Lesson 09 Demo 03

Generating an SSH Key with a Terraform TLS Provider

Objective: To generate an SSH key with the Terraform TLS provider using the latest version and configurations for secure access to your cloud infrastructure

Tools required: VS Code and Linux terminal

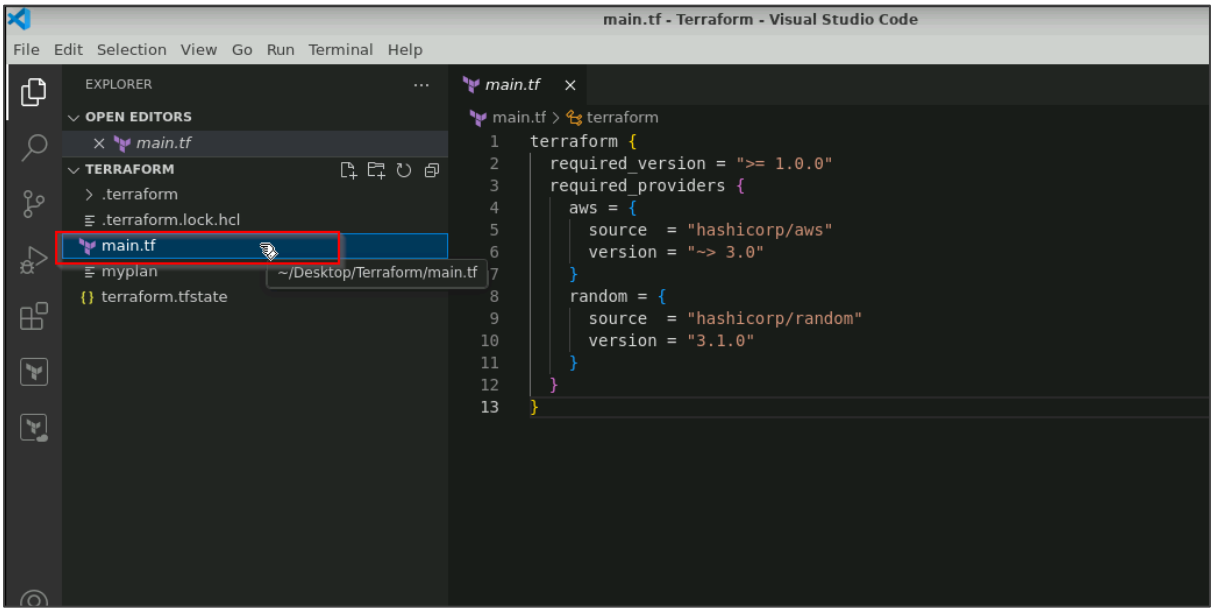
Prerequisites: Refer Demo 02_Running_Multiple_Providers_in_Terraform

Steps to be followed:

1. Check the version of the installed providers
2. Add the Terraform TLS provider configuration in the main.tf file
3. Initialize the Terraform configuration file
4. Update the main.tf file with a TLS certificate configuration block
5. Execute the apply command and validate the SSH key

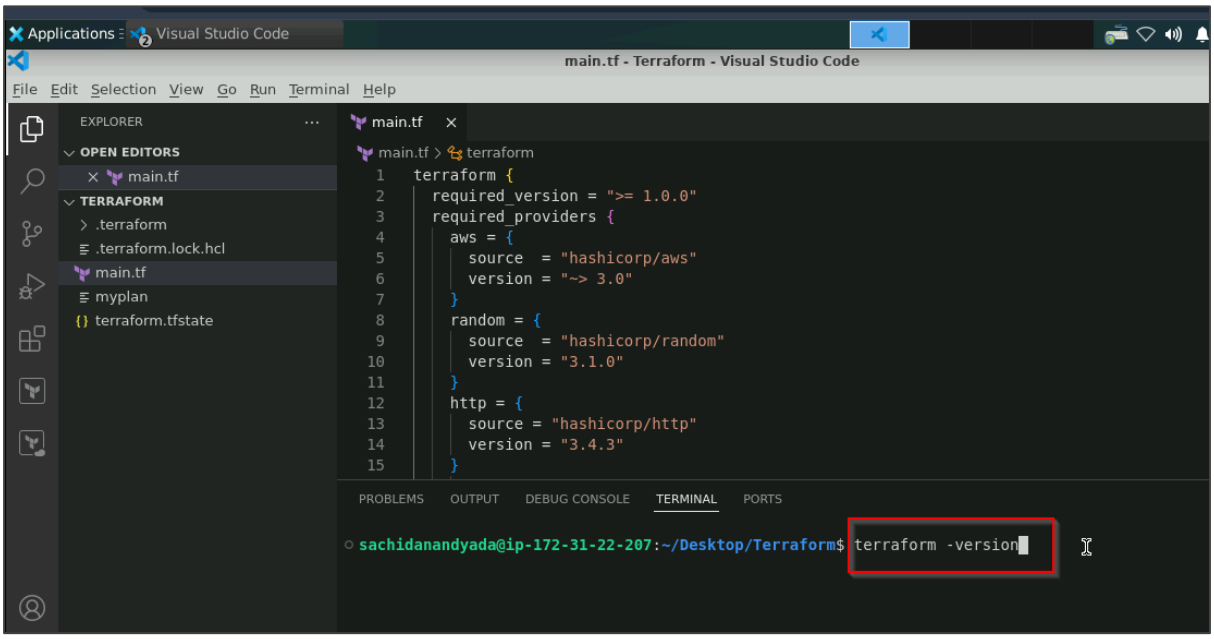
Step 1: Check the version of the installed providers

1.1 Open the **main.tf** file previously created

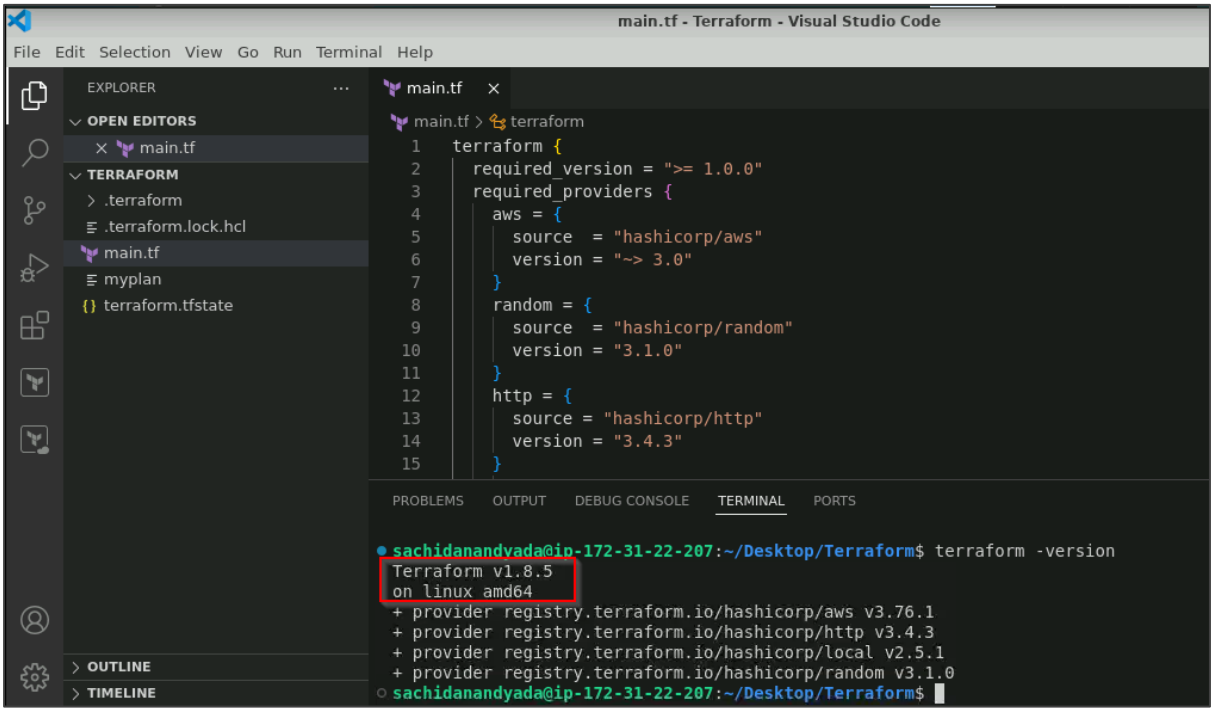


1.2 Open the terminal and execute the following command to check the Terraform version:

terraform -version



The latest installed version of the Terraform is available.

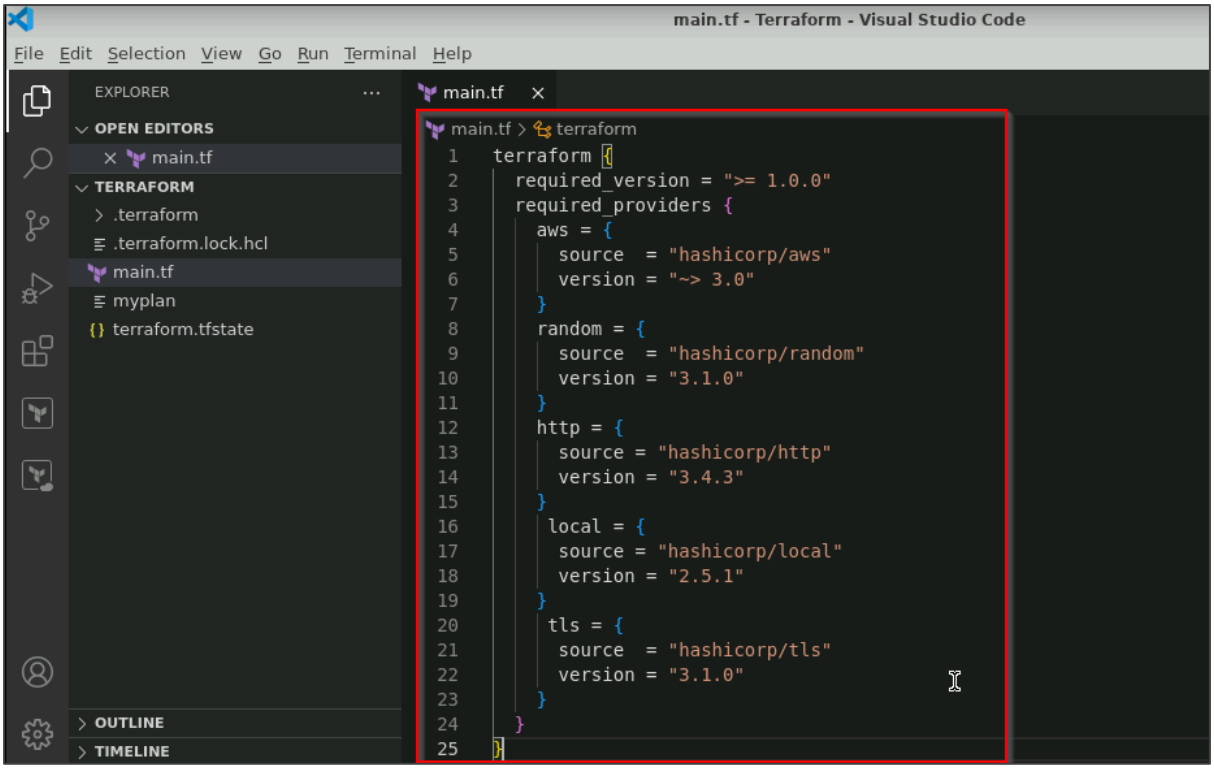


Step 2: Add the Terraform TLS provider configuration in the main.tf file

2.1 Open the **main.tf** file previously created, enter the configuration code given below, and save the file:

```
terraform {
  required_version = ">= 1.0.0"
  required_providers {
    aws = {
      source = "hashicorp/aws"
    }
    http = {
      source  = "hashicorp/http"
      version = "2.1.0"
    }
    random = {
      source  = "hashicorp/random"
      version = "3.1.0"
    }
    local = {
      source  = "hashicorp/local"
      version = "2.1.0"
    }
    tls = {
      source  = "hashicorp/tls"
      version = "3.1.0"
    }
  }
}
```

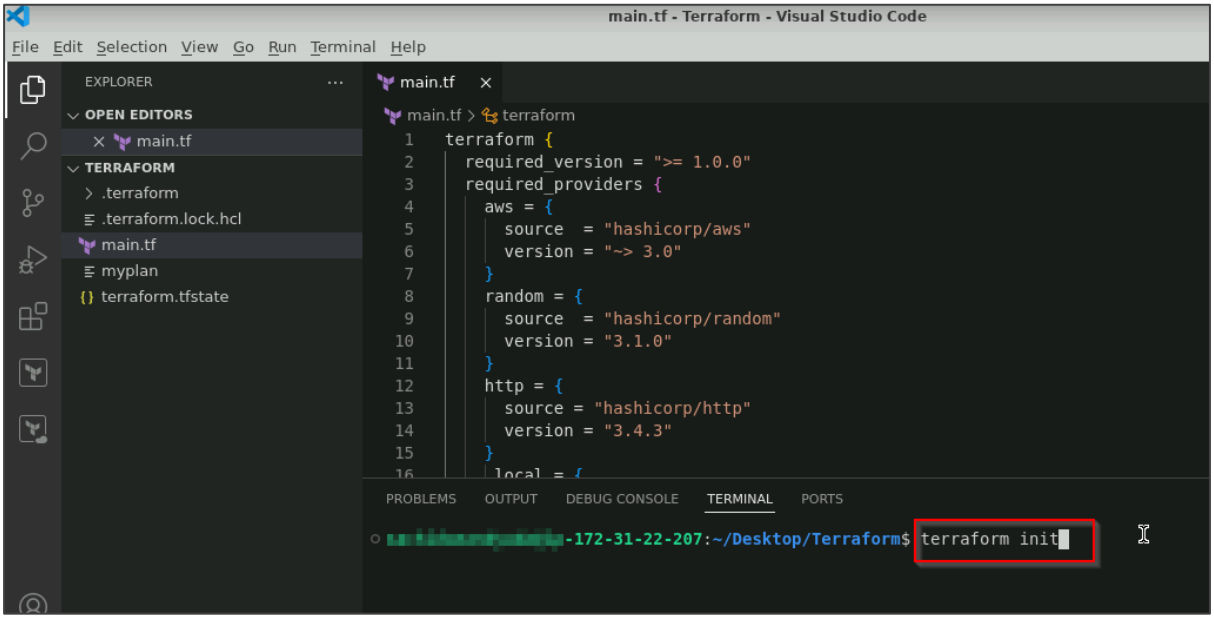
Note: You can get the configuration code of any Terraform provider from the official website of **HashiCorp Terraform** on the **Terraform Registry** page.

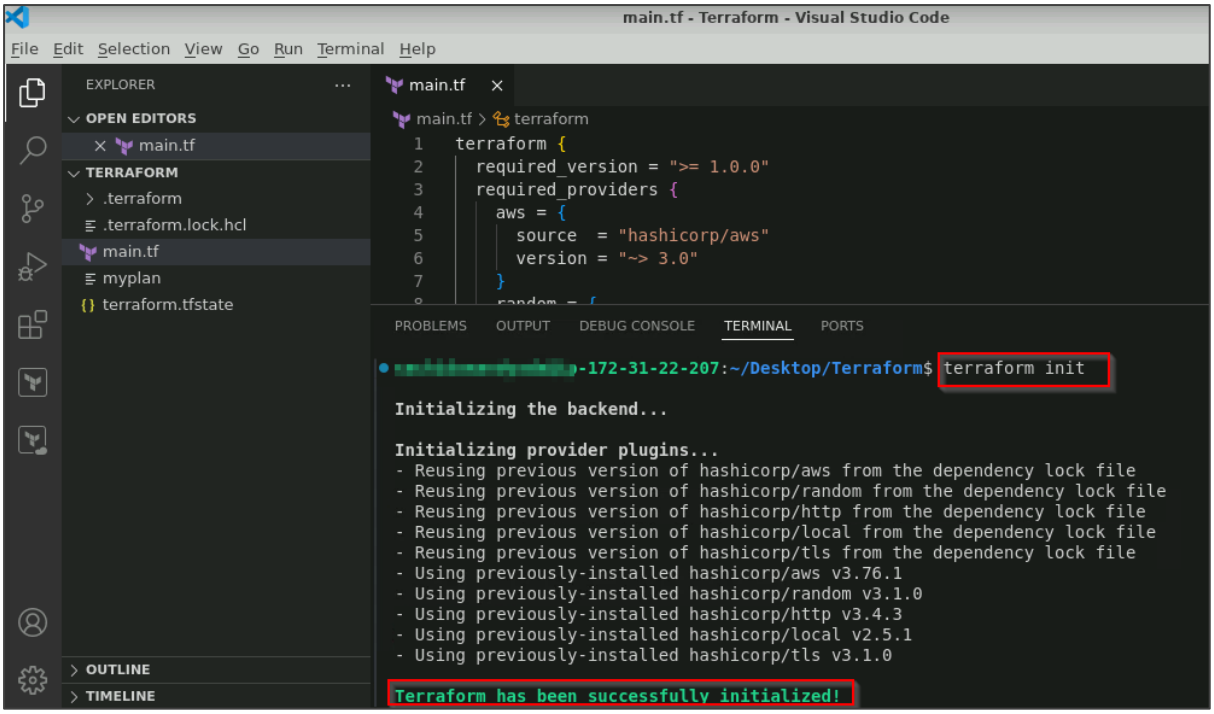


Step 3: Initialize the Terraform configuration file

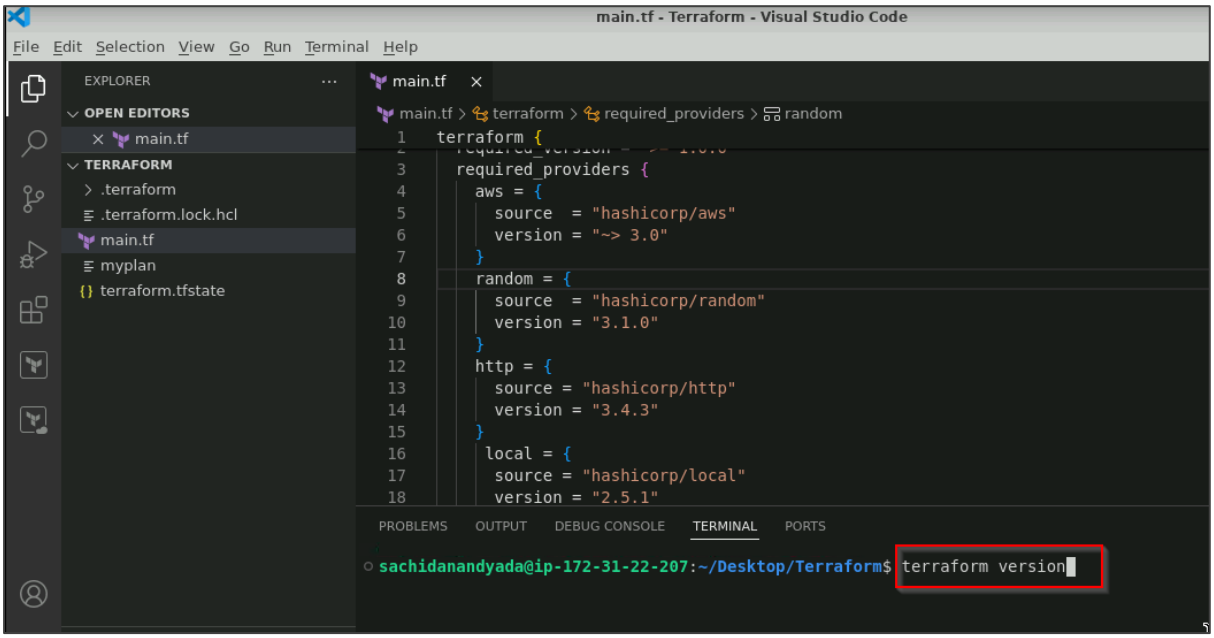
3.1 Open the terminal and execute the command given below to initialize the configuration file:

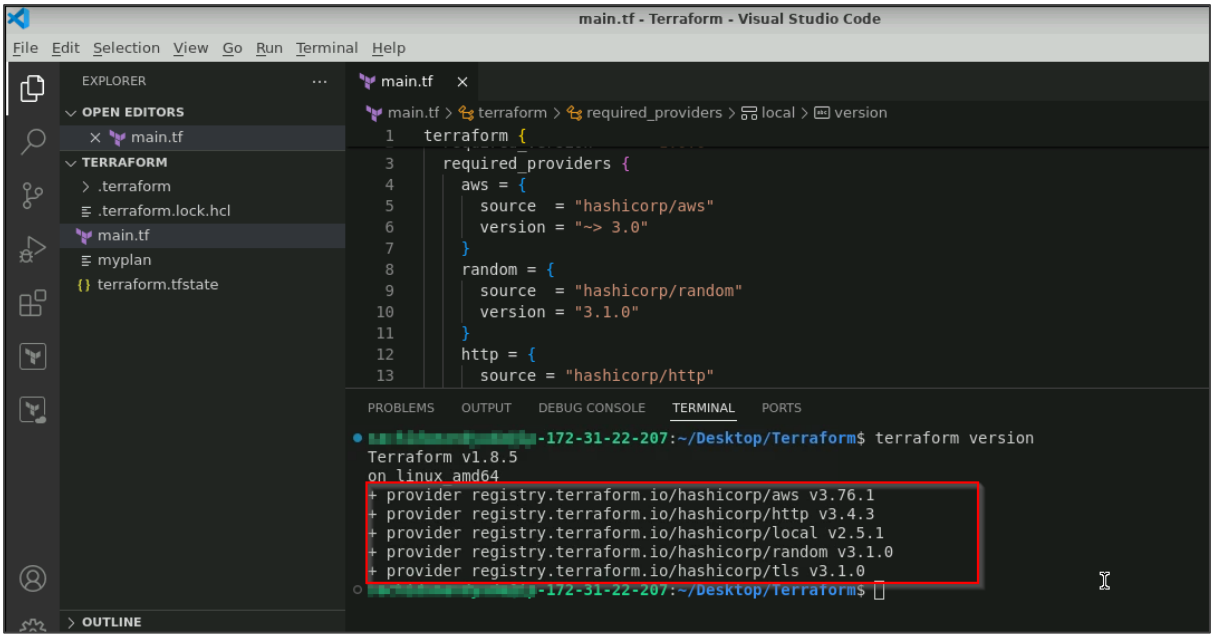
terraform init





3.2 Open the terminal and enter the given command to check the installed provider:
terraform version





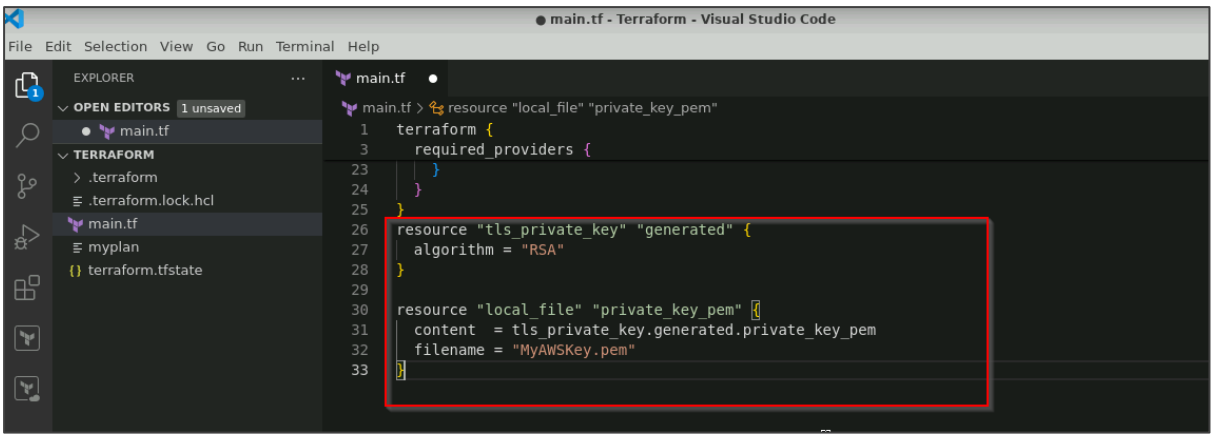
The **tls** provider is successfully installed.

Step 4: Update the main.tf file with a TLS certificate configuration block

4.1 Open the **main.tf** file and add the configuration block code given below to generate a TLS self-signed certificate, and save the file:

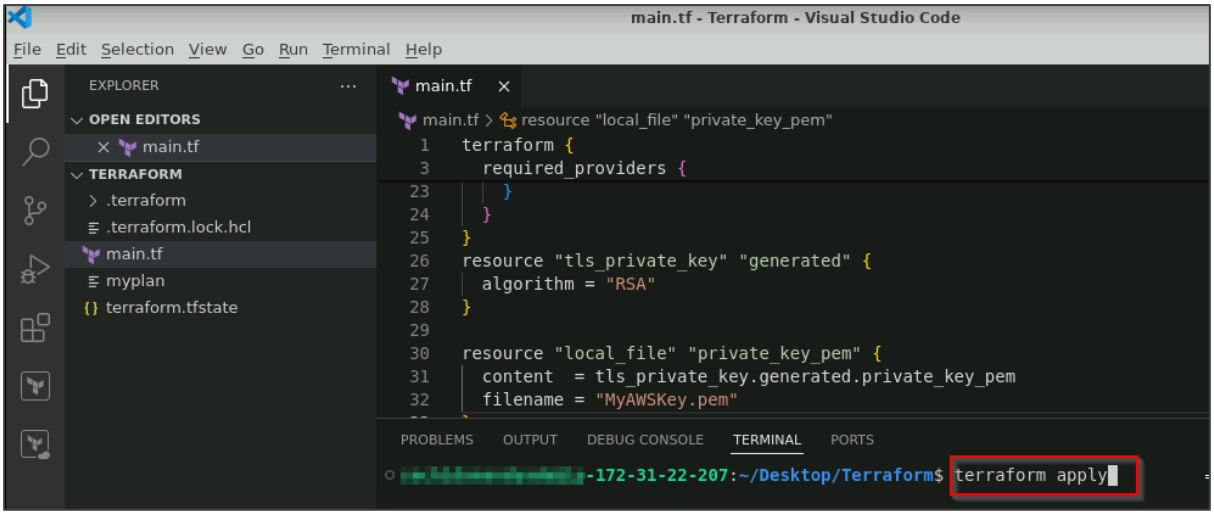
```
resource "tls_private_key" "generated" {
 algorithm = "RSA"
}

resource "local_file" "private_key_pem" {
 content  = tls_private_key.generated.private_key_pem
 filename = "MyAWSKey.pem"
}
```

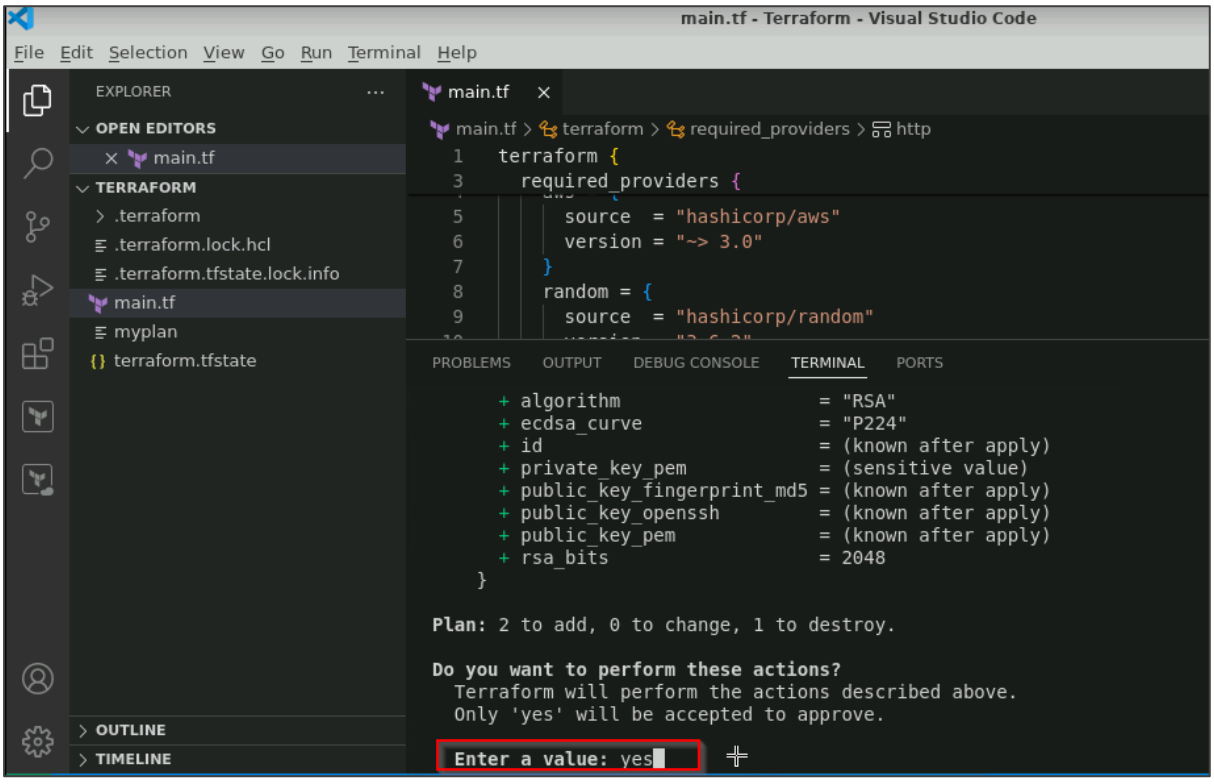


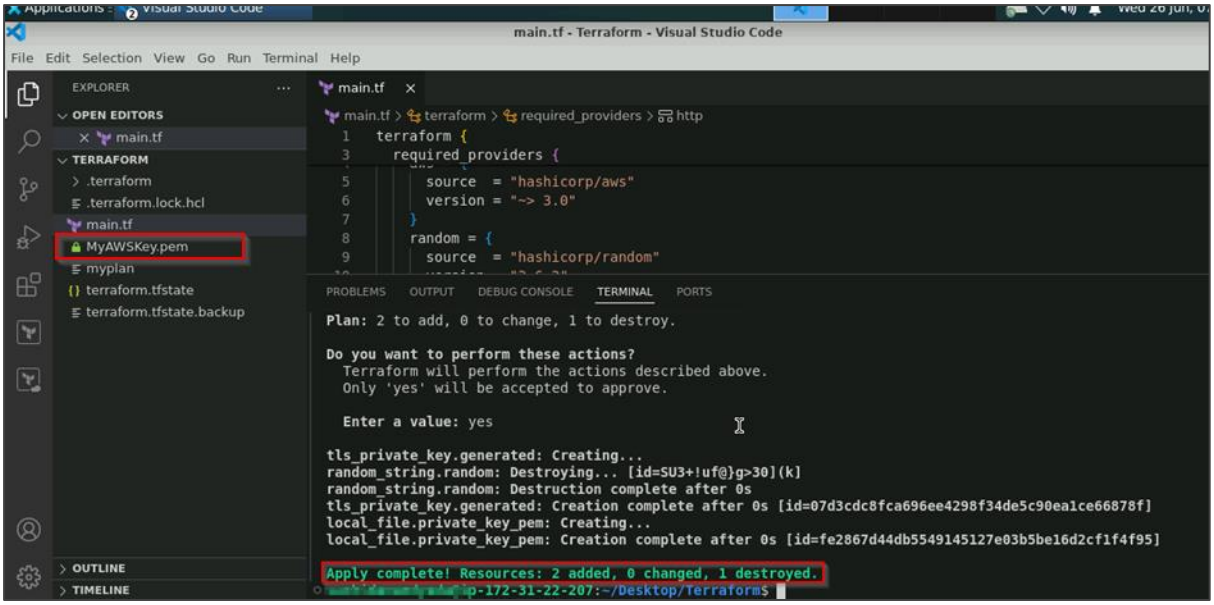
Step 5: Execute the apply command and validate the SSH key

5.1 Open the terminal and execute the given command to apply the TLS certificate configurations:
terraform apply

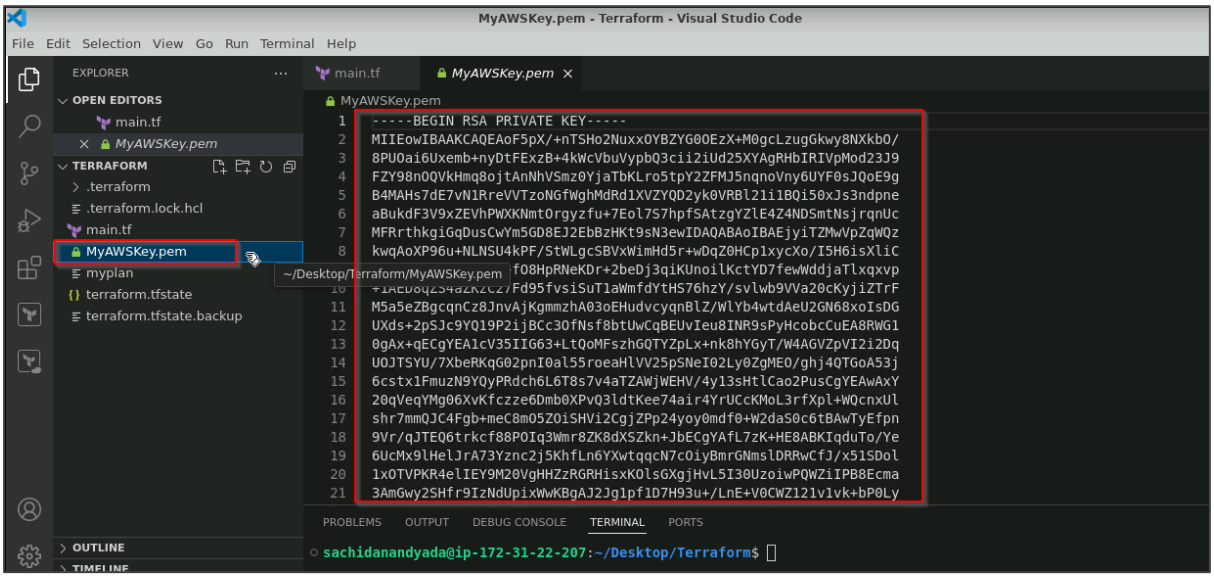


5.2 Enter **yes** to approve the run





5.3 Navigate to the **MyAWSKey.pem** to check the created SSH key



The SSH key with Terraform TLS provider is created in this file.

By following these steps, you have successfully generated the SSH key with the Terraform TLS provider using the latest version and configurations for secure access to your cloud infrastructure.