

## Advance DevOps Lab - Practical 5

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**Aim :** To understand Terraform lifecycle, core concepts/terminologies and install it on a Windows Machine.

#### Theory :

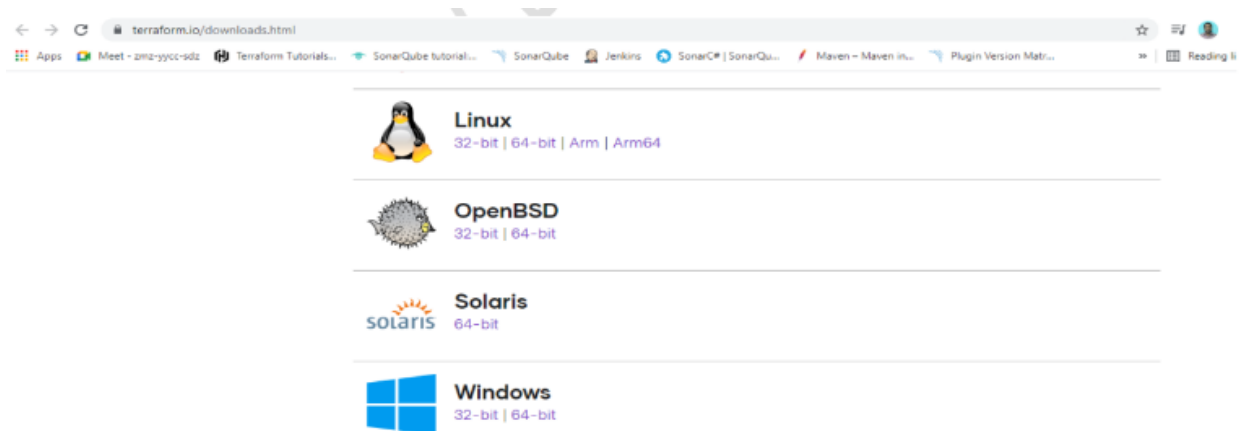
Terraform is an infrastructure as code (IaC) tool that allows you to build, change, and version infrastructure safely and efficiently. This includes low-level components such as compute instances, storage, and networking, as well as high-level components such as DNS entries, SaaS features, etc.

Terraform can manage infrastructure on multiple cloud platforms. Terraform state allows you to track resource changes throughout your deployments. You can commit your configurations to version control to safely collaborate on infrastructure. Terraform plugins called providers let Terraform interact with cloud platform and other services via their application programming interfaces (APIs).

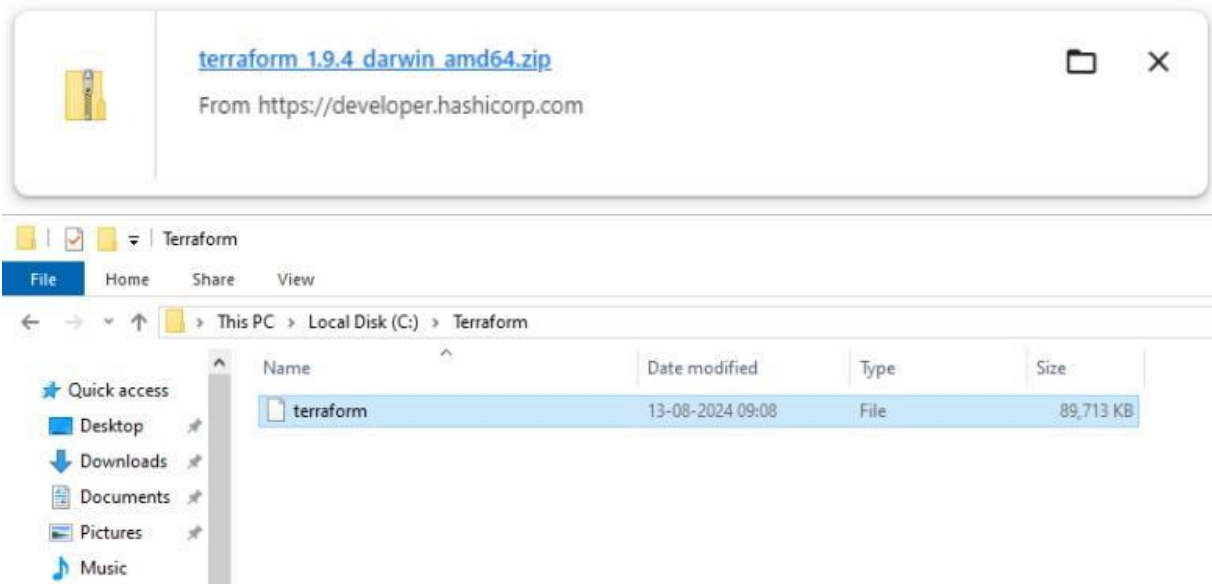
#### Steps :

##### Step 1: Download terraform

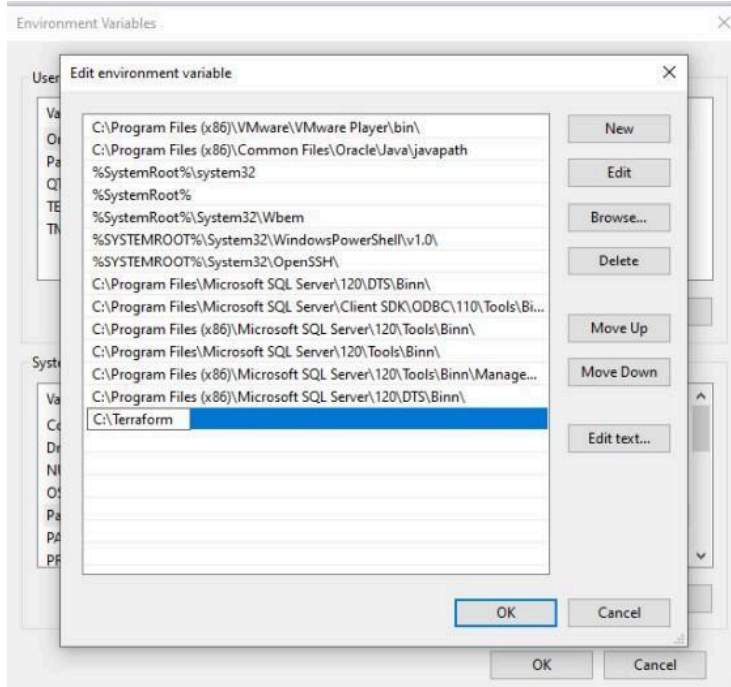
To install Terraform, First Download the Terraform Cli Utility for windows from terraforms official website - <https://www.terraform.io/downloads.html>  
Select the Operating System Windows followed by either 32 bit or 64 bit based on your OS type.



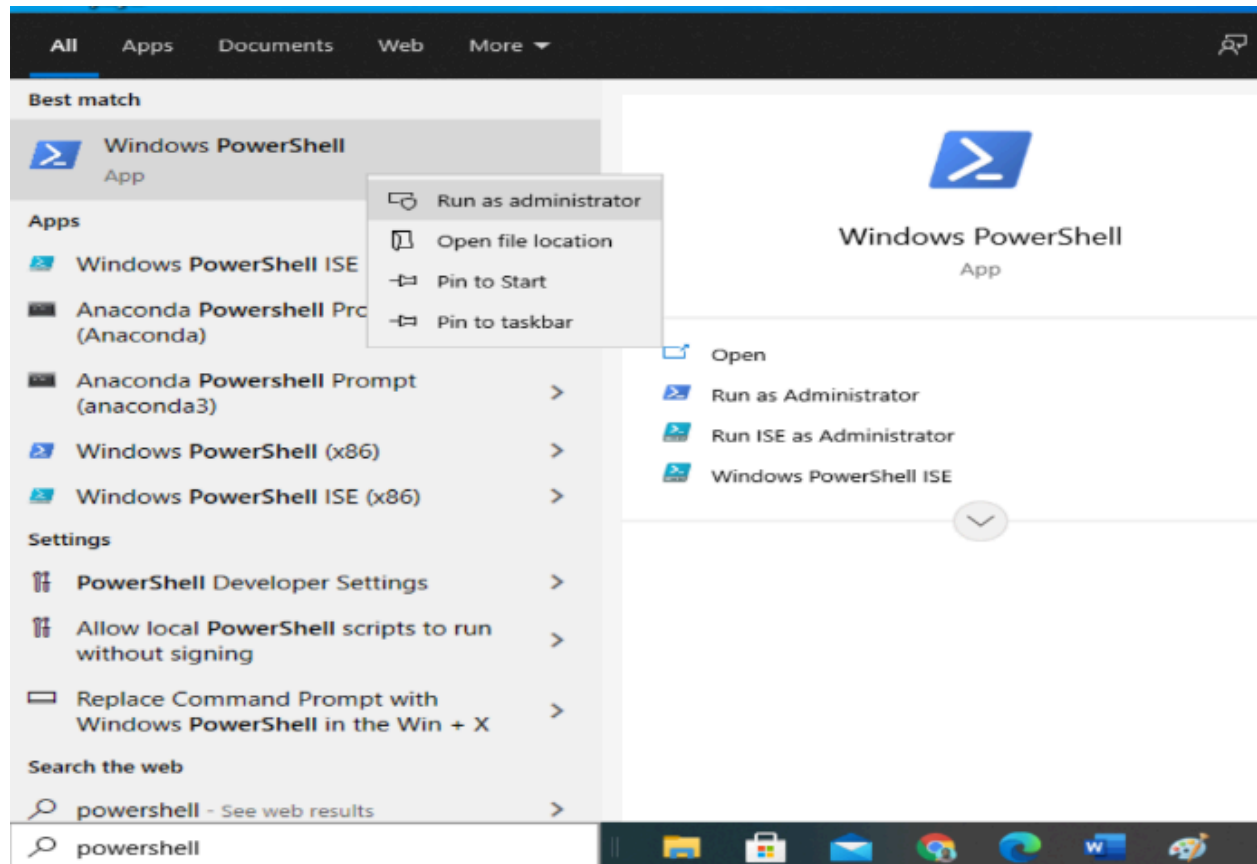
## Step 2: Extract the downloaded setup file Terraform.exe in C:\Terraform directory



## Step 3: Set the System path for Terraform in Environment Variables



## Step 4: Open PowerShell with Admin Access



## Step 5 : Open Terraform in PowerShell and check its functionality

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Command Prompt
Microsoft Windows [Version 10.0.19045.4651]
(c) Microsoft Corporation. All rights reserved.

C:\Users\INFT513-9>terraform
Usage: terraform [global options] <subcommand> [args]

The available commands for execution are listed below.
The primary workflow commands are given first, followed by
less common or more advanced commands.

Main commands:
  init       Prepare your working directory for other commands
  validate   Check whether the configuration is valid
  plan       Show changes required by the current configuration
  apply      Create or update infrastructure
  destroy    Destroy previously-created infrastructure

All other commands:
  console    Try Terraform expressions at an interactive command prompt
  fmt        Reformat your configuration in the standard style
  force-unlock Release a stuck lock on the current workspace
  get        Install or upgrade remote Terraform modules
  graph      Generate a Graphviz graph of the steps in an operation
  import     Associate existing infrastructure with a Terraform resource
  login      Obtain and save credentials for a remote host
  logout     Remove locally-stored credentials for a remote host
  metadata   Metadata related commands
  output     Show output values from your root module
  providers  Show the providers required for this configuration
  refresh    Update the state to match remote systems
```