

# EXPERIMENT 5

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D15A/19

AIM: To understand terraform lifecycle, core concepts / terminologies and install it on a Linux Machine and Windows.

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Experiment No. 05 Adv. Devops

Aim: To understand terraform lifecycle, core concepts / terminologies and it on a Linux Windows machine.

Theory:- Terraform

Terraform is an Infrastructure as code (IaC) tool that allows you to build, change and version Infrastructure safely and ~~effect~~ efficient. This includes low-level components such as compute instances, storage and networking, as well as high-level component such as DNS entries, SaaS features, etc. Terraform can manage both existing service providers and custom in-house solutions.

Key Features:

- (1) Infrastructure as code
- (2) Resource Graph
- (3) Change Automation

~~How does Terraform work?~~  
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Terraform actually works, there's sort of two major components:  
One is the terraform core; it takes the terraform configuration which is being provided by the user

FOR EDUCATIONAL USE

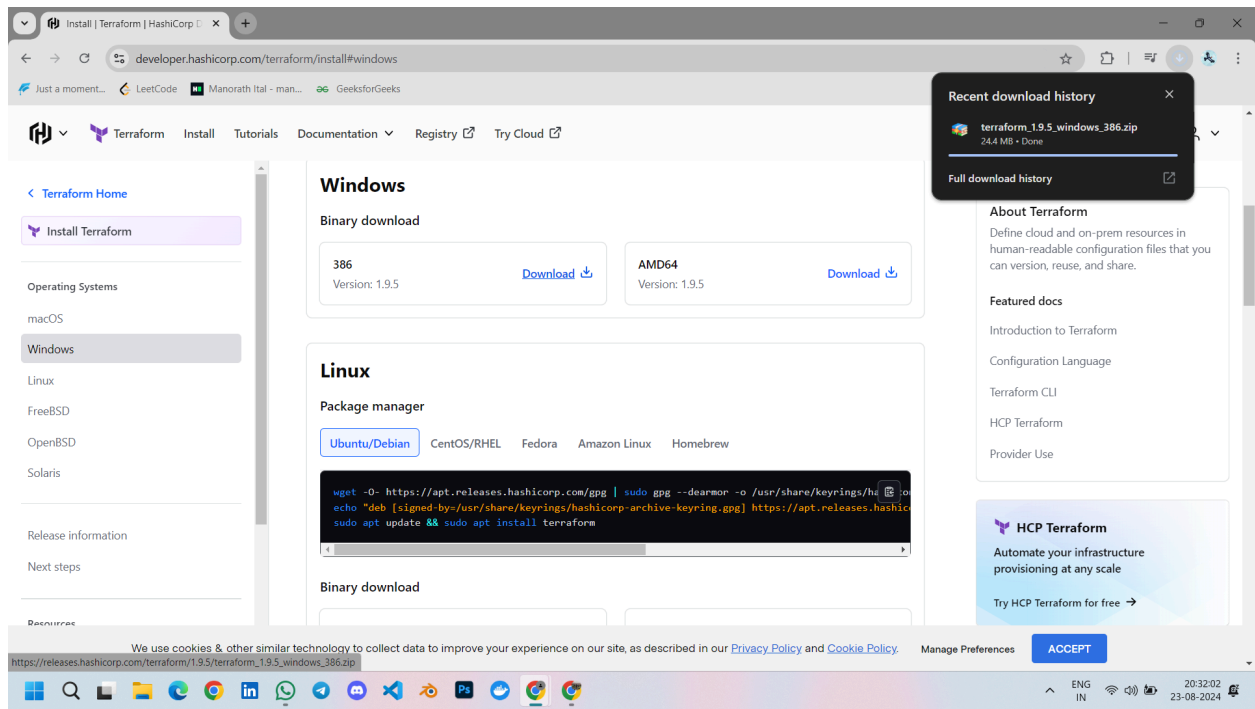
## Terraform Core Concepts:

Below are the core concepts/terminologies used in Terraform:

- Variables: Also used as input-variables, it is a key-value pair used by Terraform modules to allow customization
- Provider
- Module
- State
- Resource
- Data Source
- Output Values
- plan
- Apply

STEP1: Go to website and download the 386 zip file

<https://developer.hashicorp.com/terraform/install#windows>



STEP2: Extract the file to a folder and copy path



STEP3: Open edit the environment variables

System Properties

×

Computer Name

Hardware

Advanced

System Protection

Remote

You must be logged on as an Administrator to make most of these changes.

Performance

Visual effects, processor scheduling, memory usage, and virtual memory

Settings...

User Profiles

Desktop settings related to your sign-in

Settings...

Startup and Recovery

System startup, system failure, and debugging information

Settings...

Environment Variables...

OK

Cancel

Apply

# Environment Variables



## User variables for manor

Variable	Value
OneDrive	C:\Users\manor\OneDrive
OneDriveConsumer	C:\Users\manor\OneDrive
Path	C:\Users\manor\AppData\Local\Programs\Python\Launcher\...
TEMP	C:\Users\manor\AppData\Local\Temp
TMP	C:\Users\manor\AppData\Local\Temp

New...

Edit...

Delete

## System variables

Variable	Value
ComSpec	C:\Windows\system32\cmd.exe
DriverData	C:\Windows\System32\Drivers\DriverData
IGCCSVC_DB	AQAAANCMnd8BFdERjHoAwE/CI+sBAAAAqsArRp3AV0WYR...
INTEL_DEV_REDIST	C:\Program Files (x86)\Common Files\Intel\Shared Libraries\
JAVA_HOME	C:\Program Files\Eclipse Adoptium\jdk-21.0.4.7-hotspot\
MIC_LD_LIBRARY_PATH	%INTEL_DEV_REDIST%compiler\lib\mic
NUMBER_OF_PROCESSORS	16

New...

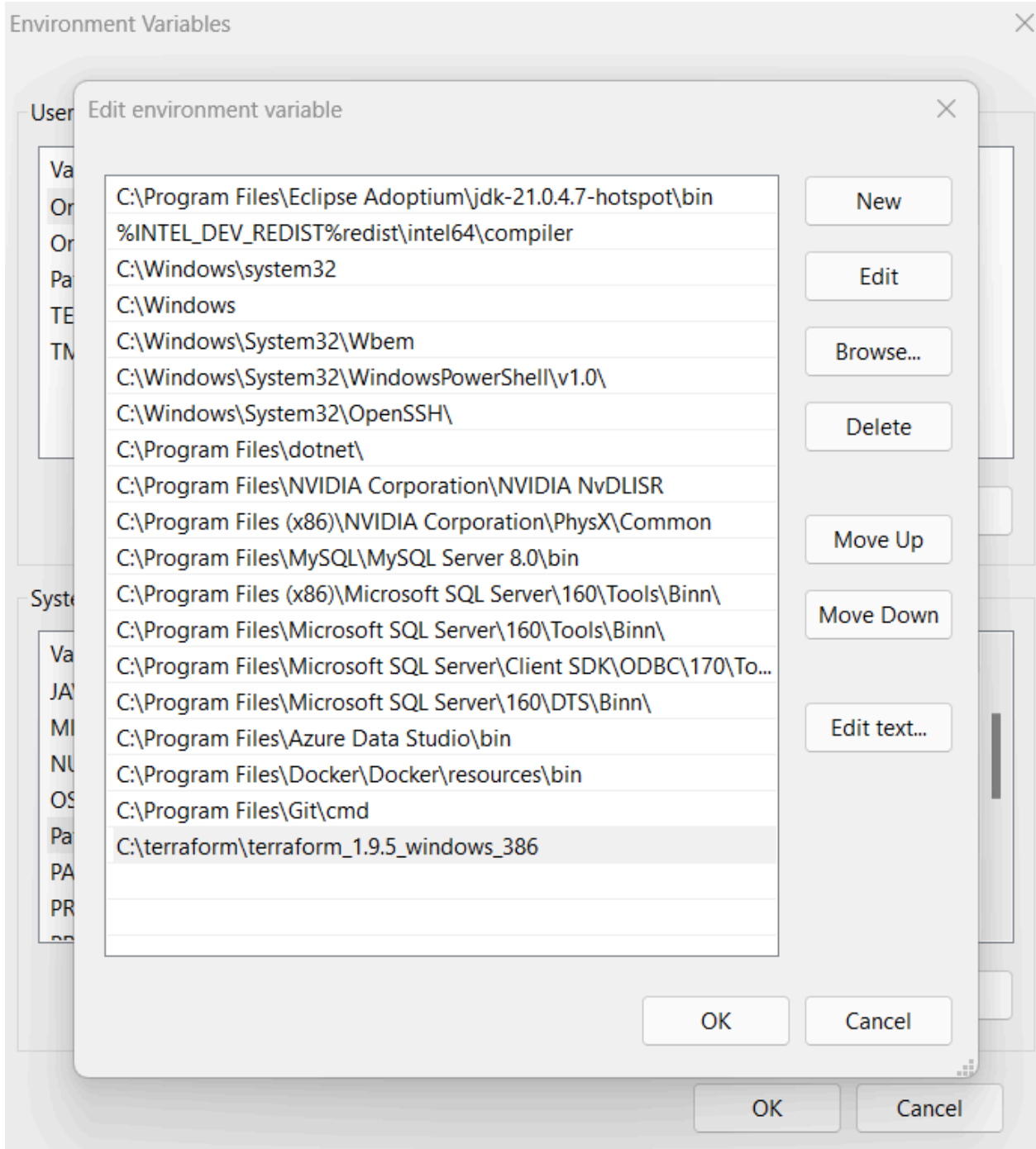
Edit...

Delete

OK

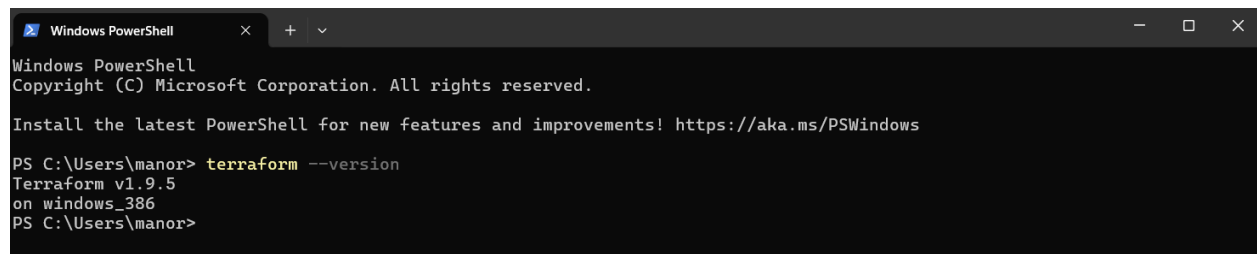
Cancel





Now, terraform is install to verify go to step 4

STEP4:Go to windows powershell and command terraform --version

A screenshot of a Windows PowerShell terminal window. The window has a title bar with 'Windows PowerShell' and standard window controls. The terminal text shows the PowerShell version and copyright information, followed by a prompt to install the latest version. The user enters the command 'terraform --version', and the output shows 'Terraform v1.9.5 on windows\_386'.

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\manor> terraform --version
Terraform v1.9.5
on windows_386
PS C:\Users\manor>
```

It should show this.

Conclusion: