTING LAB

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Reg No: 2023-BSE-076

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Class: 5B

LAB #13

Task 0 Lab Setup (Codespace & GH CLI)

- task0_codespace_create_and_list.png

```
C:\Users\A>gh codespace list
```

| NAME | DISPLAY NAME | REPOSITORY | BRANCH | STATE | CREATED AT |
|------------------------------------|---------------------|-------------------------|--------|----------|-------------------|
| refactored-umbrella-v6j6vpjwwxx... | refactored umbrella | mariamalik11/Lab-9 | main* | Shutdown | about 16 days ago |
| fictional-pancake-wrqr7vwqyg6rhq6g | fictional pancake | mariamalik11/CC_Mari... | main* | Shutdown | about 6 days ago |

- task0_codespace_ssh_connected.png

```
C:\Users\A>gh codespace ssh -c fictional-pancake-wrqr7vwqyg6rhq6g
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
Last login: Sun Jan 18 13:13:55 2026 from ::1
```

Task 1 — Create IAM Group and Output Details

- task1_project_directory.png

```
@mariamalik11 [?] /workspaces/CC_Maria_076 (main) $ cd lab13
@mariamalik11 [?] /workspaces/CC_Maria_076/lab13 (main) $
```

- task1_file_created.png

```
SafaJahangir09 [?] /workspaces/CC_Safa_056/Lab13 (main) $ touch main.tf
SafaJahangir09 [?] /workspaces/CC_Safa_056/Lab13 (main) $ ls
EADME.md  main.tf
```

- task1_main_tf.png

```
@mariamalik11 [ /workspaces/CC_Maria_076/lab13 (main) ] $ cat main.tf
provider "aws" {
  shared_config_files      = ["~/.aws/config"]
  shared_credentials_files = ["~/.aws/credentials"]
}

resource "aws_iam_group" "developers" {
  name = "developers"
  path = "/groups/"
}

output "group_details" {
  value = {
    group_name = aws_iam_group.developers.name
    group_arn  = aws_iam_group.developers.arn
    unique_id  = aws_iam_group.developers.unique_id
  }
}
```

- task1_terraform_init.png

```
@mariamalik11 [ /workspaces/CC_Maria_076/lab13 (main) ] $ terraform init
Initializing the backend...
Initializing provider plugins...
- Finding latest version of hashicorp/aws...
- Installing hashicorp/aws v6.28.0...
- Installed hashicorp/aws v6.28.0 (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.
```

- task1_terraform_apply.png

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

Changes to Outputs:
  + group_details = {
    + group_arn    = (known after apply)
    + group_name   = "developers"
    + unique_id    = (known after apply)
  }
aws_iam_group.developers: Creating...
aws_iam_group.developers: Creation complete after 2s [id=developers]

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.

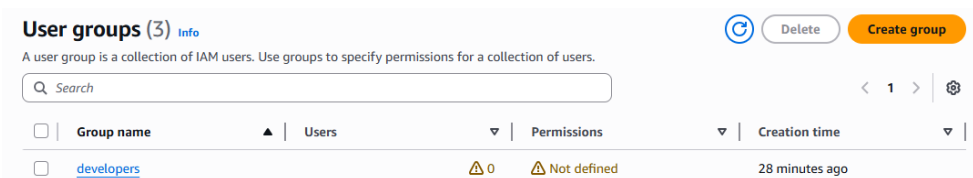
Outputs:

group_details = {
  "group_arn" = "arn:aws:iam::291506017390:group/groups/developers"
  "group_name" = "developers"
  "unique_id" = "AGPAUHX42RXDWDNXBYRY"
}
```

- task1_terraform_output.png

```
@mariamalik11 [E] /workspaces/CC_Maria_076/lab13 (main) $ terraform output
group_details = {
  "group_arn" = "arn:aws:iam::291506017390:group/groups/developers"
  "group_name" = "developers"
  "unique_id" = "AGPAUHX42RXDWDNXBYRY"
}
@mariamalik11 [E] /workspaces/CC_Maria_076/lab13 (main) $ _
```

- task1_aws_console_group.png



Task 2 — Create IAM User with Group Membership

- task2_main_tf_user.png

```
output "group_details" {
  value = {
    group_name = aws_iam_group.developers.name
    group_arn  = aws_iam_group.developers.arn
    unique_id  = aws_iam_group.developers.unique_id
  }
}

resource "aws_iam_user" "lb" {
  name = "loadbalancer"
  path = "/users/"
  force_destroy = true
  tags = {
    DisplayName = "Load Balancer"
  }
}

resource "aws_iam_user_group_membership" "lb_membership" {
  user = aws_iam_user.lb.name
  groups = [
    aws_iam_group.developers.name
  ]
}

output "user_details" {
  value = {
    user_name = aws_iam_user.lb.name
    user_arn  = aws_iam_user.lb.arn
    unique_id = aws_iam_user.lb.unique_id
  }
}

-- INSERT --
```

- task2_terraform_apply.png

```
Changes to Outputs:
+ user_details = {
+   unique_id = (known after apply)
+   user_arn  = (known after apply)
+   user_name = "loadbalancer"
}
aws_iam_user.lb: Creating...
aws_iam_user.lb: Creation complete after 2s [id=loadbalancer]
aws_iam_user_group_membership.lb_membership: Creating...
aws_iam_user_group_membership.lb_membership: Creation complete after 2s [id=lb_membership-20260122075722802400000001]
Apply complete! Resources: 2 added, 0 changed, 0 destroyed.
```

- task2_terraform_output.png

```
@mariamalik11 /workspaces/CC_Maria_076/lab13 (main) $ terraform output
group_details = {
  "group_arn" = "arn:aws:iam::291506017390:group/groups/developers"
  "group_name" = "developers"
  "unique_id" = "AGPAUHX42RXDWDNXYBYR"
}
user_details = {
  "unique_id" = "AIDAUHX42RXMMBWVDQJK"
  "user_arn" = "arn:aws:iam::291506017390:user/users/loadbalancer"
  "user_name" = "loadbalancer"
}
```

- task2_aws_console_user.png

Users (4) Info

An IAM user is an identity with long-term credentials that is used to interact with AWS in an account.

Search

| <input type="checkbox"/> | User name | Path | Groups | Last activity | MFA | Password age | Console last sign-in | Access key ID |
|--------------------------|-----------------------|------|--------|---------------|-----|--------------|----------------------|--------------------|
| <input type="checkbox"/> | Admin | / | 0 | 3 minutes ago | - | 16 days | 3 days ago | Active - AKIAUHX42 |

- task2_aws_console_user_groups.png

Users (5) Info

An IAM user is an identity with long-term credentials that is used to interact with AWS in an account.

Search

| <input type="checkbox"/> | User name | Path | Groups | Last activity | MFA | Password age | Console |
|--------------------------|------------------------------|---------|--------|----------------|-----|--------------|---------|
| <input type="checkbox"/> | Admin | / | 0 | 15 minutes ago | - | 16 days | 3 day |
| <input type="checkbox"/> | Lab8User | / | 0 | 53 minutes ago | - | 16 days | 53 m |
| <input type="checkbox"/> | loadbalancer | /users/ | 1 | - | - | - | - |

Task 3 — Attach Policies to IAM Group

- task3_main_tf_policies.png

```
unique_id = aws_iam_user.10.unique_id
}
}
resource "aws_iam_group_policy_attachment" "developer_ec2_fullaccess" {
  group = aws_iam_group.developers.name
  policy_arn = "arn:aws:iam::aws:policy/AmazonEC2FullAccess"
}

resource "aws_iam_group_policy_attachment" "change_password" {
  group = aws_iam_group.developers.name
  policy_arn = "arn:aws:iam::aws:policy/IAMUserChangePassword"
}
```

- task3_terraform_apply.png

```

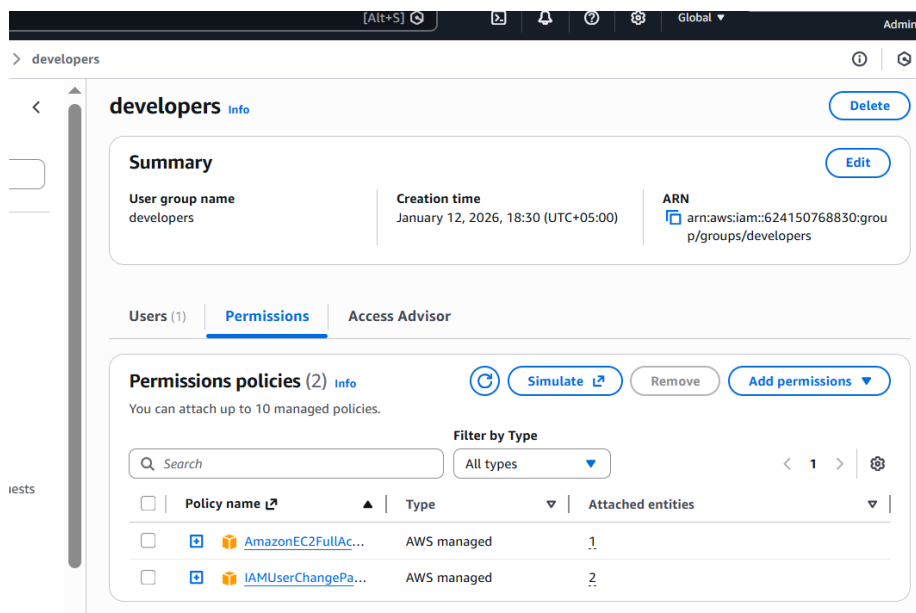
Apply complete! Resources: 2 added, 0 changed, 0 destroyed.

Outputs:

group_details = {
  "group_arn" = "arn:aws:iam::291506017390:group/groups/developers"
  "group_name" = "developers"
  "unique_id" = "AGPAUHX42RXDWDNXYBYRY"
}
user_details = {
  "unique_id" = "AIDAUHX42RXMMBWVDQJK"
  "user_arn" = "arn:aws:iam::291506017390:user/users/loadbalancer"
  "user_name" = "loadbalancer"
}
@mariamalik11 /workspaces/CC_Maria_076/lab13 (main) $

```

- task3_aws_console_policies.png



Task 4 — Create Login Profile for IAM User

- task4_variables_tf.png

```

@mariamalik11 /workspaces/CC_Maria_076/lab13 (main) $ cat variables.tf
variable "iam_password" {
  type        = string
  sensitive   = true
  default     = "1dontKnow"
}

```

- task4_create_login_script.png

```

GNU nano 7.2                                create-login-profile.sh
#!/usr/bin/env bash
set -e

USERNAME="$1"
PASSWORD="$2"

aws iam create-login-profile \
  --user-name "$USERNAME" \
  --password "$PASSWORD" \
  --password-reset-required || true

```

- task4_chmod_script.png

```

@mariamalik11 /workspaces/CC_Maria_076/lab13 (main) $ chmod +x create-login-profile.sh

```

- task4_main_tf_login_profile.png

```

resource "null_resource" "create_login_profile" {
  triggers = {
    password_hash = sha256(var.iam_password)
    user          = aws_iam_user.lb.name
  }

  depends_on = [aws_iam_user.lb]

  provisioner "local-exec" {
    command = "${path.module}/create-login-profile.sh ${aws_iam_user.lb.name} '${var.iam_password}'"
  }
}

```

- task4_terraform_apply.png

```

Plan: 1 to add, 0 to change, 0 to destroy.
null_resource.create_login_profile: Creating...
null_resource.create_login_profile: Provisioning with 'local-exec'...
null_resource.create_login_profile (local-exec): (output suppressed due to sensitive value in command)
null_resource.create_login_profile (local-exec): (output suppressed due to sensitive value in command)
null_resource.create_login_profile (local-exec): (output suppressed due to sensitive value in command)
null_resource.create_login_profile (local-exec): (output suppressed due to sensitive value in command)
null_resource.create_login_profile (local-exec): (output suppressed due to sensitive value in command)
null_resource.create_login_profile (local-exec): (output suppressed due to sensitive value in command)
null_resource.create_login_profile (local-exec): (output suppressed due to sensitive value in command)
null_resource.create_login_profile (local-exec): (output suppressed due to sensitive value in command)
null_resource.create_login_profile (local-exec): (output suppressed due to sensitive value in command)
null_resource.create_login_profile: Creation complete after 7s [id=1355112466946589324]

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.

```

- task4_aws_cli_verify.png

```

@SafaJahangir09 /workspaces/CC_Safa_056/Lab13 (main) $ aws iam get-login-profile --user-name loadbalancer
{
  "LoginProfile": {
    "UserName": "loadbalancer",
    "CreateDate": "2026-01-13T04:20:43+00:00",
    "PasswordResetRequired": true
  }
}

```

- task4_aws_console_login.png

IAM user sign in ⓘ

Account ID or alias [\(Don't have?\)](#)

291506017390

☐ Remember this account

IAM username

loadbalancer

Password

.....

☐ Show Password [Having trouble?](#)

Sign in

Sign in using root user email

[Create a new AWS account](#)

Task 5 — Generate Access Keys for IAM User

- task5_main_tf_access_keys.png

```
command = "${path.module}/create-login-profile.sh ${aws_iam
}
}
}

resource "aws_iam_access_key" "lb_access_key" {
  user = aws_iam_user.lb.name
}

output "access_key_id" {
  value = aws_iam_access_key.lb_access_key.id
}

output "access_key_secret" {
  value     = aws_iam_access_key.lb_access_key.secret
  sensitive = true
}

:wq
```

- task5_terraform_apply.png

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

Changes to Outputs:
  + access_key_id   = (known after apply)
  + access_key_secret = (sensitive value)
aws_iam_access_key.lb_access_key: Creating...
aws_iam_access_key.lb_access_key: Creation complete after 1s [id=AKIAZCUSI5S7HDDJJD6J]

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
```

- task5_terraform_output.png

```
@mariamalik11 /workspaces/CC_Maria_076/lab13 (main) $ terraform output
access_key_id = "AKIAZCUSI5S7HDDJJD6J"
access_key_secret = <sensitive>
group_details = {
  "group_arn" = "arn:aws:iam::624150768830:group/groups/developers"
  "group_name" = "developers"
  "unique_id" = "AGPAZCUSI5S7AOCKZMXY3"
}
```

- task5_tfstate_secret. Png

```
@mariamalik11 /workspaces/CC_Maria_076/lab13 (main) $ cat terraform.tfstate
{
  "access_key_secret": {
    "value": "6jTDuQi0350TPaRCwhzWQwGUHBkenlIRjZeNJy9Q",
    "type": "string",
    "sensitive": true
  },
  "group_details": {
    "value": {
      "group_arn": "arn:aws:iam::624150768830:group/groups/developers",
      "group_name": "developers",
      "unique_id": "AGPAZCUSI5S7AOCKZMXY3"
    }
  }
}
```

- task5_aws_console_access_keys. Png

The screenshot shows the AWS IAM console interface. On the left is a navigation sidebar with links like 'IAM', 'Users', 'loadbalancer', 'Entity and Access Management (IAM)', 'Search IAM', 'Dashboard', 'Access Management', 'Groups', 'Users', 'Roles', 'Policies', 'Identity providers', 'Account settings', 'Account access management', 'Temporary delegation requests', 'Access reports', 'Access Analyzer', and 'Resource analysis'. The main content area is titled 'IAM > Users > loadbalancer'. It shows a section for 'Access keys (1)' with a 'Create access key' button. Below this, there is a table with one entry: an access key with ID 'AKIAZCUSI5S7HDDJJD6J', description '-', status 'Active' (indicated by a green checkmark), last used 'None', last used region 'N/A', and last used service 'N/A'. An 'Actions' dropdown menu is visible next to the key ID.

Task 6 — Implement Terraform Remote State with S3

- task6_s3_bucket_create.png

Create bucket [info](#)

Buckets are containers for data stored in S3.

General configuration

AWS Region

Middle East (UAE) me-central-1

Bucket name [info](#)

myapp-s3-bucket-056

Bucket names must be 3 to 63 characters and unique within the global namespace. Bucket names must also begin and end with a letter or number. Valid characters are a-z, 0-9, periods (.), and hyphens (-). [Learn more](#)

Copy settings from existing bucket - optional

Only the bucket settings in the following configuration are copied.

[Choose bucket](#)

Format: s3://bucket/prefix

Object Ownership [info](#)

Control ownership of objects written to this bucket from other AWS accounts and the use of access control lists (ACLs). Object ownership determines who can specify access to objects.

Object Ownership

☒ ACLs disabled (recommended)

All objects in this bucket are owned by this account. Access to this bucket and its objects is specified using only policies.

☐ ACLs enabled

Objects in this bucket can be owned by other AWS accounts. Access to this bucket and its objects can be specified using ACLs.

Object Ownership

Bucket owner enforced

Block Public Access settings for this bucket

Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to ensure that public access to this bucket and its objects is blocked, turn on Block all public access. These settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to this bucket or objects within, you can customize the individual settings below to suit your specific storage use cases. [Learn more](#)

☒ Block all public access

Turning this setting on is the same as turning on all four settings below. Each of the following settings are independent of one another.

☐ Block public access to buckets and objects granted through new access control lists (ACLs)

S3 will block public access permissions applied to newly added buckets or objects, and prevent the creation of new public access ACLs for existing buckets and objects. This setting doesn't change any existing permissions that allow public access to S3 resources using ACLs.

☐ Block public access to buckets and objects granted through any access control lists (ACLs)

S3 will ignore all ACLs that grant public access to buckets and objects.

☐ Block public access to buckets and objects granted through new public bucket or access point policies

S3 will block new bucket and access point policies that grant public access to buckets and objects. This setting doesn't change any existing policies that allow public access to S3 resources.

☐ Block public and cross-account access to buckets and objects through any public bucket or access point policies

S3 will ignore public and cross-account access for buckets or access points with policies that grant public access to buckets and objects.

Bucket Versioning

Versioning is a means of keeping multiple variants of an object in the same bucket. You can use versioning to preserve, retrieve, and restore every version of every object stored in your Amazon S3 bucket. With versioning, you can easily recover from both unintended user actions and application failures. [Learn more](#)

Bucket Versioning

☐ Disable

☒ Enable

- task6_s3_bucket_versioning.png

The screenshot shows the AWS Management Console interface for the bucket 'myapp-s3-bucket-056'. The top navigation bar includes the AWS logo, a search bar, and account information for 'Middle East (UAE)' with account ID '6241-5076-8830'. The breadcrumb trail indicates the path: Amazon S3 > Buckets > myapp-s3-bucket-056. The main content area has tabs for 'Objects', 'Metadata', 'Properties' (selected), 'Permissions', 'Metrics', 'Management', and 'Access Points'. Under the 'Properties' tab, there are three sections: 'Bucket overview' showing the AWS Region as 'Middle East (UAE) me-central-1', the Amazon Resource Name (ARN) as 'arn:aws:s3::myapp-s3-bucket-056', and the creation date as 'January 13, 2026, 09:47:24 (UTC+05:00)'; 'Bucket Versioning' showing the status as 'Enabled' with an 'Edit' button; and 'Multi-factor authentication (MFA) delete' showing the status as 'Disabled'. Below these is a section for 'Bucket ABAC' with an 'Edit' button. The bottom of the console shows a partial view of the 'Objects' tab.

- task6_main_tf_backend.png

```

terraform {
  backend "s3" {
    bucket = "myapp-s3-bucket-056"
    key    = "myapp/terraform.tfstate"
    region = "me-central-1"
    encrypt = true
    use_lockfile = true
  }
}

provider "aws" {

```

- task6_terraform_init_migrate.png

```

@mariamalik11 @ /workspaces/CC_Maria_076/lab13 (main) $ terraform init -migrate-state
Initializing the backend...
Do you want to copy existing state to the new backend?
  Pre-existing state was found while migrating the previous "local" backend to the
  newly configured "s3" backend. No existing state was found in the newly
  configured "s3" backend. Do you want to copy this state to the new "s3"
  backend? Enter "yes" to copy and "no" to start with an empty state.

  Enter a value: yes

Successfully configured the backend "s3"! Terraform will automatically
use this backend unless the backend configuration changes.
Initializing provider plugins...
- Reusing previous version of hashicorp/aws from the dependency lock file
- Reusing previous version of hashicorp/null from the dependency lock file
- Using previously-installed hashicorp/aws v6.28.0
- Using previously-installed hashicorp/null v3.2.4

Terraform has been successfully initialized!

```

- task6_terraform_apply.png

```

aws_iam_user_group_membership.lb_membership: Refreshing state... [id=terraform-20260112140940444400000001]
aws_iam_access_key.lb_access_key: Refreshing state... [id=AKIAZCUSI5S7HDDJJD6J]

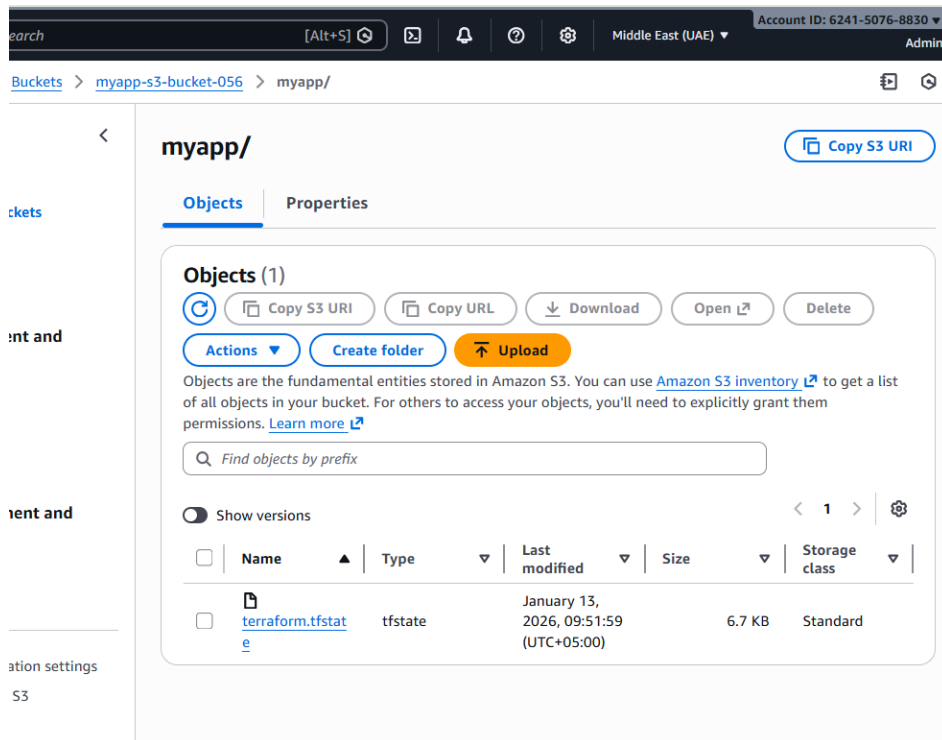
No changes. Your infrastructure matches the configuration.

Terraform has compared your real infrastructure against your configuration and found no differences, so no
changes are needed.

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

```

- task6_s3_tfstate_file.png



- task6_local_state_backup.png

```
@mariamalik11 /workspaces/CC_Maria_076/lab13 (main) $ ls -la terraform.tfstate*
-rw-rw-rw- 1 codespace codespace 0 Jan 13 04:51 terraform.tfstate
-rw-rw-rw- 1 codespace codespace 6882 Jan 13 04:51 terraform.tfstate.backup
```

- task6_terraform_destroy.png

```
aws_iam_group_policy_attachment.change_password: Destruction complete after 0s
aws_iam_group_policy_attachment.developer_ec2_fullaccess: Destruction complete after 0s
aws_iam_user_group_membership.lb_membership: Destruction complete after 1s
aws_iam_user.lb: Destroying... [id=loadbalancer]
aws_iam_group.developers: Destroying... [id=developers]
aws_iam_group.developers: Destruction complete after 0s
aws_iam_user.lb: Destruction complete after 3s

Destroy complete! Resources: 7 destroyed.
```

- task6_s3_tfstate_destroyed. Png

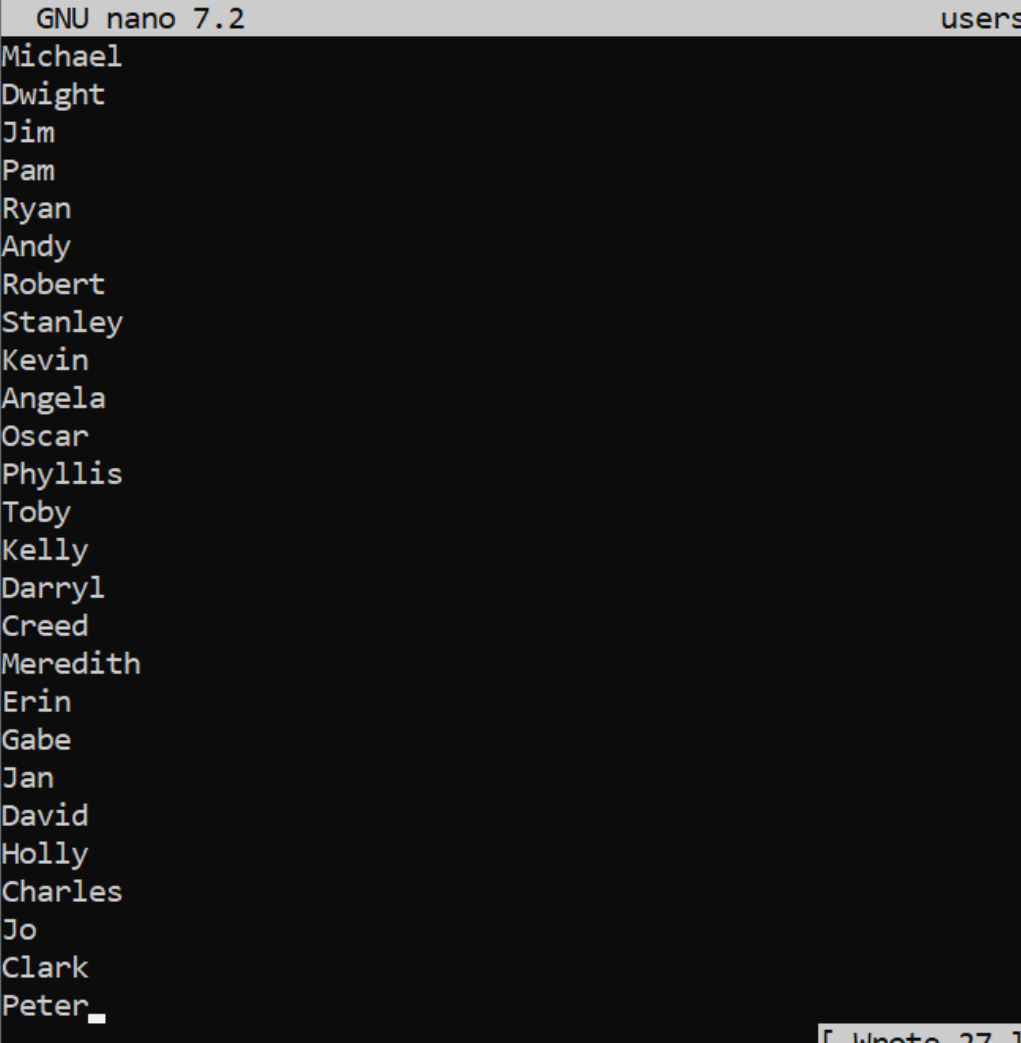
```
pretty-print {}
{
  "version": 4,
  "terraform_version": "1.14.3",
  "serial": 2,
  "lineage": "46f2a50a-befd-1786-5486-911df1a43971",
  "outputs": {},
  "resources": [],
  "check_results": null
}
```

Task 7 — Create Multiple Users from CSV File

- task7_locals_tf.png

```
@mariamalik11 /workspaces/CC_Maria_076/lab13 (main) $ vim locals.tf
@mariamalik11 /workspaces/CC_Maria_076/lab13 (main) $ cat locals.tf
locals {
  users = csvdecode(file("users.csv"))
}
```

- task7_users_csv.png



```
GNU nano 7.2 users
Michael
Dwight
Jim
Pam
Ryan
Andy
Robert
Stanley
Kevin
Angela
Oscar
Phyllis
Toby
Kelly
Darryl
Creed
Meredith
Erin
Gabe
Jan
David
Holly
Charles
Jo
Clark
Peter_
```

- task7_main_tf_multiple_users.png


```

@mar1amalik11 @ /workspaces/CC_Maria_076/lab13 (main) $ terraform output
all_access_key_secrets = <sensitive>
all_users_details = {
  "Andy" = {
    "access_key_id" = "AKIAZCUSI5S7DTWGSAXQ"
    "user_arn" = "arn:aws:iam::624150768830:user/users/Andy"
    "user_unique_id" = "AIDAZCUSI5S7EU66BIZMN"
  }
  "Angela" = {
    "access_key_id" = "AKIAZCUSI5S7JFJMRVYV6"
    "user_arn" = "arn:aws:iam::624150768830:user/users/Angela"
    "user_unique_id" = "AIDAZCUSI5S7MJJHZDLXE"
  }
  "Charles" = {
    "access_key_id" = "AKIAZCUSI5S7DCMWLCW2"
    "user_arn" = "arn:aws:iam::624150768830:user/users/Charles"
    "user_unique_id" = "AIDAZCUSI5S7II2DWP4H"
  }
  "Clark" = {
    "access_key_id" = "AKIAZCUSI5S7CF4EMTBO"
    "user_arn" = "arn:aws:iam::624150768830:user/users/Clark"
    "user_unique_id" = "AIDAZCUSI5S7DOBR3VI4X"
  }
}

```

- task7_tfstate_secrets. Png

```

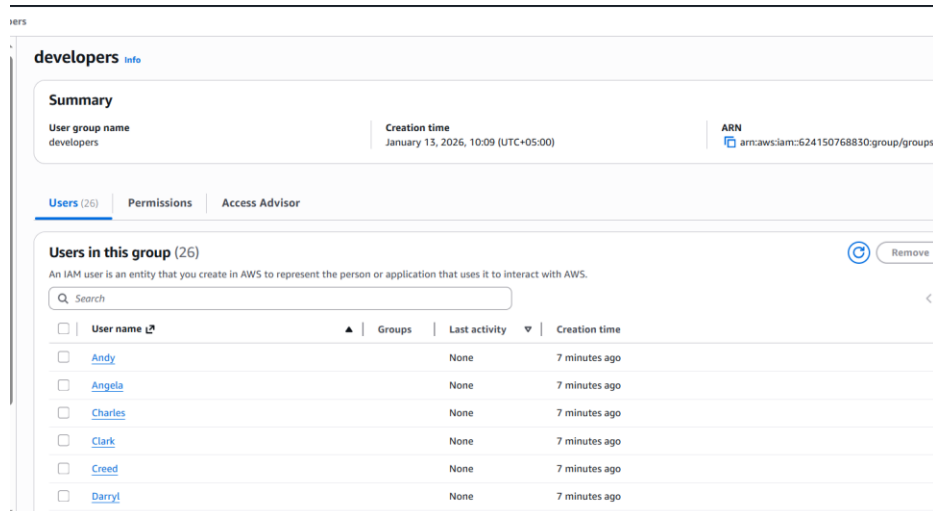
@mar1amalik11 @ /workspaces/CC_Maria_076/lab13 (main) $ terraform state pull | grep -A 5 "all_access_key_secrets"
"all_access_key_secrets": {
  "value": {
    "Andy": "xSH56b/f9r128TKyZkVHLqBx80+HCCJSA+bDB/1A",
    "Angela": "EQVFQJetu7FkIEdaVdNbt21wZ8xdm73flaXug7dP",
    "Charles": "vNbQvIth16w3qsLVSqLSXWL8nLvJQIbEineNCise",
    "Clark": "bY8ye5Ya762nEcnuEK2Z8UmCrGga2q6NuOExsTTz",

```

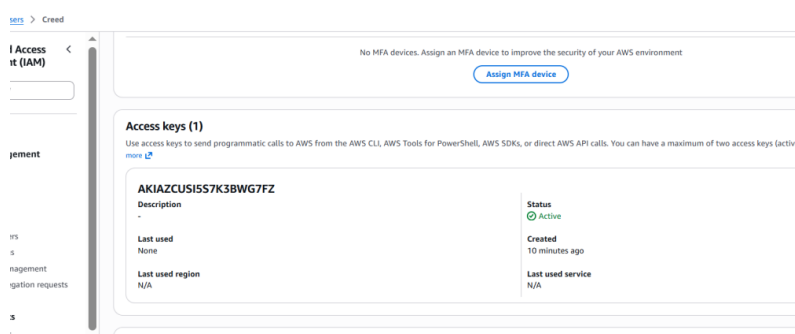
- task7_aws_console_all_users. Png

| | User name | Path | Group | Last activity | MFA | Password age | Console last sign-in | Access key ID | Acti |
|--------------------------|-------------------------|---------|-------|---------------|-----|--------------|----------------------|--------------------------|------|
| <input type="checkbox"/> | Admin | / | 0 | 5 minutes ago | - | 15 days | 33 minutes ago | Active - AKIAZCUSI5S7... | 7 |
| <input type="checkbox"/> | Andy | /users/ | 1 | - | - | 4 minutes | - | Active - AKIAZCUSI5S7... | 7 |
| <input type="checkbox"/> | Angela | /users/ | 1 | - | - | 4 minutes | - | Active - AKIAZCUSI5S7... | 7 |
| <input type="checkbox"/> | Charles | /users/ | 1 | - | - | 4 minutes | - | Active - AKIAZCUSI5S7... | 7 |
| <input type="checkbox"/> | Clark | /users/ | 1 | - | - | 4 minutes | - | Active - AKIAZCUSI5S7... | 6 |
| <input type="checkbox"/> | Creed | /users/ | 1 | - | - | 4 minutes | - | Active - AKIAZCUSI5S7... | 6 |
| <input type="checkbox"/> | Darryl | /users/ | 1 | - | - | 4 minutes | - | Active - AKIAZCUSI5S7... | 7 |
| <input type="checkbox"/> | David | /users/ | 1 | - | - | 4 minutes | - | Active - AKIAZCUSI5S7... | 6 |
| <input type="checkbox"/> | Dwight | /users/ | 1 | - | - | 4 minutes | - | Active - AKIAZCUSI5S7... | 6 |
| <input type="checkbox"/> | Erin | /users/ | 1 | - | - | 4 minutes | - | Active - AKIAZCUSI5S7... | 7 |
| <input type="checkbox"/> | Gabe | /users/ | 1 | - | - | 4 minutes | - | Active - AKIAZCUSI5S7... | 6 |
| <input type="checkbox"/> | Holly | /users/ | 1 | - | - | 4 minutes | - | Active - AKIAZCUSI5S7... | 6 |

- task7_aws_console_group_members. Png



- task7_aws_console_user_access_key.png



- task7_s3_tfstate_multiple_users.png

```
{
  "version": 4,
  "terraform_version": "1.14.3",
  "serial": 5,
  "lineage": "46f2a50a-befd-1786-5486-911df1a43971",
  "outputs": {
    "all_access_key_secrets": {
      "value": {
        "Andy": "xSH56b/f9r128TKyZkVHLqBx80+HCCJSA+bDB/1A",
        "Angela": "EQVFQJetu7FkIEdaVdNbt21wZ8xdm73flaXug7dP",
        "Charles": "vNbQvIth16w3qsLVSq1SXWL8nLvJQIbEiNeNCise",
        "Clark": "bY8ye5Ya762nEcnuEK2Z8UmCrgGa2q6NuOExsTTZ",
        "Creed": "LhNNTtIgCCIHwToBUP/w8Y7WDRubMGzvdF3JOLiQ",
        "Darryl": "+TIBY0x1o4VJaA54JESfsqsMG+168fun2EODLzR+",
        "David": "/NjUr5QyVoxBRuYc0yvJf+HCXYx+u1I1AU04DmTb",
        "Dwight": "1Ca+g3uuSA+Pb7T3ubaEnDeEEKjTJ1G90eNgsJge",
        "Erin": "DPK9wN03vios1Un/Gu+MSOE7tXmhcpwsq1sSFqy",
        "Gabe": "omPpczXRMWqN0rTPifxYRsZ8u1/RyUXk4nkH/f5L",
        "Holly": "tsR00ybcSvx4nD/5MXotSwNnhvIM/Uw3bwNZUNVq",
        "Jan": "K6SN+yTygBK9qtvrBm9Iav2MhU0by2Wtcv1bQQ2",
        "Jim": "Xe9oyCqW+eblEUEqD3cDZC4NXEm3aMQMcyDt/Hbx",
        "Jo": "YVe4Ljr2hkFx6dmjxtzkxj2pshkF4jwgmkvdaOA",
        "Kelly": "iaQ3HM1RZkyIFRkByNucoGiL2dqeQBmFn0vJGcT",
        "Kevin": "Aedm3PKPd1EBQGe1C5kzGrRrUyRF1oTvyl0B1z4vp",
        "Meredith": "a61ZiBMxF20gMeI2Z1C50ThLur6UMXUt8AxRI71h",
        "Michael": "PV5sO2R+oP8B19Oenn0uShc3HyNGkQuimpUDq0gn",
        "Oscar": "z3VtCwkSvTo3k23XZA5hmtOgZbsgWiUwoY5Xmk55",
        "Pam": "Miw9nmV1XmMUfXQxwmmQc6FwH+XcwIFINCGs4P0S",
        "Peter": "YkNknpcol4kk04UR2iv25ZGIQ6S1gysWQHGWn1w",
        "Phyllis": "f86kJun03jR0hpYu+0Femj0V/4Q8/DT9+FBF2sG5",
        "Robert": "vxyOK0beJ7hP9mGHTdXpZX0Us/9JazR+K2R0CR5a",
        "Rvan": "10pFHRRpapOvgveJUG4fxtvWGeiPRvL54pdLmio"
      }
    }
  }
}
```

Cleanup

- cleanup_destroy_complete.png

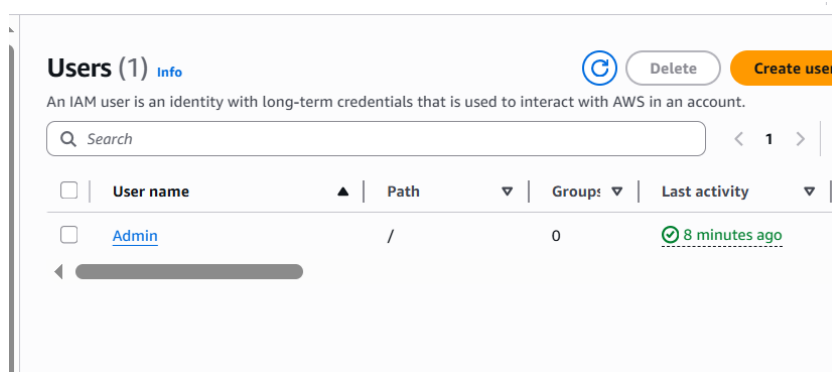
```

aws_iam_user.users["Clark"].Destroying... [id=Clark]
aws_iam_user.users["Jan"]: Destruction complete after 8s
aws_iam_user.users["Andy"]: Destroying... [id=Andy]
aws_iam_user.users["Jo"]: Destruction complete after 2s
aws_iam_user.users["Gabe"]: Destruction complete after 8s
aws_iam_user.users["David"]: Destruction complete after 3s
aws_iam_user.users["Creed"]: Destruction complete after 4s
aws_iam_user.users["Michael"]: Destruction complete after 5s
aws_iam_user.users["Holly"]: Destruction complete after 4s
aws_iam_user.users["Andy"]: Destruction complete after 2s
aws_iam_user.users["Oscar"]: Destruction complete after 5s
aws_iam_user.users["Pam"]: Destruction complete after 4s
aws_iam_user.users["Clark"]: Destruction complete after 5s

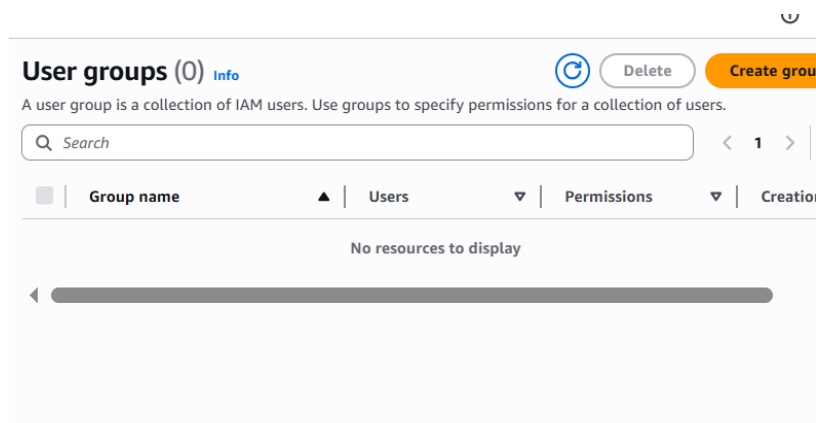
Destroy complete! Resources: 107 destroyed.

```

- cleanup_aws_console_users_deleted.png



- cleanup_aws_console_group_deleted.png



- cleanup_s3_empty_state.png

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Error>
  <Code>AccessDenied</Code>
  <Message>Access Denied</Message>
  <RequestId>FJJH1VJEQ1ZCP910</RequestId>
  <HostId>XpGVya1jGgR52SDDhZi6HTAbco2VmeVZ6u5pTQbk080MB525CPjZM9E3iuJbj7/9ACP7c2fN+A3oas4z66VsgI+N9+FTIaES</HostId>
</Error>

```

- cleanup_final_files.png


```
@mariamalik11 ▢ /workspaces/CC_Maria_076/lab13 (main) $ ls -la
total 65324
drwxrwxrwx+  4 codespace root          4096 Jan 13 05:10 .
drwxrwxrwx+ 17 codespace root          4096 Jan 12 14:05 ..
drwxr-xr-x+  3 codespace codespace     4096 Jan 13 04:51 .terraform
-rw-r--r--   1 codespace codespace     2422 Jan 13 04:20 .terraform.lock.hcl
-rw-rw-rw-   1 codespace root           0 Jan 12 13:05 README.md
drwxr-xr-x+  3 codespace codespace     4096 Jan  9 19:14 aws
-rw-rw-rw-   1 codespace codespace 66842323 Jan 12 13:21 awscliv2.zip
-rwxrwxrwx   1 codespace codespace      423 Jan 13 04:17 create-login-profile.sh
-rw-rw-rw-   1 codespace codespace       50 Jan 13 05:00 locals.tf
-rw-rw-rw-   1 codespace codespace     2509 Jan 13 05:10 main.tf
-rw-rw-rw-   1 codespace codespace       0 Jan 13 04:51 terraform.tfstate
-rw-rw-rw-   1 codespace codespace     6882 Jan 13 04:51 terraform.tfstate.backup
-rw-rw-rw-   1 codespace codespace      167 Jan 13 05:02 users.csv
-rw-rw-rw-   1 codespace codespace      150 Jan 13 04:15 variables.tf
```