Assignment: Use Terraform's local provider to create two files:

- 1) student_info.txt → should contain your name, course, and current date.
- 2) config.json → should contain fixed JSON data (project, status, version).

Bonus: Use random provider to generate a nickname and add it inside student_info.txt.

Solution:

Required Providers

- local for creating files
- random for generating random nicknames
- time for getting current date

>> Under the "required_providers" block , the source and version of the provider is added

main.tf

```
# Terraform configuration
terraform {
required_providers {
 local = {
  source = "hashicorp/local"
  version = "2.4.0"
 }
 random = {
  source = "hashicorp/random"
  version = "3.5.1"
 }
 time = {
  source = "hashicorp/time"
  version = "0.9.1"
 }
}
```

Here the resource "random_pet" is called.

We can use other resources like random_string / random_byte etc , but those would not provide a meanigful name as a word.

'length' can be any number from 1 and defines the number of words the random name is required of.

'seperator' is an optional variable. By default '-' is considered and is used as the seperator of the random name words generated.

```
resource "random_pet" "student_nickname" {
    length = 3
```

```
}
# Get current timestamp
resource "time_static" "current_time" {}
# Convert UTC to IST (UTC +5:30)
locals {
ist_time = formatdate("YYYY-MM-DD hh:mm:ss", timeadd(time_static.current_time.rfc3339, "5h30m"))
}
# Create student_info.txt file
#time_static.current_time.rfc3339 - RFC3339 is a standard format that looks like:
#2024-01-15T14:30:45Z
   | | | Z = UTC timezone (Greenwich Mean Time)
    45 seconds
   | | L______30 minutes
   14 hours (2 PM)
# | ______ 15th day
           ______January 2024
resource "local_file" "student_info" {
filename = "student_info.txt"
 content = <<-EOT
Name: Rajesh Bhaskaran
Course: Terraform Assignment
Current Date: ${time_static.current_time.rfc3339}
Current Date (IST): ${local.ist_time}
Nickname: ${random_pet.student_nickname.id}
 EOT
}
# Create config.json file
resource "local_file" "config_json" {
 filename = "config.json"
 content = jsonencode({
 project = "Terraform Assignment"
 status = "completed"
 version = "1.0.0"
 created = time_static.current_time.rfc3339
```

```
})
}
# Output the generated values
output "generated_nickname" {
value = random_pet.student_nickname.id
description = "The randomly generated nickname"
}
output "current_timestamp" {
value = time_static.current_time.rfc3339
 description = "The current timestamp"
}
output "files_created" {
value = [
 local_file.student_info.filename,
 local_file.config_json.filename
 description = "List of files created"
Snapshot of the code tried in Visual Studio Code
```

```
✓ TERRAFORM 🖺 🛱 🖰 🗗
                             Assignment_Local > 🍟 main.tf > ધ resource "local_file" "student_info" > 🕟 content
> .terraform
                                    terraform {
> 24Sep
                                    required_p object s {

∨ Assignment_Local

                                      local = {
 > .terraform

≡ .terraform.lock.hcl
                                          version = "2.4.0"
                                     random = {
   source = "hashicorp/random"
   version = "3.5.1"
 {} config.json

≡ student_info.txt

 {} terraform.tfstate

    ■ terraform.tfstate.backup

{} terraform.tfstate
                                          version = "0.9.1"
                                    resource "random_pet" "student_nickname" {
                              PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
                              current_timestamp = "2025-10-06T16:56:02Z"
                              files_created = [
                                "student_info.txt",
                                "config.json",
                              generated_nickname = "deeply-meet-hermit"
OUTLINE
                              PS C:\Users\bhaskaranr\Downloads\Terraform\Assignment_Local>
```

terraform init

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\bhaskaranr\Downloads\Terraform\Assignment_Local> terraform init Initializing the backend...

Initializing provider plugins...

- Reusing previous version of hashicorp/time from the dependency lock file
- Reusing previous version of hashicorp/local from the dependency lock file
- Reusing previous version of hashicorp/random from the dependency lock file
- Using previously-installed hashicorp/time v0.9.1
- Using previously-installed hashicorp/local v2.4.0
- Using previously-installed hashicorp/random v3.5.1

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.

terraform plan

```
PS C:\Users\bhaskaranr\Downloads\Terraform\Assignment_Local> terraform plan
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:
  # local_file.config_json will be created
+ resource "local_file" "config_json" {
      + content
                              = (known after apply)
      + content_base64sha256 = (known after apply)
      + content_base64sha512 = (known after apply)
                           = (known after apply)
      + content_md5
      + content_sha1
                              = (known after apply)
                            = (known after apply)
= (known after apply)
      + content_sha256
      + content_sha512
      + directory_permission = "0777"
      + file_permission = "0777"
                              = "config.json"
      + filename
                               = (known after apply)
      + id
  # local_file.student_info will be created
  + resource "local_file" "student_info" {
                              = (known after apply)
      + content
      + content_base64sha256 = (known after apply)
      + content_base64sha512 = (known after apply)
                          = (known after apply)
      + content_md5
+ content_sha1
                              = (known after apply)
                            = (known after apply)
= (known after apply)
      + content_sha256
      + content_sha512
      + directory_permission = "0777"
      + file_permission = "0777"
                               = "student_info.txt"
      + filename
                               = (known after apply)
      + id
  # random pet.student nickname will be created
  + resource "random_pet" "student_nickname" {
      + id = (known after apply)
+ length = 3
+ separator = "-"
  # time_static.current_time will be created
+ resource "time_static" "current_time" {
      + day
                = (known after apply)
                 = (known after apply)
       + hour
       + id
                  = (known after apply)
      + minute = (known after apply)
      + month = (known after apply)
       + rfc3339 = (known after apply)
       + second = (known after apply)
      + unix = (known after apply)
+ year = (known after apply)
       + year
                 = (known after apply)
Plan: 4 to add, 0 to change, 0 to destroy.
Changes to Outputs:
  + current_timestamp = (known after apply)
  + files created
```

+ "student_info.txt",
+ "config.json",

+ generated_nickname = (known after apply)

terraform apply

```
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
random_pet.student_nickname: Creating...
random_pet.student_nickname: Creation complete after 0s [id=early-mighty-guinea]
time_static.current_time: Creating...
time_static.current_time: Creation complete after 0s [id=2025-10-07T09:01:02Z]
local file.student info: Creating...
local_file.config_json: Creating...
local_file.student_info: Creation complete after 0s [id=6ce365bee221c3cc34b0282108c03828c7242474]
local_file.config_json: Creation complete after 0s [id=56f00da6b6d8174c66945cd7ce8151f9c64f6369]
Apply complete! Resources: 4 added, 0 changed, 0 destroyed.
Outputs:
current_timestamp = "2025-10-07T09:01:02Z"
files_created = [
  "student_info.txt",
  "config.json",
generated_nickname = "early-mighty-guinea"
```

Output files:

student_info.txt

```
EXPLORER
                                main.tf

≡ student_info.txt ×

TERRAFORM
                                   1 Name: Rajesh Bhaskaran
> .terraform
                                       Course: Terraform Assignment
> 24Sep
                                       Current Date (UTC): 2025-10-07T09:01:02Z
Current Date (IST): 2025-10-07 14:31:02

✓ Assignment_Local

> .terraform
                                        Nickname: early-mighty-guinea

    .terraform.lock.hcl
    .

{} config.json
🍟 main.tf

    ■ terraform.tfstate.backup

> Day-10-20251005T083438Z..
```

config.json

```
EXPLORER
                              main.tf

■ student_info.txt

                                                                        {} config.json ×
TERRAFORM
                               Assignment_Local > {} config.json > ...
                                 1 {"created":"2025-10-07T09:01:02Z","project":"Terraform Assignment","status":"completed","version":"1.0.0"}
> .terraform

✓ Assignment_Local

 > .terraform

    .terraform.lock.hcl

{} config.json
 main.tf

    student_info.txt

 {} terraform.tfstate

    terraform.tfstate.backuj
```