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
```

```hcl
}
# 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
#|    |  | └──────────── 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"
}
```
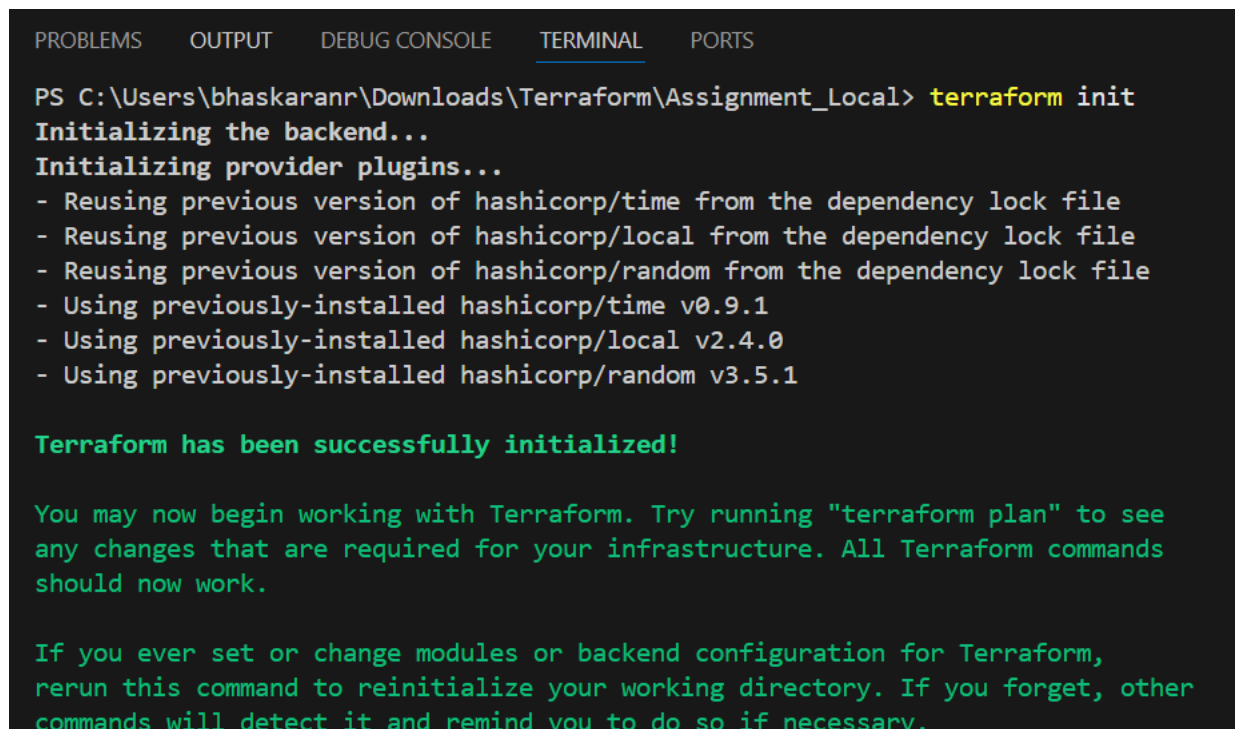Snapshot of the code tried in Visual Studio Code
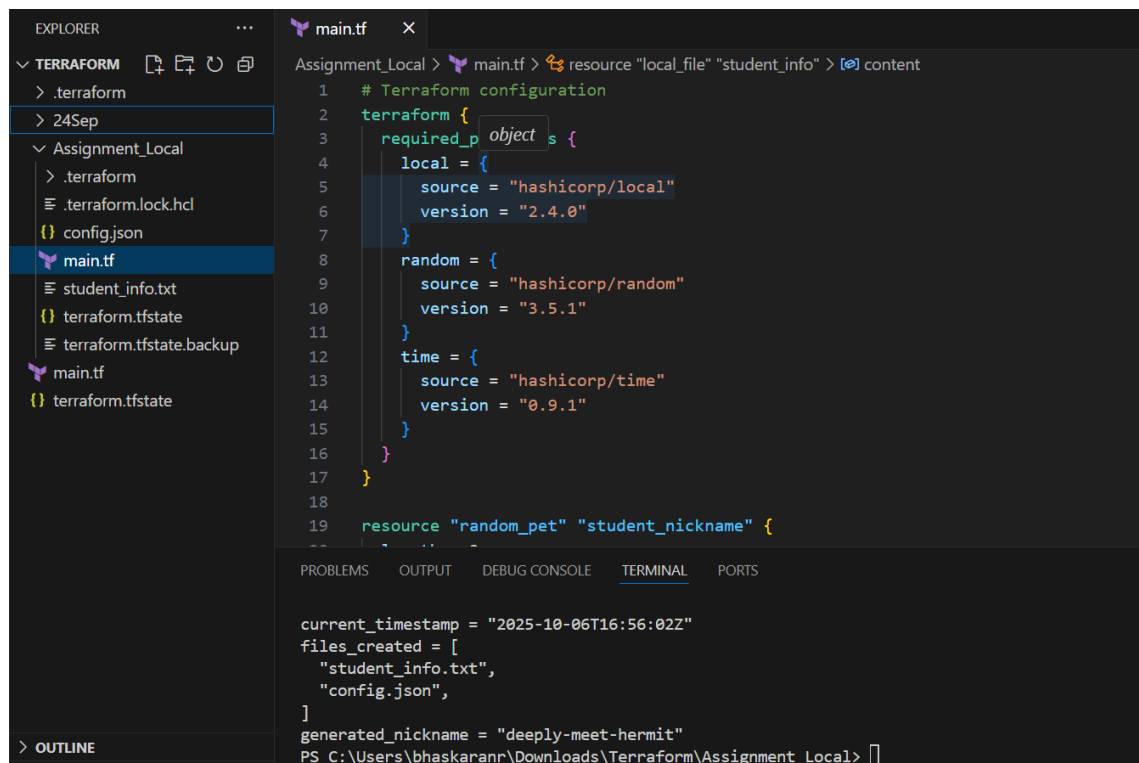
terraform init

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)
      + content_md5          = (known after apply)
      + content_sha1         = (known after apply)
      + content_sha256       = (known after apply)
      + content_sha512       = (known after apply)
      + directory_permission = "0777"
      + file_permission      = "0777"
      + filename             = "config.json"
      + id                   = (known after apply)
    }

  # local_file.student_info will be created
  + resource "local_file" "student_info" {
      + content              = (known after apply)
      + content_base64sha256 = (known after apply)
      + content_base64sha512 = (known after apply)
      + content_md5          = (known after apply)
      + content_sha1         = (known after apply)
      + content_sha256       = (known after apply)
      + content_sha512       = (known after apply)
      + directory_permission = "0777"
      + file_permission      = "0777"
      + filename             = "student_info.txt"
      + id                   = (known after apply)
    }

  # 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)
      + hour   = (known after apply)
```

```
      + 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)
    }

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"
```
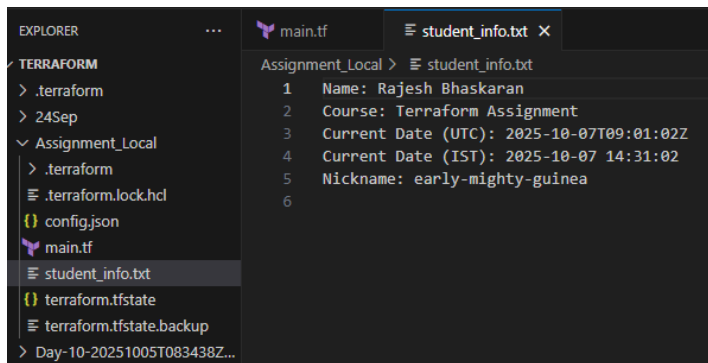
Output files :

student_info.txt

config.json