Terraform is an open-source infrastructure as code software tool created by HashiCorp. Users define and provide data center infrastructure using a declarative configuration language known as HashiCorp Configuration Language.

It is used to automate and manage the manage the entire lifecycle of infrastructure using infrastructure as code. That means declaring infrastructure components in configuration files that are then used by Terraform to provision, adjust and tear down infrastructure in various cloud providers.

For example, say you are working in AWS and would like to spin up several EC2 instances of a specific type. You would define the type and number of instances in a configuration file and Terraform would use that to communicate with the AWS API to create those instances.

I automated the infrastructure in Amazon Web Service using Terraform in this way:

1. Install terraform on your Operating System.
2. Create 3 files in a single folder named

* user-data(contains user data and your access key),
* main.tf(contains the information on what type of EC2 instance I want to create)
* variables.tf(contains the necessary information for the communication between your system and AWS)  
  ***(Files are uploaded on GitHub)***

1. As I use a Linux based Operating System(Ubuntu) I used the following commands to automate the infrastructure AWS from my terminal.
2. terraform init - Initializes my code to find any errors

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1. terraform plan - Shows a layout of all my resources

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1. terraform apply - Executes the code and created the infrastructure on AWS.

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1. Your desired infrastructure has been created on AWS.

A screenshot of a computer

Description automatically generated with medium confidence