5. Create and running Containers

Hosting a Simple Website with Docker and Apache HTTP Server:

Steps:

1. Develop a Website (index.html) and store all its contents in a folder

2. pull the httpd Docker image :

```
docker pull httpd
```

3. check the status of httpd container :

```
docker ps
```

4. Check All Containers (Including Stopped Ones) :

```
docker ps -a
```

5. Check the Status of the httpd Image :

```
docker images
```

6. Run the httd container:

```
docker  run -d --name my-httpd -p 8080:80 -v
/path/to/your/folder:/usr/local/apache2/htdocs httpd
```

Note: Write out put for every step

6. Managing resources using Terraform

Launching an EC2 Instance in AWS using Terraform

Step-1: Install Terraform in Windows Operating System

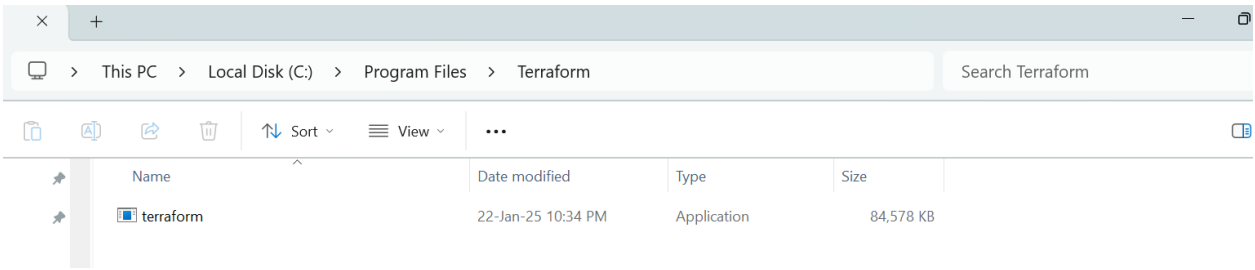
Download a suitable Binary based on your Processor Type.

https://developer.hashicorp.com/terraform/install

Step-2: Extract terraform_1.10.5_windows_386 folder

Step 3: Copy the **terraform** file and save it in the following location in C Drive.

C:\Program Files\Terraform



Step 4: Type Edit the System Environment variables in search Box

Click on Environment Variables

Go to System variables

Click on Path

Click on Edit

Click on New

Paste the following Path :

C:\Program Files\Terraform

Click on Ok

Step 5: Verify Terraform Installation

Open cmd as Administrator

Type : terraform version

O/p: Terraform v1.10.1

With this You confirm Terrafrom is successfully installed.

Step 6: Create an IAM user with Administrator Access, Access Key, and Secret Key.

Step 7: Open Windows Powershell move to the Project directory.

Type notepad.tf

And write the following Terraform script and save it.

```
provider "aws" {
```

```
  region = "ap-south-1"
}
resource "aws_instance" "example" {
  ami           = "ami-00bb6a80f01f03502"
  instance_type = "t2.micro"
  tags = {
    Name = "AshwinUbunutInstance"
  }
}
```

Next, Run the following command in Power Shell

Step 8:

Reinitialize Terraform: terraform init

Run Terraform Plan: terraform plan

Apply the Configuration: terraform apply

Verify the EC2 Instance in AWS Console:

Now login to the AWS Console and verify the newly created instance in EC2 Dashboard.

Step 9: Remove the Instance:

Now you can delete the Instance using Terraform using the following command.

terraform destroy.

Note: Write or paste output for each step.