Bansilal Ramnath Agarwal Charitable Trust's

VISHWAKARMA INSTITUTE OF INFORMATION TECHNOLOGY,

PUNE-48 Department of Information Technology

ITUA32202: CLOUD COMPUTING
Assignment-4

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AIM: Deploy static Web application using AWS S3 service

THEORY:

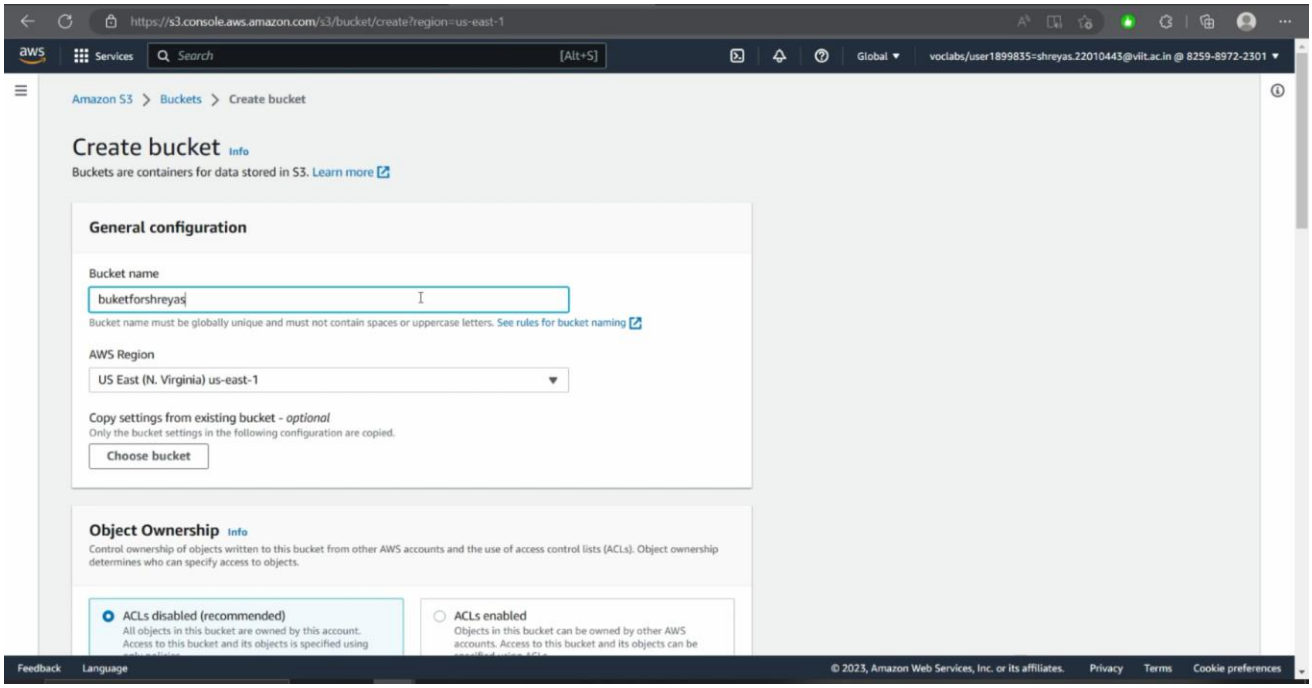
Q. What is S3 service of AWS?

-> Amazon Simple Storage Service (Amazon S3) has various features you can use to organize and manage your data in ways that support specific use cases, enable cost efficiencies, enforce security, and meet compliance requirements. Data is stored as objects within resources called "buckets." Objects can be accessed through S3 Access Points or directly through the bucket hostname.

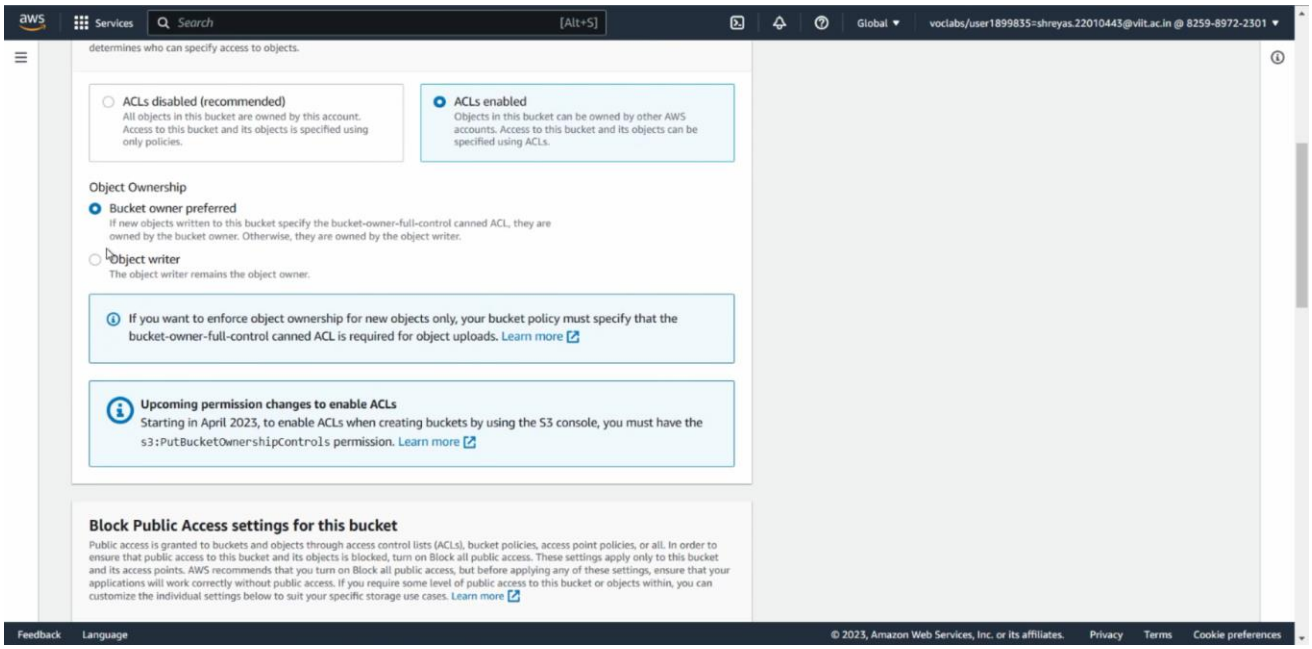
Amazon Simple Storage Service (S3) is an object storage service provided by Amazon Web Services (AWS). It allows you to store and retrieve any amount of data, at any time, from anywhere on the web. S3 provides a highly durable and scalable storage infrastructure, making it a popular choice for hosting data, storing backups, and storing static files for websites. With S3, you can store your data in a secure and highly available manner, and access it through the web or programmatically using the S3 API. S3 is also a highly configurable service, with features such as versioning, lifecycle policies, and access controls, which enable you to manage and protect your data effectively.

Step by Step Implementation of the Web Application Deployment using S3

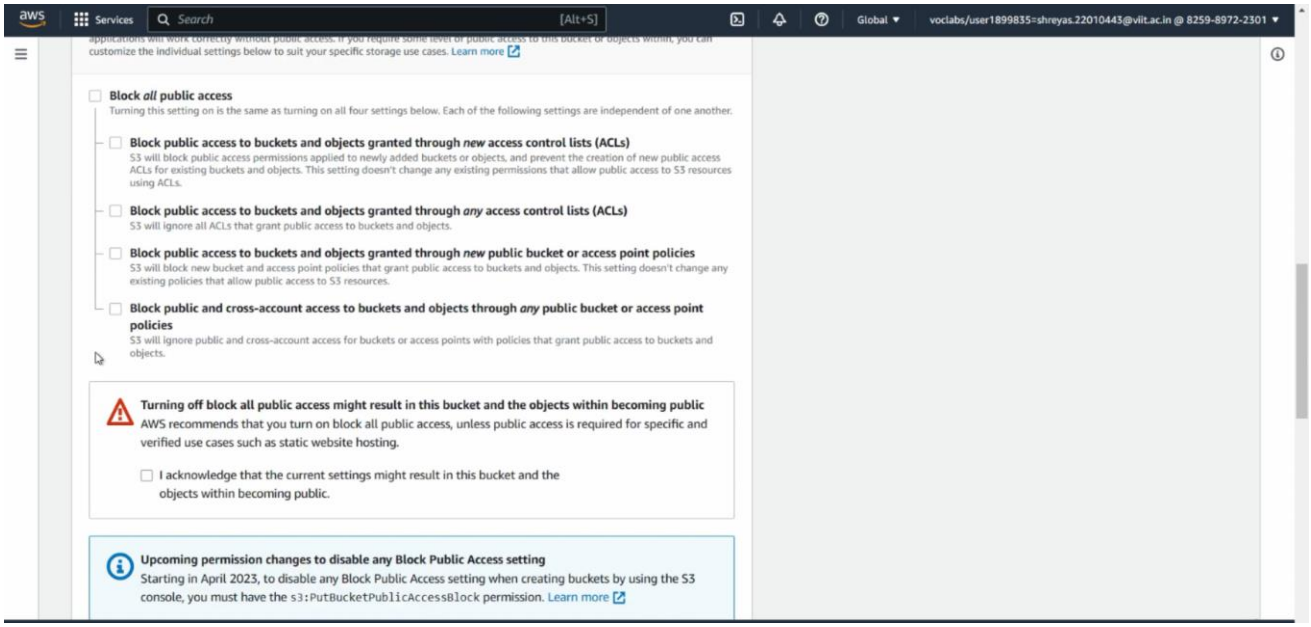
-> Create S3 bucket



Object Ownership must be ACL enabled(i.e accessible publicly if given public access)

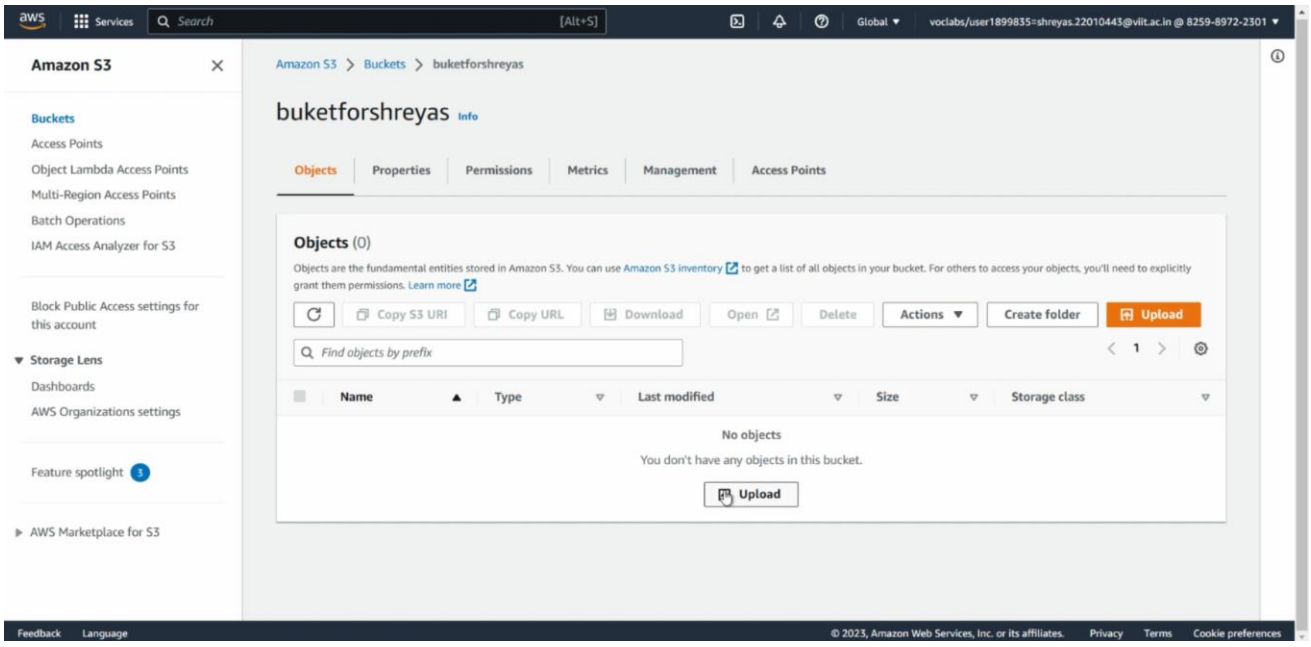


Disable blocked public address

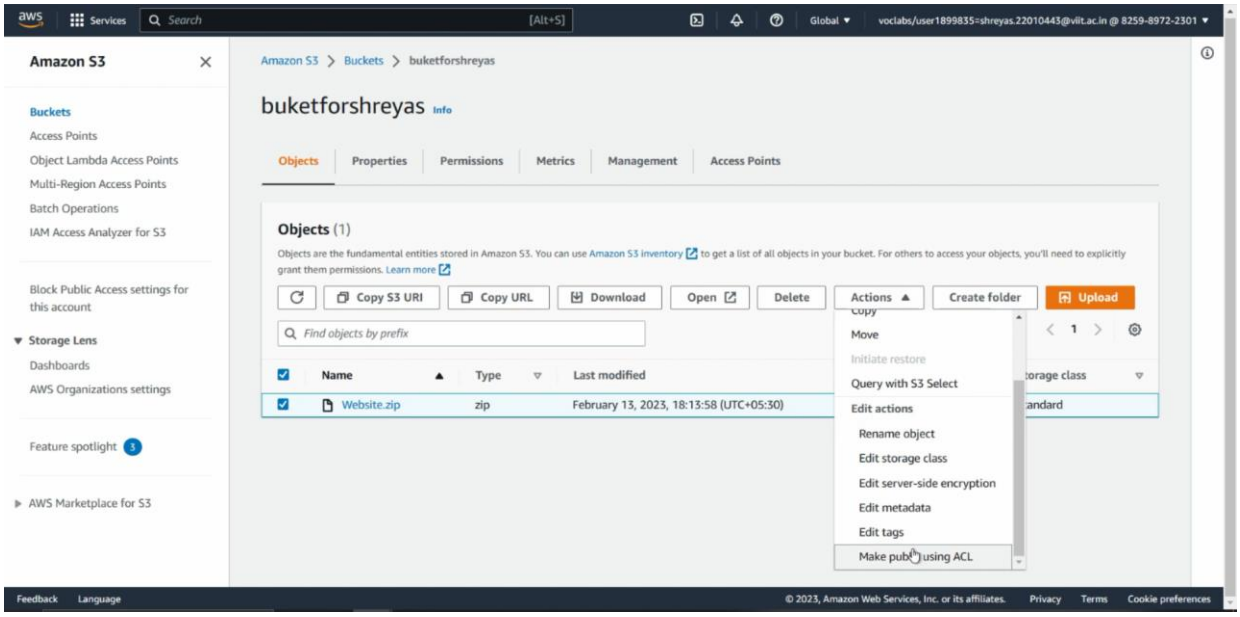


Bucket created successfully!

-> Upload the .zip file in the s3 bucket

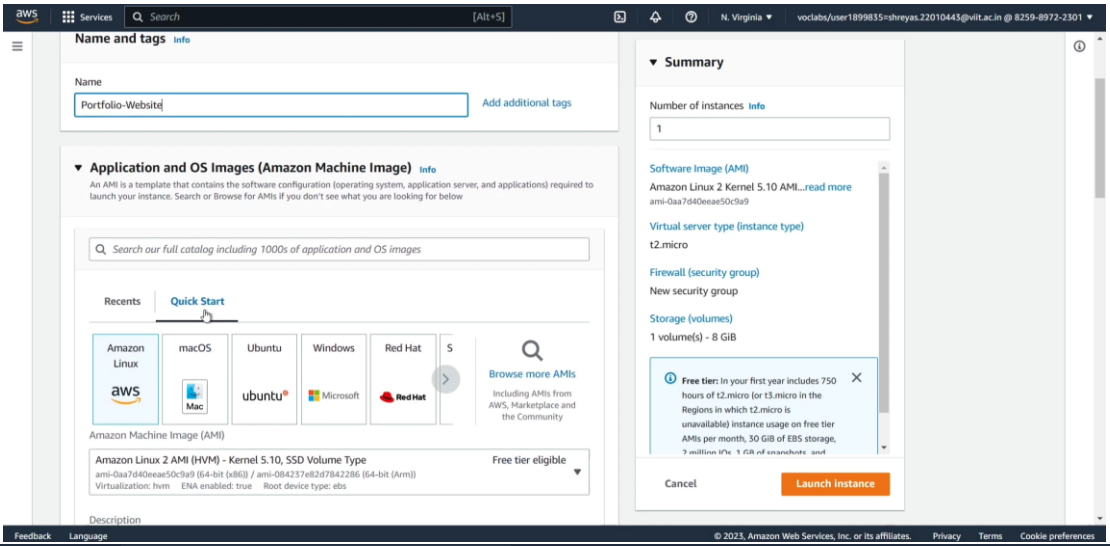


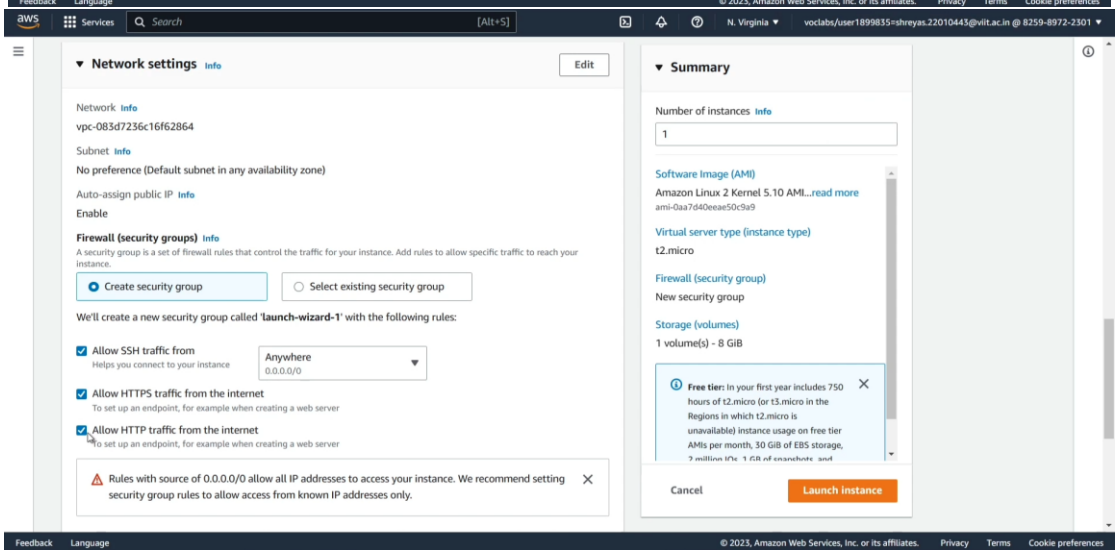
Give it public access with ACL



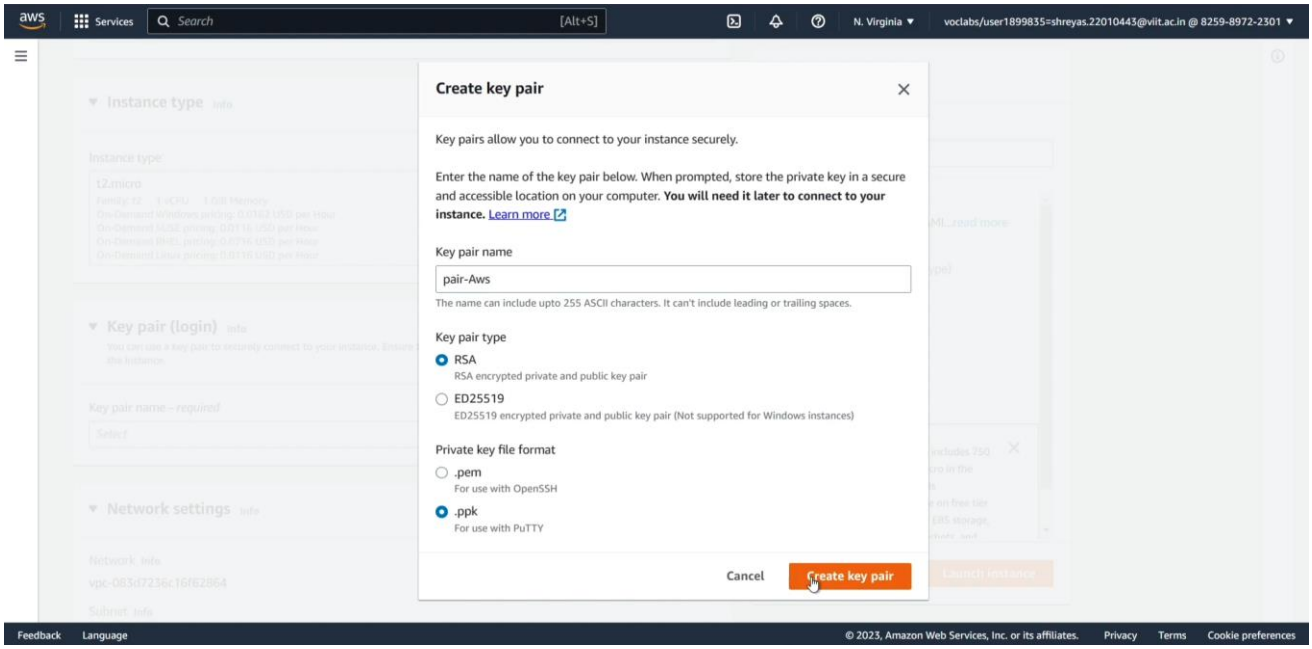
Copy the link of the zip file in the s3 bucket(we will use it later)

-> Create EC2 Instance enabled with HTTP & HTTPS protocols(Ports:22,443,80)





Create security group & download the .ppk file

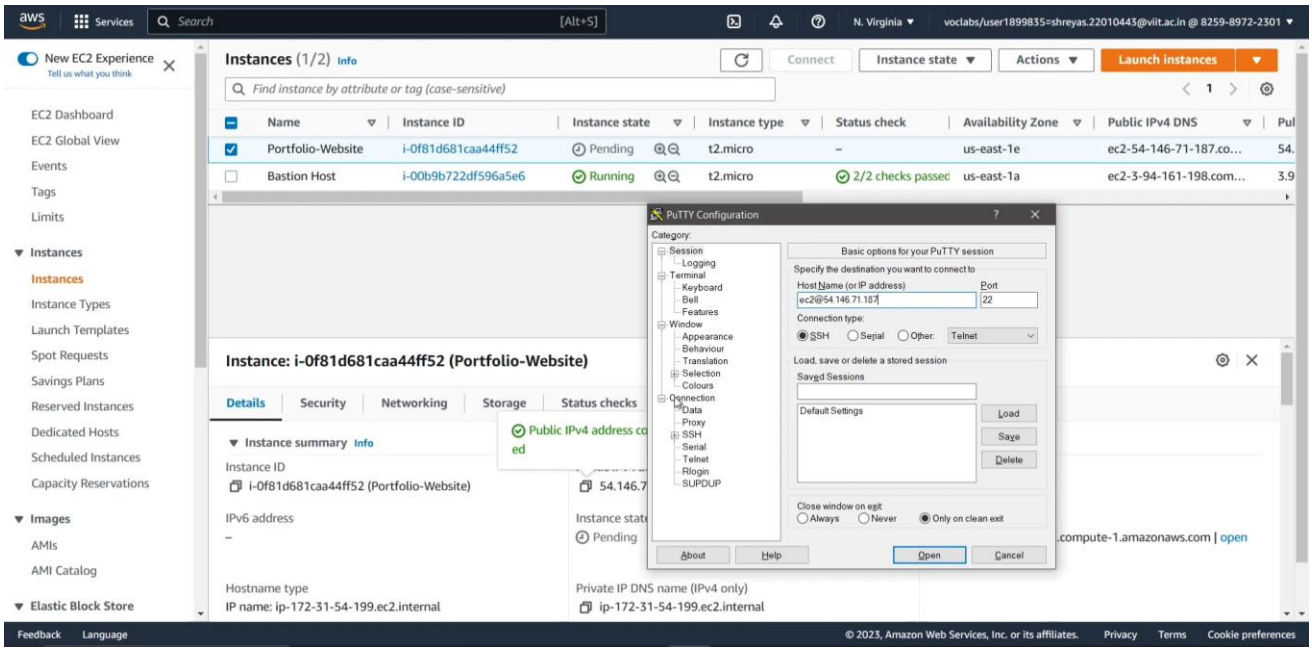


-> After initializing the EC2 Instance, we will have to connect it to the VM.

For this we have three methods:

1. We will use the PuTTY to convert .pem file(The key which we downloaded while creating the instance) to .ppk and launch it on our local System/machine
2. If we have downloaded the .ppk file then we can directly initialize the VM on our local Machine/System.
3. We will directly connect to the VM through the AWS platform

I have used the 2nd method.



-> In the VM run the following commands top deploy the webpage on the AWS Cloud:

1. `sudo su`
2. `yum update -y`
3. `yum install -y httpd`
4. `cd /var/www/html`
5. `wget<s3_bucket_zip_file_link>`
6. `ls`
7. `unzip Website.zip`
8. `cp -r Website/* /var/www/html/`
9. `rm -rf Website Website.zip`
10. `systemctl enable httpd`
11. `systemctl start httpd`
12. `systemctl status httpd`

-> Copy the iPV4 address of the EC2 Instance

We have Successfully Deployed the Web Application on AWS Cloud!

The Video procedure is uploaded here -> LINK

Conclusion: We have learnt and understood S3 & S3 Bucket in AWS Cloud. We have also deployed a web application on AWS Cloud using S3.