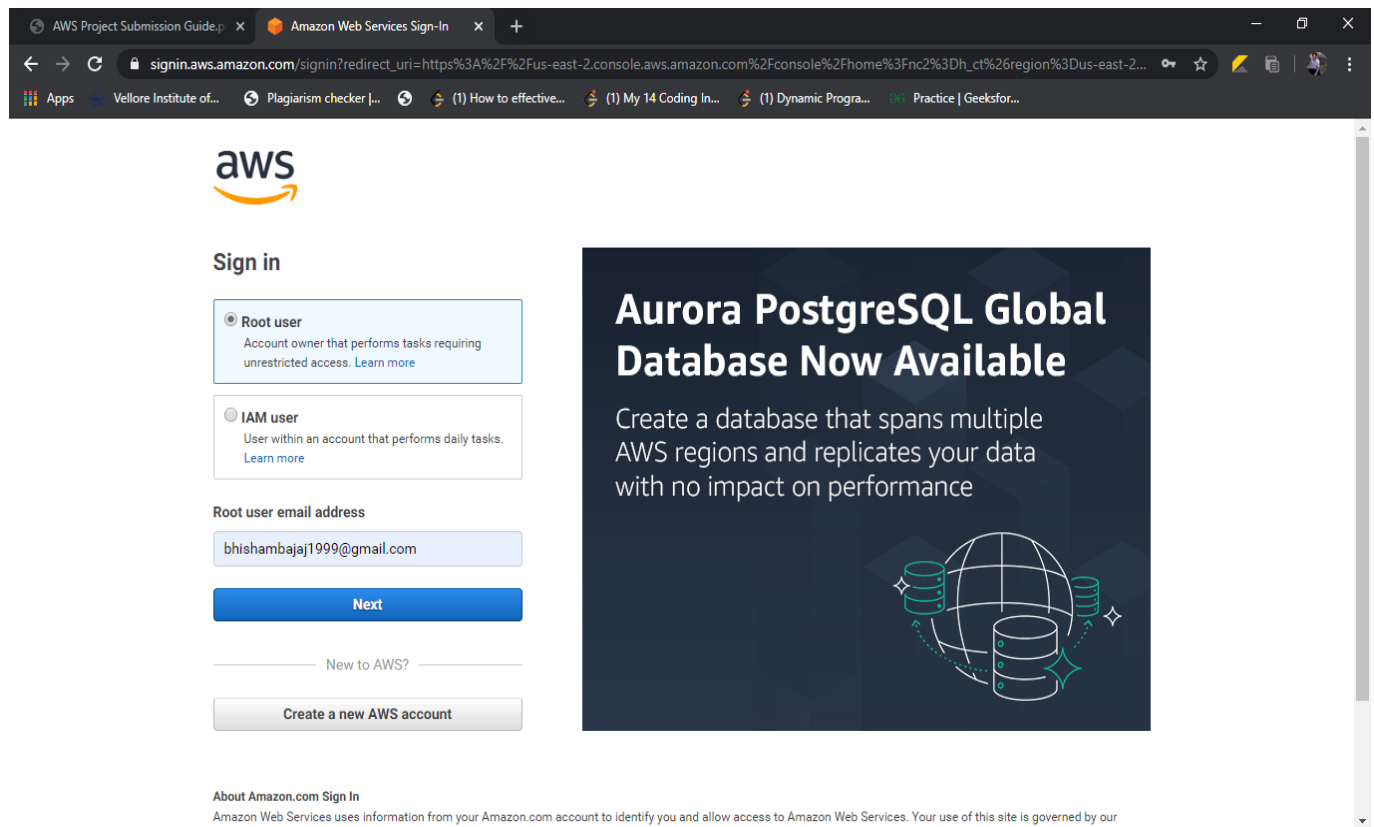


# Masterclass on AWS Cloud-Building a Face Detection App

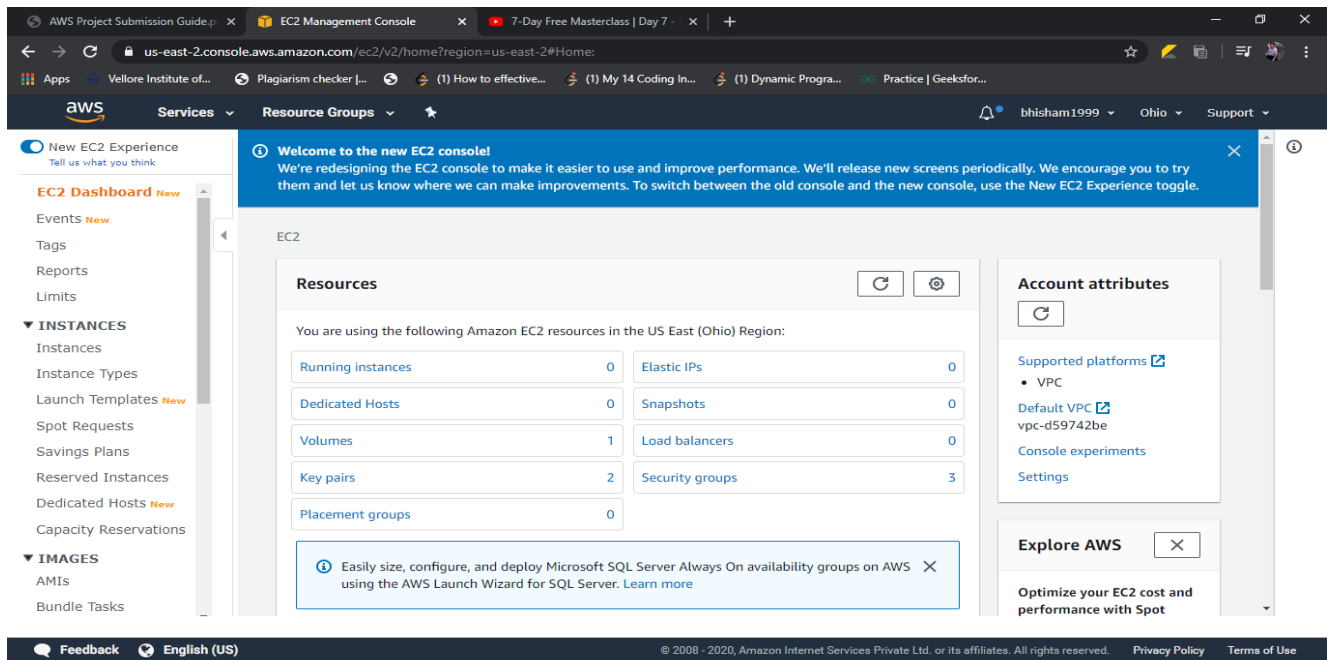
Proof of Working (Screenshots):

## Screenshots needed for Dashboards:

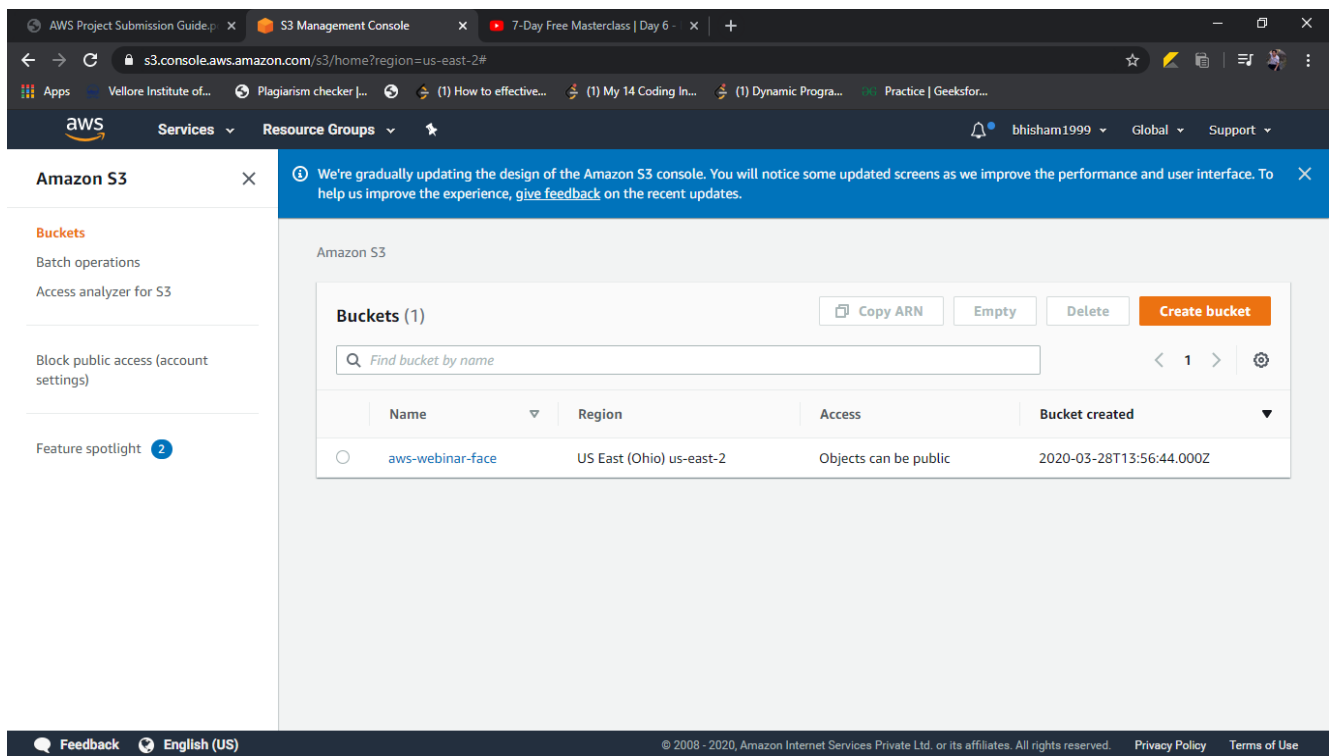
### 1.) AWS Login screen with username



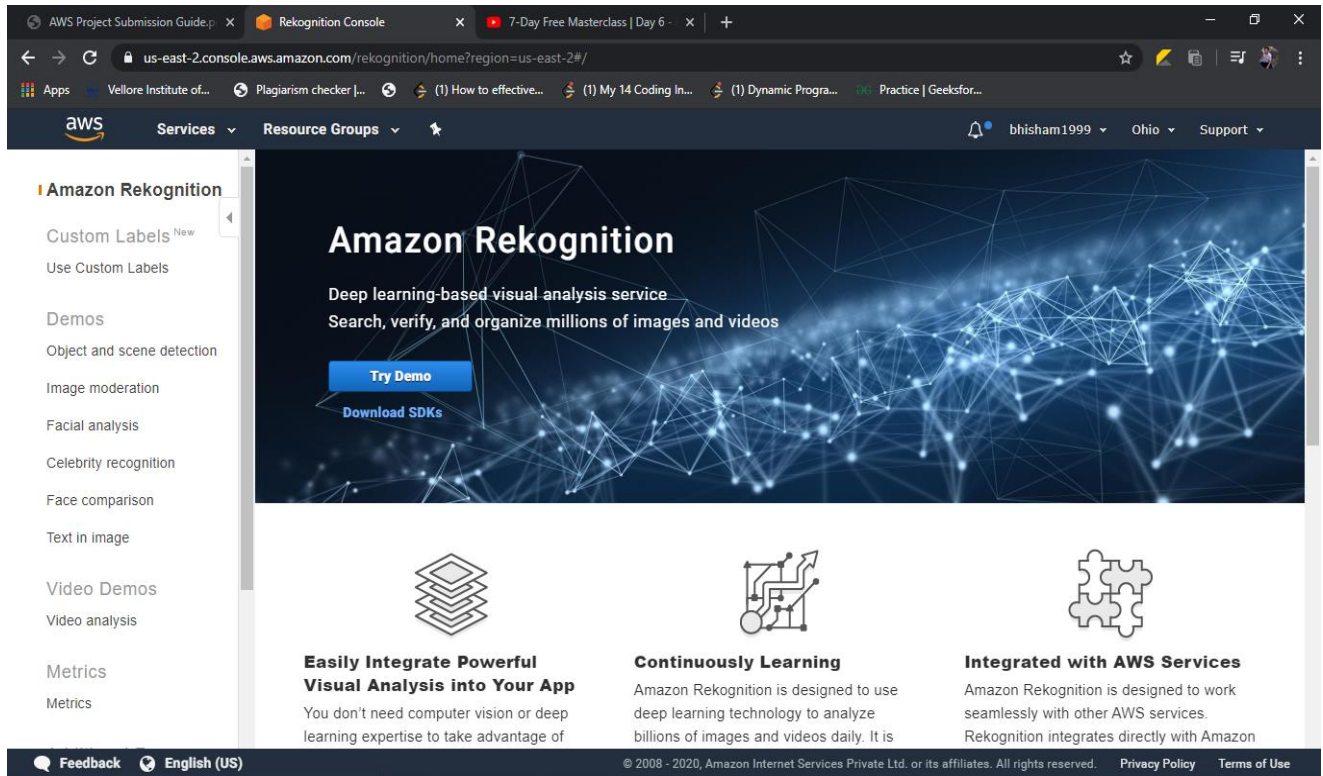
### 2.) EC2 Dashboard



### 3.) S3 dashboard

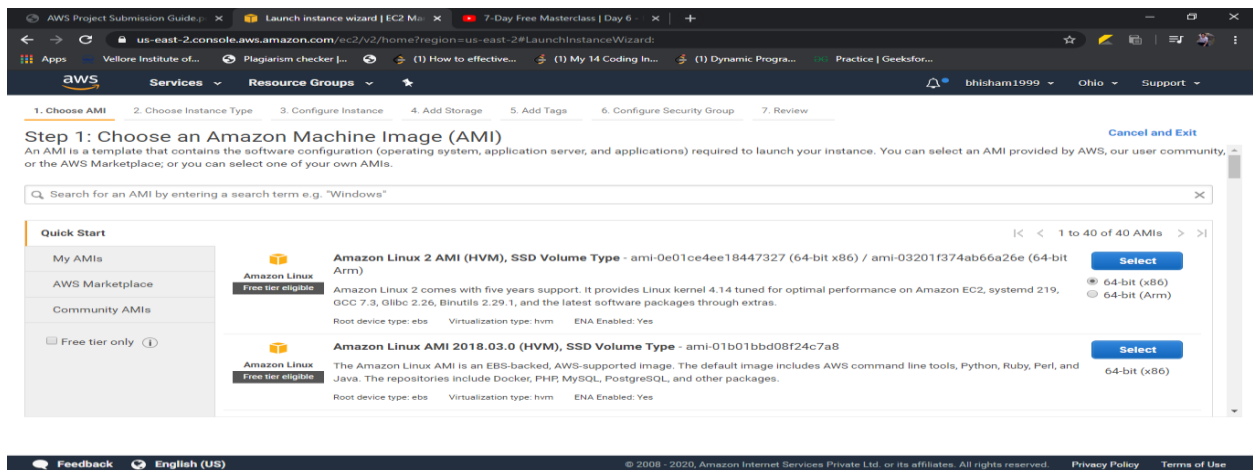


### 4.) Recognition Dashboard



## Screenshots needed for EC2:

### 5: Choosing an AMI



6.)

Launch instance wizard | EC2 Ma

7-Day Free Masterclass | Day 6

us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:

Apps

Vellore Institute of...

Plagiarism checker |...

(1) How to effective...

(1) My 14 Coding In...

(1) Dynamic Progra...

Practice | Geeksfor...

aws

Services

Resource Groups

Support

1. Choose AMI

2. Choose Instance Type

3. Configure Instance

4. Add Storage

5. Add Tags

6. Configure Security Group

7. Review

### Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: All instance types Current generation Show/Hide Columns

Currently selected: t2.micro (Variable ECUs, 1 vCPUs, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	General purpose	t2.micro Free tier eligible	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.large	2	8	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.xlarge	4	16	EBS only	-	Moderate	Yes

Cancel Previous Review and Launch Next: Configure Instance Details

Feedback

English (US)

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7.)

Launch instance wizard | EC2 Ma

7-Day Free Masterclass | Day 6

us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:

Apps

Vellore Institute of...

Plagiarism checker |...

(1) How to effective...

(1) My 14 Coding In...

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Practice | Geeksfor...

aws

Services

Resource Groups

Support

1. Choose AMI

2. Choose Instance Type

3. Configure Instance

4. Add Storage

5. Add Tags

6. Configure Security Group

7. Review

### Step 4: Add Storage

Your instance will be launched with the following storage device settings. You can attach additional EBS volumes and instance store volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes. [Learn more](#) about storage options in Amazon EC2.

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encryption
Root	/dev/xvda	snap-0f54692056aaa4c20	8	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypt

Add New Volume

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. [Learn more](#) about free usage tier eligibility and usage restrictions.

Cancel Previous Review and Launch Next: Add Tags

Feedback

English (US)

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8.)

Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: ☒ Create a new security group ☐ Select an existing security group

Security group name:

Description:

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop

Add Rule

**Warning**  
Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Cancel Previous **Review and Launch**

9.) face-ethus key pair

Step 7: Review Instance Launch

Instance Type: t2.micro, ECUs: Variable

Security Groups: launch-wizard-3

Instance Details, Storage, Tags

**Select an existing key pair or create a new key pair**

A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about removing existing key pairs from a public AMI.

Create a new key pair

Key pair name:

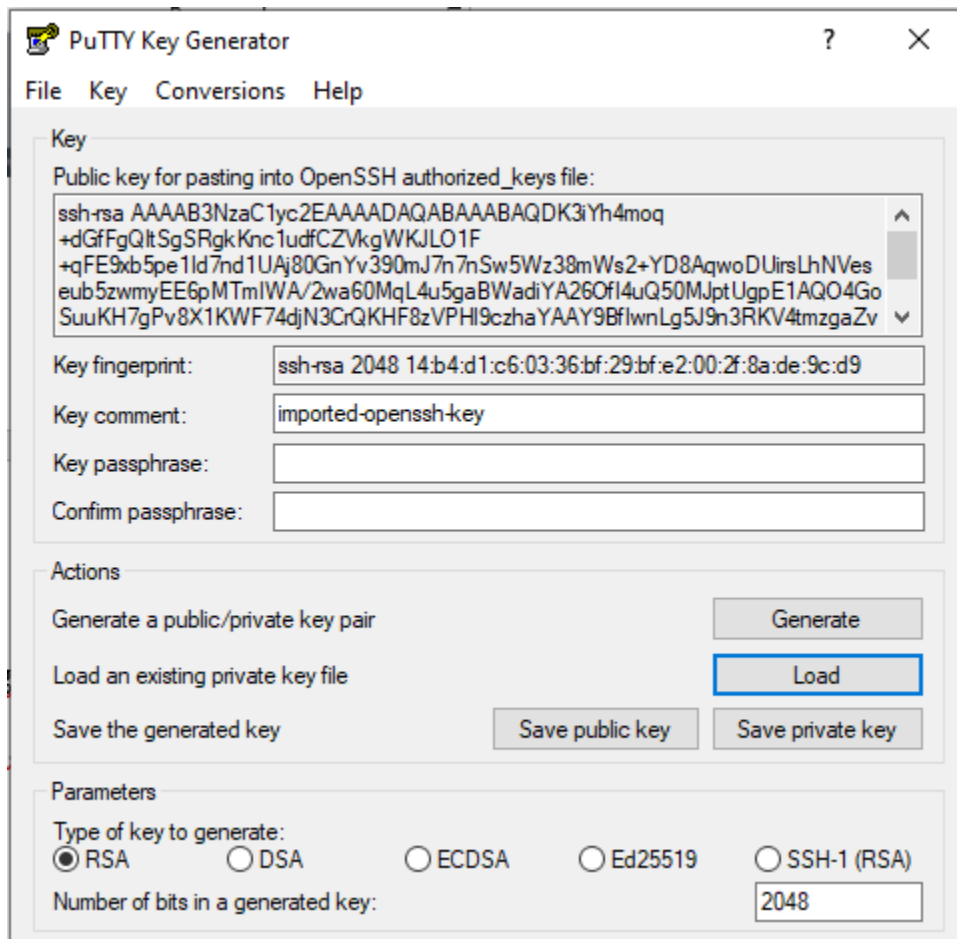
Download Key Pair

You have to download the private key file (\*.pem file) before you can continue. Store it in a secure and accessible location. You will not be able to download the file again after it's created.

Cancel Launch Instances

## 10.) puttygen conversion

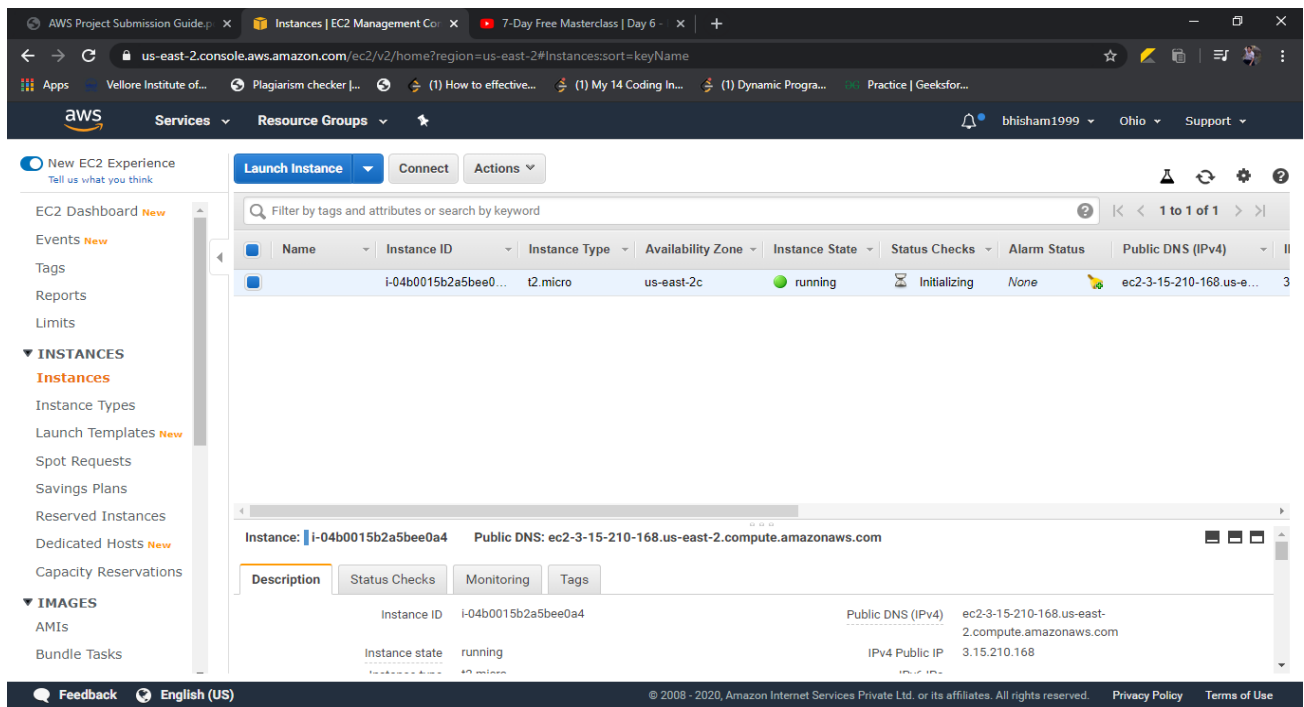
face-ethus.pem to face-ethus.ppk



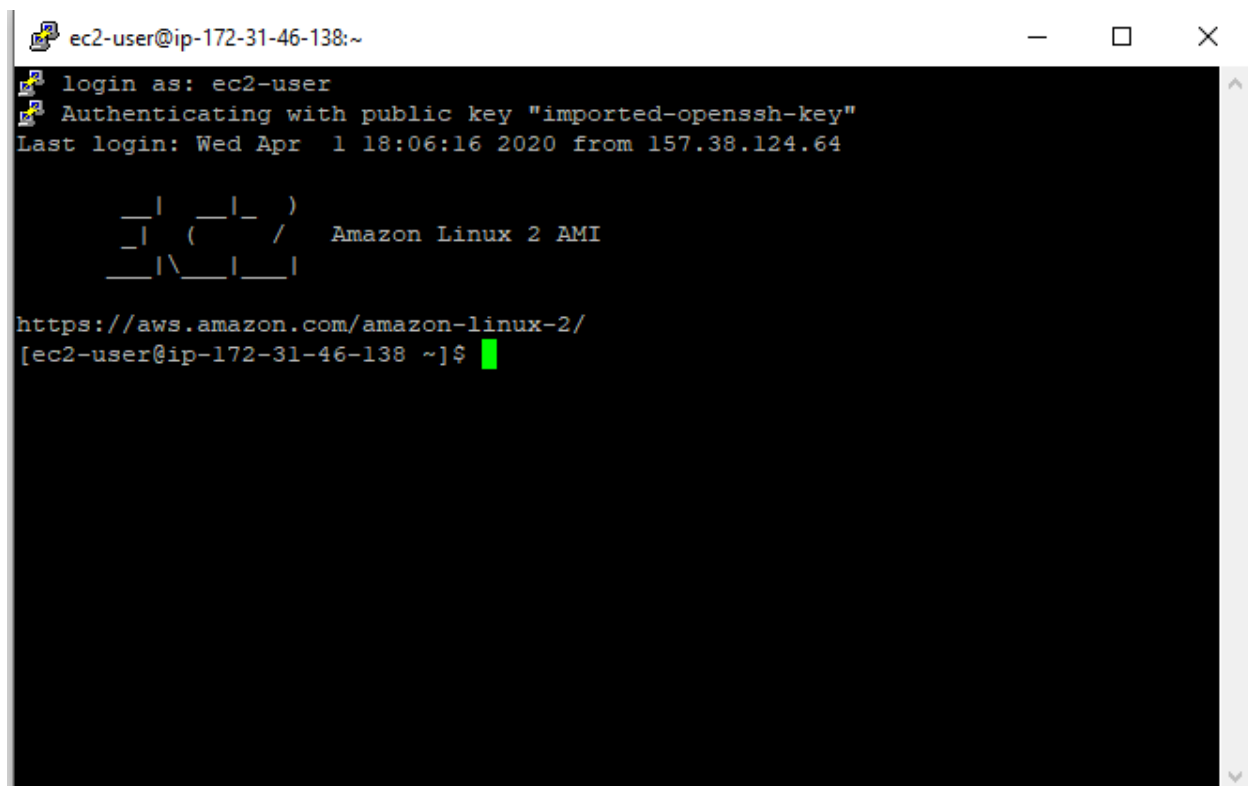
Key-loaded now save it as private key face-ethus

## 11.) Logged in Screen:

My Instance:

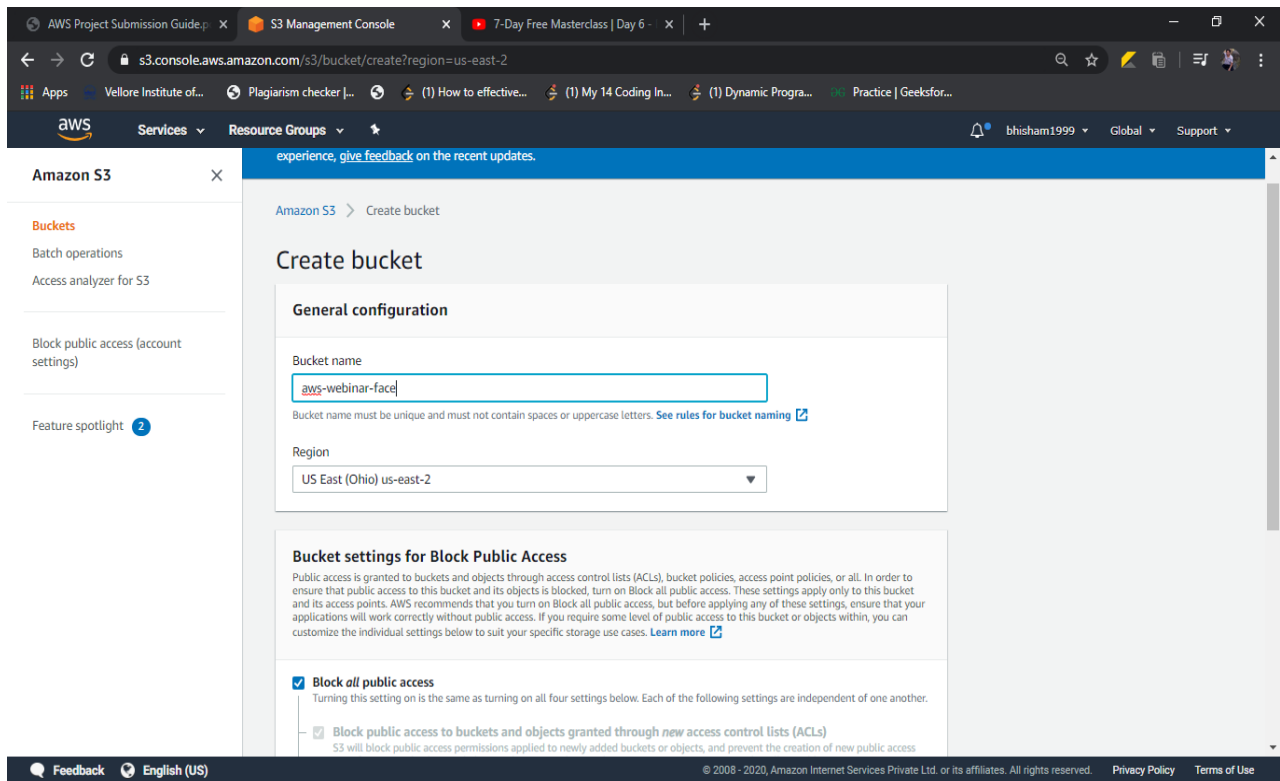


Now Copying the ip address in host in putty and passing ppk key pair in Auth under SSH.



## Screenshots needed for S3:

### 12.) Creating a bucket



experience, [give feedback](#) on the recent updates.

Amazon S3 > Create bucket

### Create bucket

**General configuration**

Bucket name

Bucket name must be unique and must not contain spaces or uppercase letters. [See rules for bucket naming](#)

Region

**Bucket settings for Block Public Access**

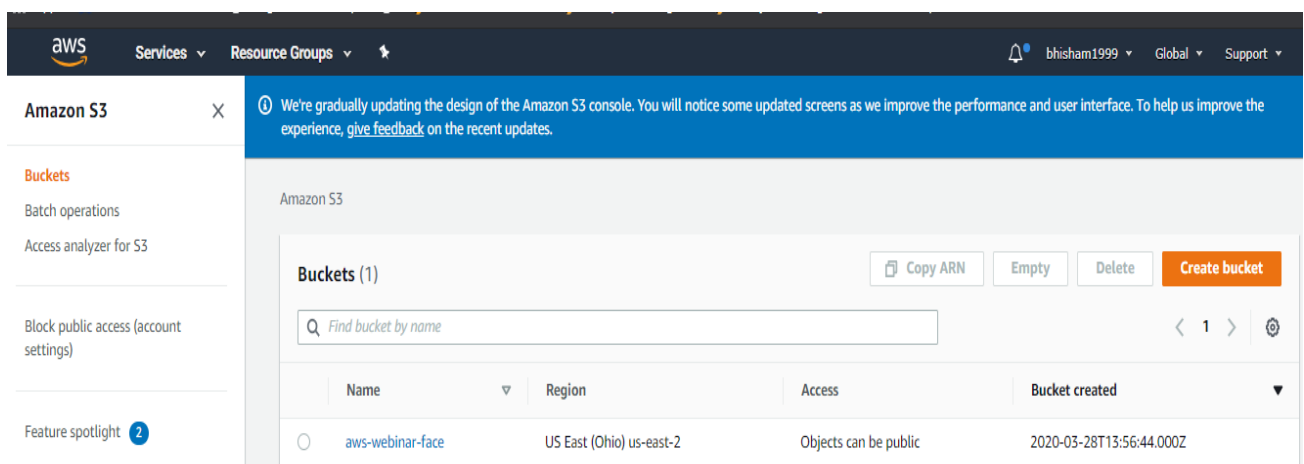
Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to ensure that public access to this bucket and its objects is blocked, turn on Block all public access. These settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to this bucket or objects within, you can customize the individual settings below to suit your specific storage use cases. [Learn more](#)

☒ **Block all public access**  
Turning this setting on is the same as turning on all four settings below. Each of the following settings are independent of one another.

☒ Block public access to buckets and objects granted through *new* access control lists (ACLs)  
S3 will block public access permissions applied to newly added buckets or objects, and prevent the creation of new public access.

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### aws-webinar-face (bucket created)



Amazon S3

We're gradually updating the design of the Amazon S3 console. You will notice some updated screens as we improve the performance and user interface. To help us improve the experience, [give feedback](#) on the recent updates.

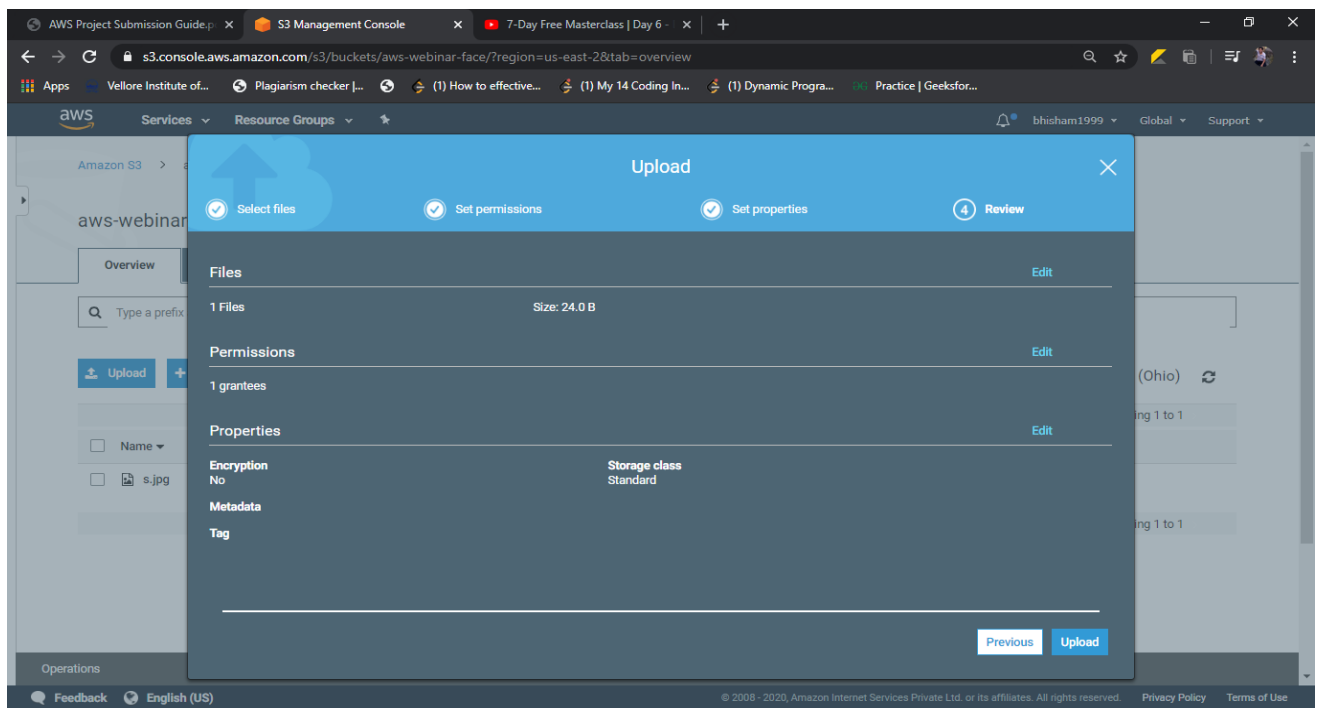
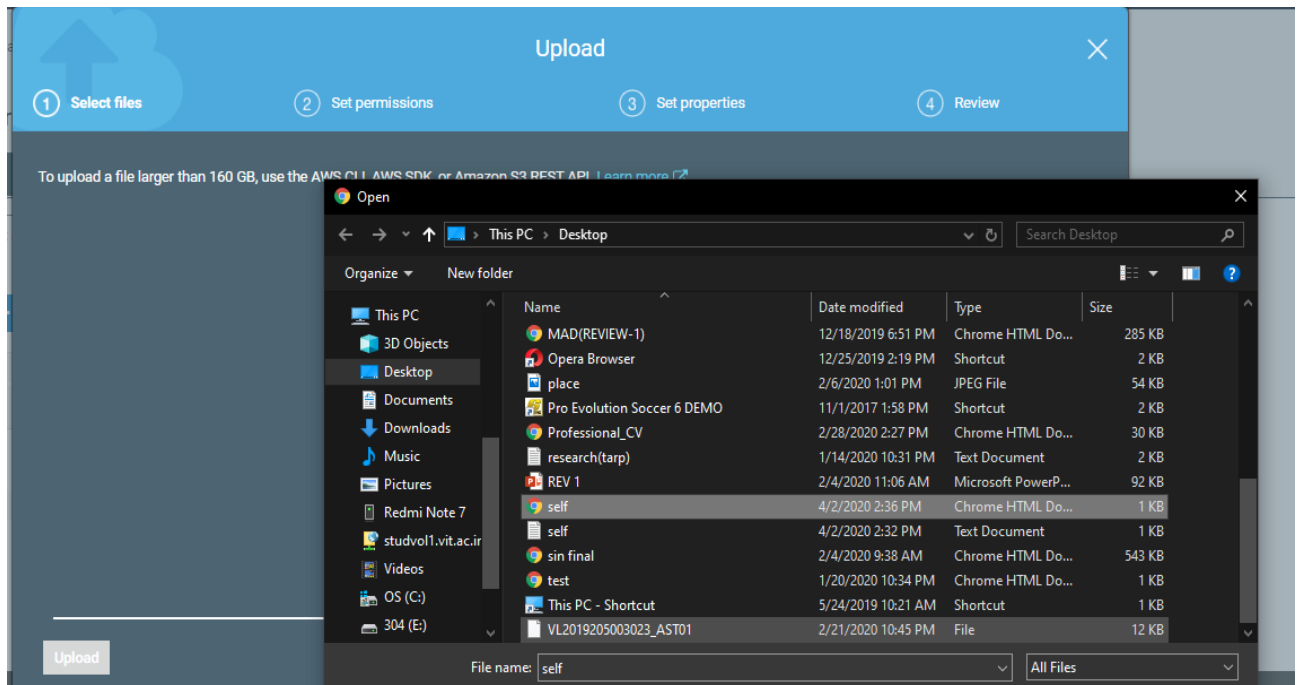
Amazon S3

**Buckets (1)** [Copy ARN](#) [Empty](#) [Delete](#) [Create bucket](#)

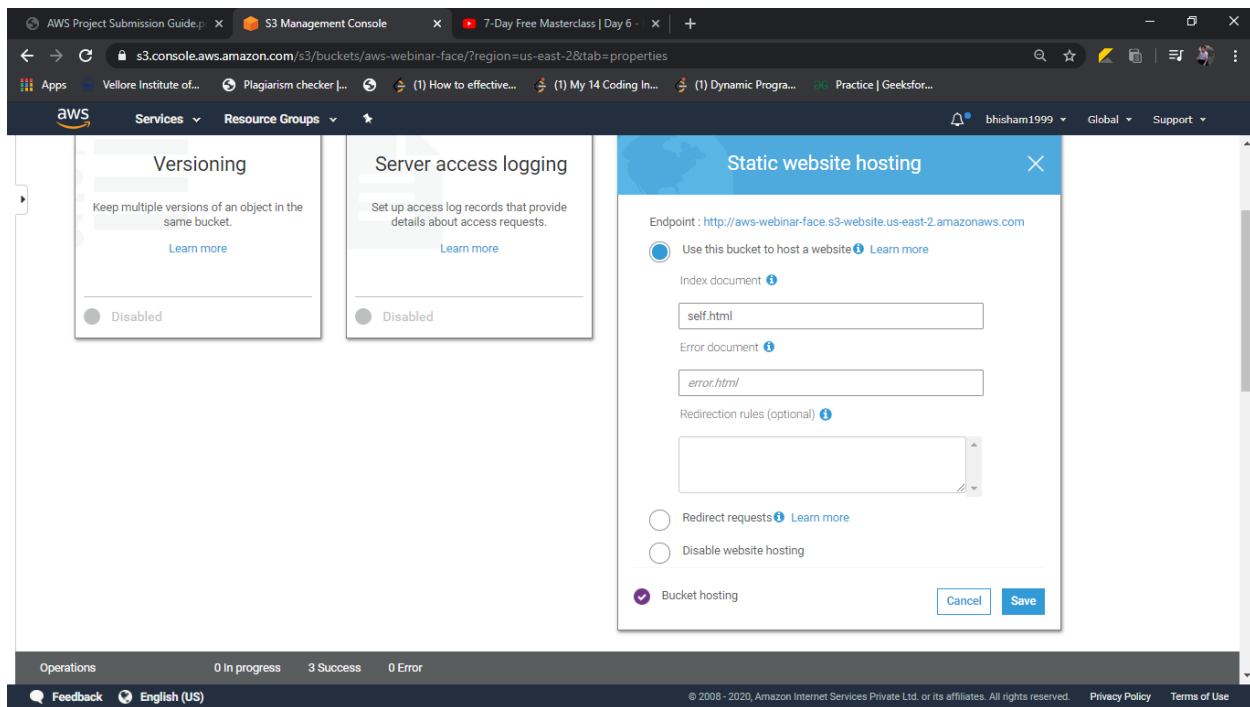
	Name	Region	Access	Bucket created
	aws-webinar-face	US East (Ohio) us-east-2	Objects can be public	2020-03-28T13:56:44.000Z

### 13.) Uploading a File

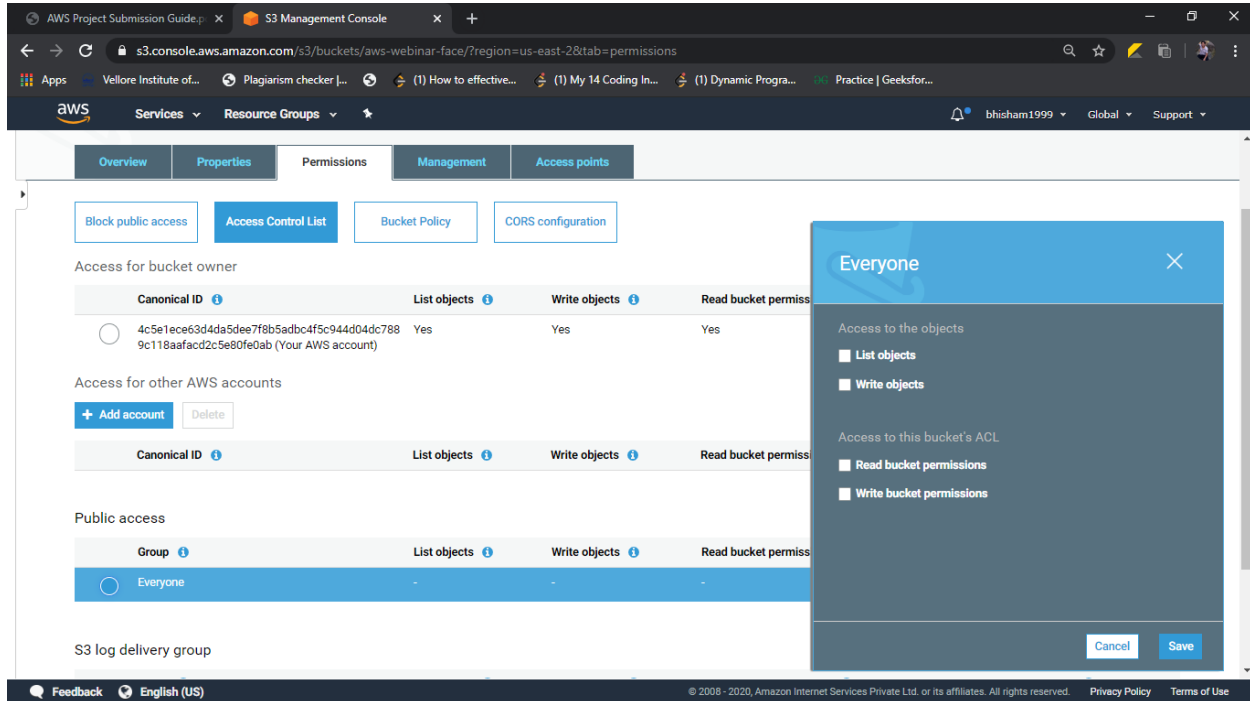


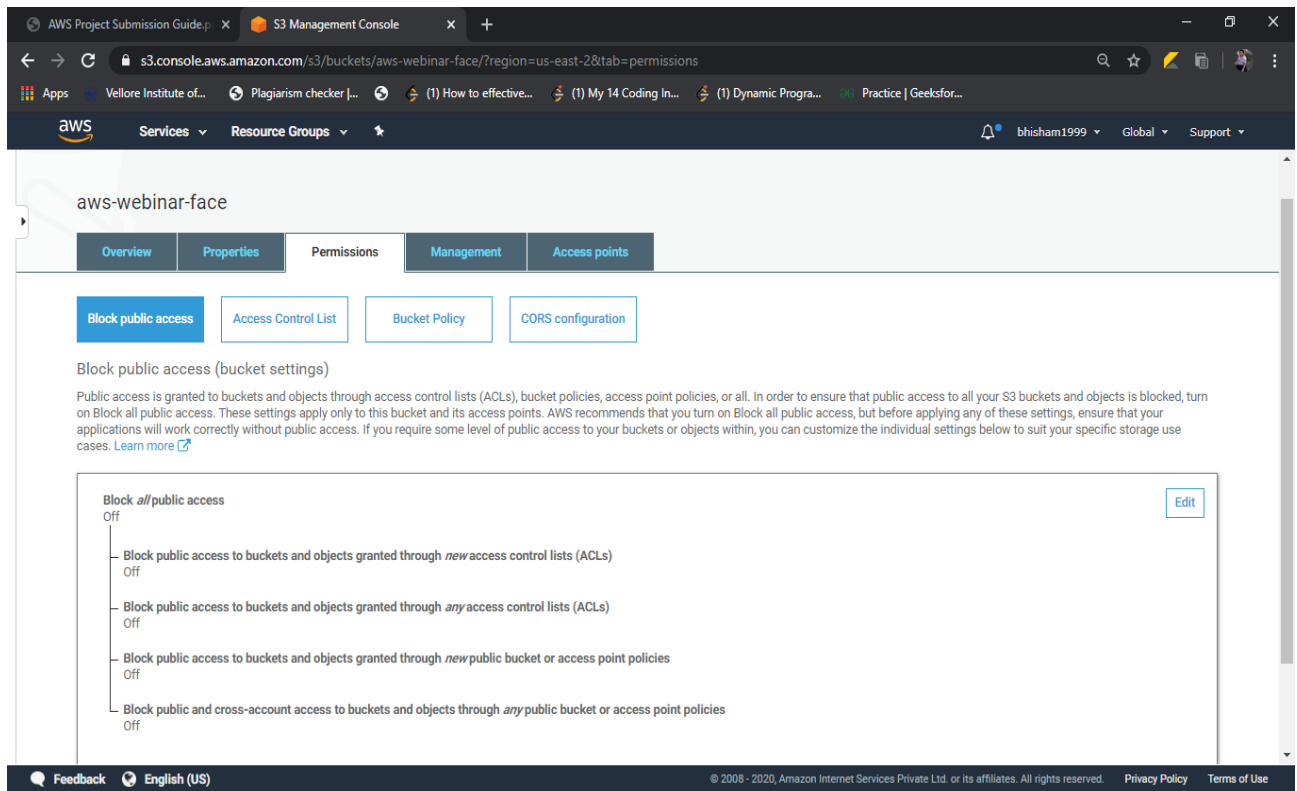


## 14.) Static website hosting

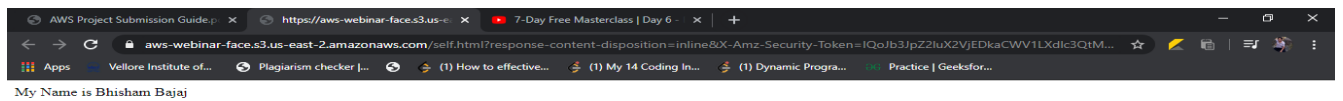


## 15.) Public access





## 16.) Checking the link on Browser (My static website)

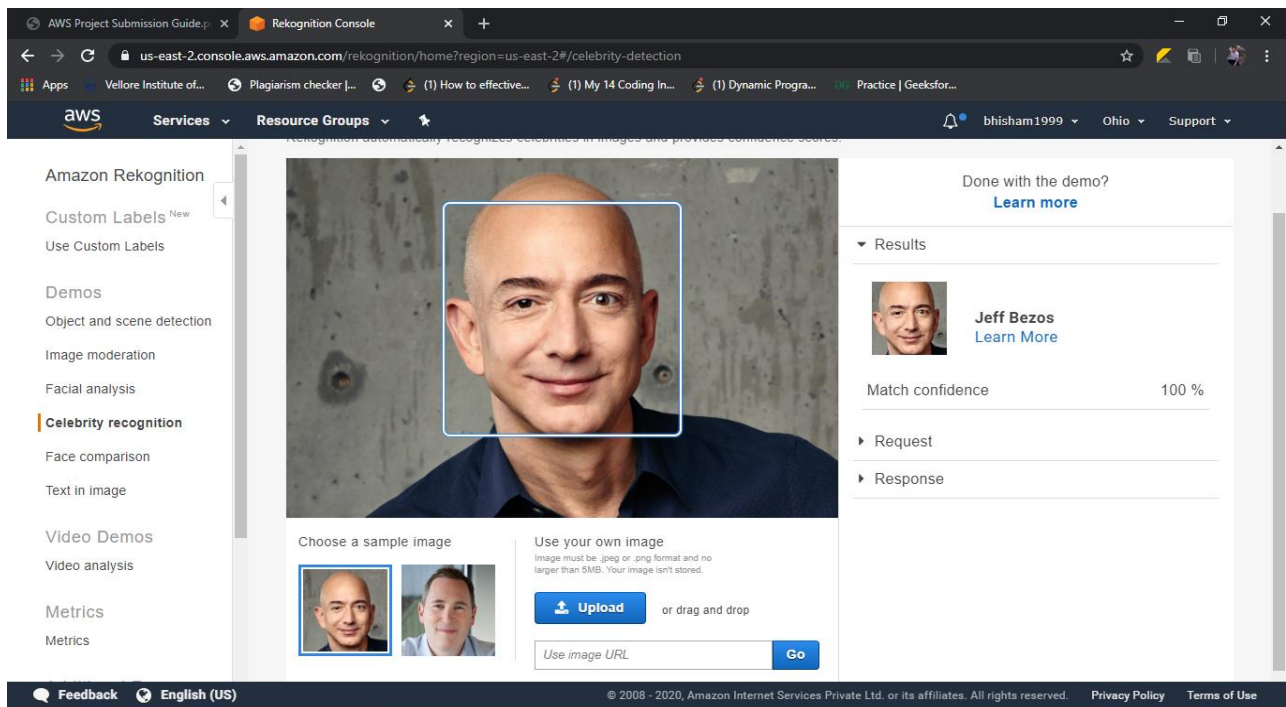


---

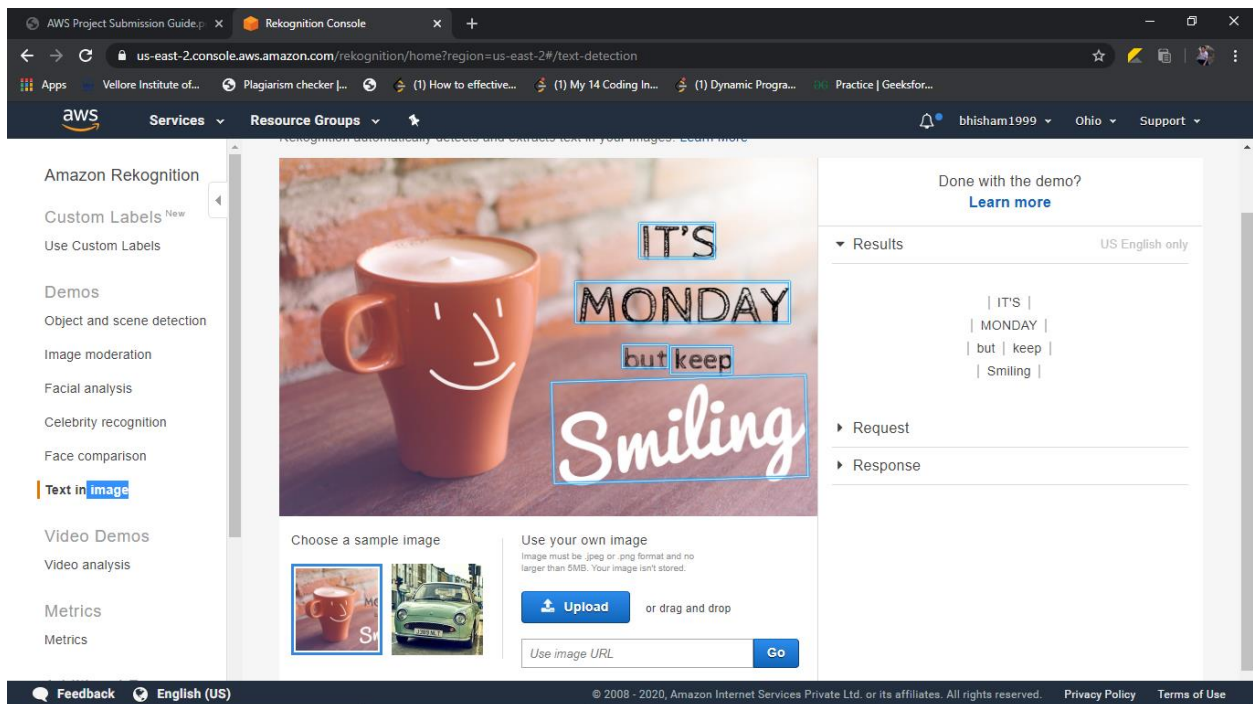
## Screenshots needed for Rekognition:

### 17.) Face Detection





## 20.) Text in Image:



Screenshots needed for EC2 & S3:

## 21.) Installing aws-sdk:

```
ec2-user@ip-172-31-46-138:~  
login as: ec2-user  
Authenticating with public key "imported-openssh-key"  
Last login: Thu Apr  2 08:56:34 2020 from 157.39.218.70  
  
 _ _ | _ _ |  
 _ | ( _ | /  
 _ | \ _ | _ |  
      Amazon Linux 2 AMI  
  
https://aws.amazon.com/amazon-linux-2/  
[ec2-user@ip-172-31-46-138 ~]$ sudo php -d memory_limit=-1 ~/composer.phar require aws/aws-sdk-php  
Using version ^3.134 for aws/aws-sdk-php  
./composer.json has been created  
Loading composer repositories with package information  
Updating dependencies (including require-dev)  
Package operations: 8 installs, 0 updates, 0 removals  
- Installing symfony/polyfill-mbstring (v1.15.0): Loading from cache  
- Installing mtdowling/jmespath.php (2.5.0): Loading from cache  
- Installing guzzlehttp/promises (v1.3.1): Loading from cache  
- Installing ralouphie/getallheaders (3.0.3): Loading from cache  
- Installing psr/http-message (1.0.1): Loading from cache  
- Installing guzzlehttp/psr7 (1.6.1): Loading from cache  
- Installing guzzlehttp/guzzle (6.5.2): Loading from cache  
- Installing aws/aws-sdk-php (3.134.1): Downloading (100%)  
guzzlehttp/psr7 suggests installing zendframework/zend-httphandler (Emit PSR-7 responses)  
guzzlehttp/guzzle suggests installing psr/log (Required for using the Log middleware)  
guzzlehttp/guzzle suggests installing ext-intl (Required for Internationalized Domain Name (IDN) support)  
aws/aws-sdk-php suggests installing doctrine/cache (To use the DoctrineCacheAdapter)  
aws/aws-sdk-php suggests installing aws/aws-php-sns-message-validator (To validate incoming SNS notifications)  
Writing lock file  
Generating autoload files  
1 package you are using is looking for funding.  
Use the `composer fund` command to find out more!  
[ec2-user@ip-172-31-46-138 ~]$
```

## 22.) Installing Php

```
ec2-user@ip-172-31-46-138:~  
[ec2-user@ip-172-31-46-138 ~]$ sudo yum install php  
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd  
amzn2-core | 2.4 kB 00:00  
Resolving Dependencies  
--> Running transaction check  
---> Package php.x86_64 0:7.2.28-1.amzn2 will be installed  
--> Finished Dependency Resolution  
  
Dependencies Resolved  
  
=====
```

Package	Arch	Version	Repository	Size
Installing:				
php	x86_64	7.2.28-1.amzn2	amzn2extra-php7.2	2.9 M

```
=====
```

Transaction Summary	
Install	1 Package

```
=====
```

Total download size:	2.9 M
Installed size:	9.1 M
Is this ok [y/d/N]:	y



## 23.) Code File:

```
ec2-user@ip-172-31-46-138:~  
In case if you get memory error -  
    sudo /bin/dd if=/dev/zero of=/var/swap.1 bs=1M count=1024  
    sudo /sbin/mkswap /var/swap.1  
    sudo /sbin/swapon /var/swap.1  
  
sudo wget https://i.pinimg.com/originals/b9/7e/a3/b97ea33b5842c7894b804923c6c05580.jpg  
sudo mv b97ea33b5842c7894b804923c6c05580.jpg sample.jpg  
  
//  
error_reporting(0);  
require_once(__DIR__ . '/vendor/autoload.php');  
  
use Aws\S3\S3Client;  
use Aws\Rekognition\RekognitionClient;  
  
$bucket = 'aws-webinar-face';  
$keyname = 's.jpg';  
  
$s3 = S3Client::factory([  
    'profile' => 'default',  
    'region' => 'us-east-2',  
    'version' => '2006-03-01',  
    'signature' => 'v4'  
]);  
  
try {  
    // Upload data.  
    $result = $s3->putObject([  
        'Bucket' => $bucket,  
        'Key' => $keyname,  
        'SourceFile' => __DIR__ . "/$keyname",  
        'ACL' => 'public-read'  
    ]);  
  
    // Print the URL to the object.  
    $imageUrl = $result['ObjectURL'];  
    if($imageUrl) {  
        echo "Image upload done... Here is the URL: " . $imageUrl;  
    }  
} catch (Exception $e) {  
    echo $e->getMessage() . PHP_EOL;  
}  
  
"index.php" 55L, 1223C
```

## 24.) Image upload Done..

ec2-user@ip-172-31-46-138:/var/www/html/face

```
[ec2-user@ip-172-31-46-138 ~]$ cd /var/www/html  
[ec2-user@ip-172-31-46-138 html]$ cd face  
[ec2-user@ip-172-31-46-138 face]$ pwd  
/var/www/html/face  
[ec2-user@ip-172-31-46-138 face]$ ls  
composer.json composer.lock index.php s.jpg vendor  
[ec2-user@ip-172-31-46-138 face]$ sudo php index.php  
Image upload done... Here is the URL: https://aws-webinar-face.s3.us-east-2.amazonaws.com/s.jpg
```

## 25.) EC2-Recognition (facial detection)

```
[ec2-user@ip-172-31-46-138 face]$ sudo php index.php  
Image upload done... Here is the URL: https://aws-webinar-face.s3.us-east-2.amazonaws.com/s.jpg  
Totally there are 9 faces [ec2-user@ip-172-31-46-138 face]$
```