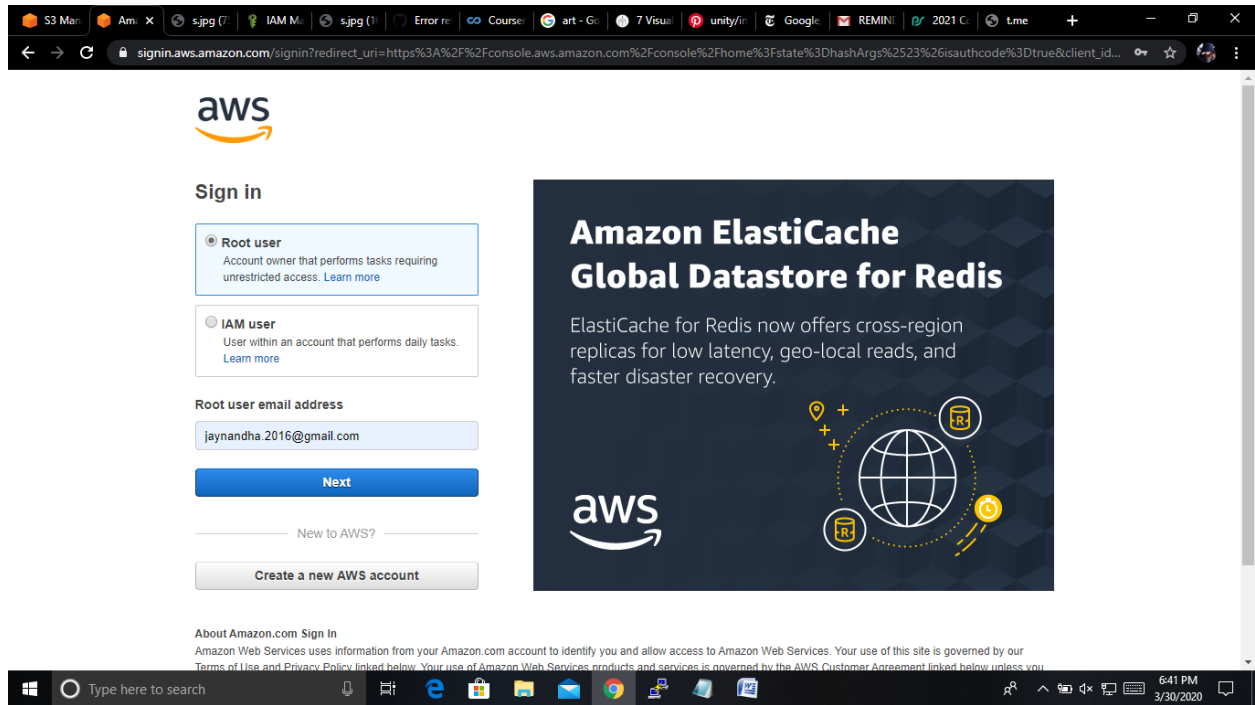


# BUILDING A FACE DETECTION AWS APP

NAME: JAYASHREE N

e-mail: jaynandha.2016@gmail.com

## Login to AWS



The screenshot shows the AWS Sign In page in a web browser. The browser's address bar displays a URL for signing in. The page features the AWS logo at the top left. Below it, the 'Sign in' section has two radio button options: 'Root user' (selected) and 'IAM user'. The 'Root user' option is described as the 'Account owner that performs tasks requiring unrestricted access.' Below these options, there is a text input field for the 'Root user email address' containing 'jaynandha.2016@gmail.com'. A blue 'Next' button is positioned below the email field. At the bottom of the sign-in section, there are links for 'New to AWS?' and 'Create a new AWS account'. To the right of the sign-in form is a large promotional banner for 'Amazon ElastiCache Global Datastore for Redis', which includes a globe icon and text about cross-region replicas. At the bottom of the page, there is a small 'About Amazon.com Sign In' section with a disclaimer. The Windows taskbar at the bottom shows the time as 6:41 PM on 3/30/2020.

aws

Sign in

☒ **Root user**  
Account owner that performs tasks requiring unrestricted access. [Learn more](#)

☐ **IAM user**  
User within an account that performs daily tasks. [Learn more](#)

Root user email address

**Next**

[New to AWS?](#)

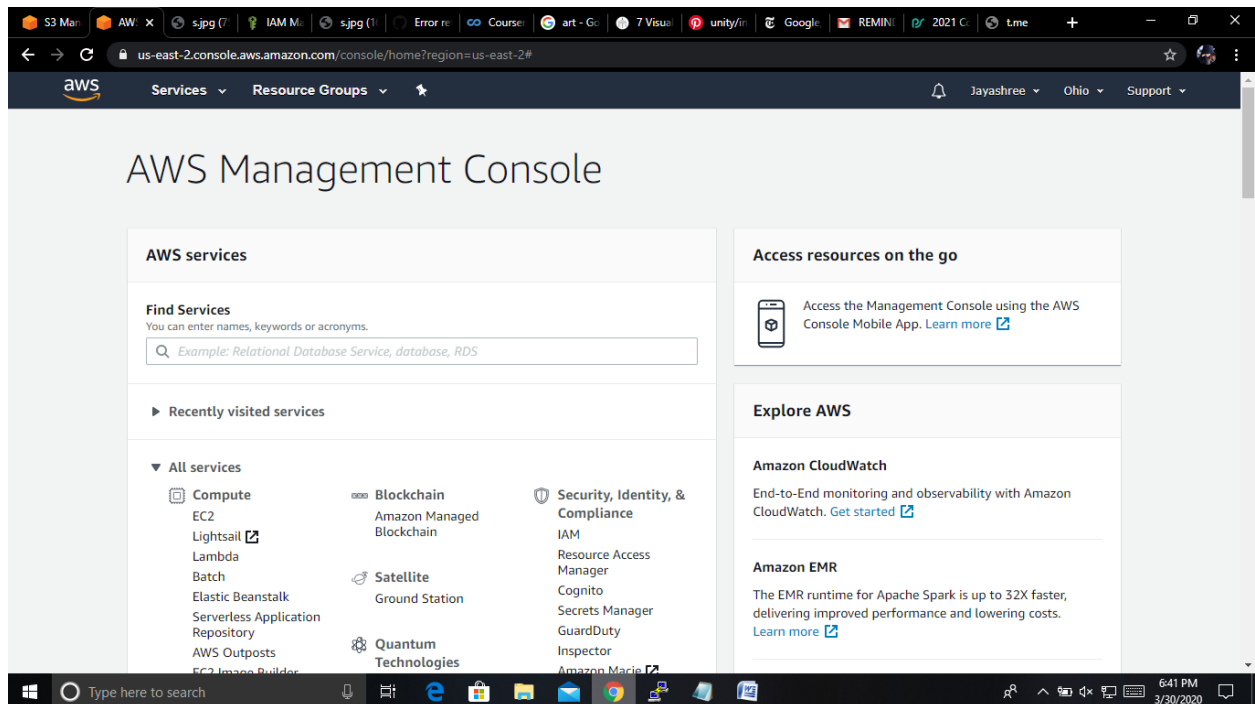
[Create a new AWS account](#)

**Amazon ElastiCache**  
**Global Datastore for Redis**

ElastiCache for Redis now offers cross-region replicas for low latency, geo-local reads, and faster disaster recovery.

aws

About Amazon.com Sign In  
Amazon Web Services uses information from your Amazon.com account to identify you and allow access to Amazon Web Services. Your use of this site is governed by our [Terms of Use and Privacy Policy](#) linked below. Your use of Amazon Web Services products and services is governed by the [AWS Customer Agreement](#) linked below unless you



The screenshot shows the AWS Management Console in a web browser. The browser's address bar displays the URL 'us-east-2.console.aws.amazon.com/console/home?region=us-east-2#'. The console header includes the AWS logo, 'Services' and 'Resource Groups' dropdowns, and a user profile for 'Jayashree' in the 'Ohio' region. The main content area is titled 'AWS Management Console' and is divided into several sections. On the left, there is a 'Find Services' search bar with the placeholder text 'Example: Relational Database Service, database, RDS'. Below this is a 'Recently visited services' section. The 'All services' section is expanded, showing a grid of service categories: Compute (EC2, Lightsail, Lambda, Batch, Elastic Beanstalk, Serverless Application Repository, AWS Outposts, EC2 Image Builder), Blockchain (Amazon Managed Blockchain), Satellite (Ground Station), Quantum Technologies, Security, Identity, & Compliance (IAM, Resource Access Manager, Cognito, Secrets Manager, GuardDuty, Inspector, Amazon Macie), and Access resources on the go (Access the Management Console using the AWS Console Mobile App). On the right, there is an 'Explore AWS' section with cards for 'Amazon CloudWatch' (End-to-End monitoring and observability with Amazon CloudWatch) and 'Amazon EMR' (The EMR runtime for Apache Spark is up to 32X faster, delivering improved performance and lowering costs). The Windows taskbar at the bottom shows the time as 6:41 PM on 3/30/2020.

us-east-2.console.aws.amazon.com/console/home?region=us-east-2#

aws Services Resource Groups Jayashree Ohio Support

## AWS Management Console

**AWS services**

**Find Services**  
You can enter names, keywords or acronyms.

**Recently visited services**

**All services**

- Compute**
  - EC2
  - Lightsail
  - Lambda
  - Batch
  - Elastic Beanstalk
  - Serverless Application Repository
  - AWS Outposts
  - EC2 Image Builder
- Blockchain**
  - Amazon Managed Blockchain
- Satellite**
  - Ground Station
- Quantum Technologies**
- Security, Identity, & Compliance**
  - IAM
  - Resource Access Manager
  - Cognito
  - Secrets Manager
  - GuardDuty
  - Inspector
  - Amazon Macie

**Access resources on the go**

Access the Management Console using the AWS Console Mobile App. [Learn more](#)

**Explore AWS**

**Amazon CloudWatch**  
End-to-End monitoring and observability with Amazon CloudWatch. [Get started](#)

**Amazon EMR**  
The EMR runtime for Apache Spark is up to 32X faster, delivering improved performance and lowering costs. [Learn more](#)

## EC2 Dashboard:

The screenshot shows the AWS Management Console for the EC2 service in the us-east-2 region. A blue banner at the top welcomes users to the new EC2 console. The left sidebar contains navigation links for EC2 Dashboard, Events, Tags, Reports, Limits, INSTANCES, and IMAGES. The main content area displays a 'Resources' table listing various EC2 resources in the US East (Ohio) Region.

Resources	
You are using the following Amazon EC2 resources in the US East (Ohio) Region:	
Running instances	1
Elastic IPs	0
Dedicated Hosts	0
Snapshots	0
Volumes	1
Load balancers	0
Key pairs	2
Security groups	3
Placement groups	0

On the right, the 'Account attributes' section shows supported platforms (VPC) and the default VPC (vpc-6e934605). A 'Feedback' button is visible at the bottom left of the console area.

## S3 Dashboard:

The screenshot shows the AWS Management Console for the S3 service in the us-east-2 region. A blue banner at the top informs users of ongoing updates to the S3 console. The left sidebar contains navigation links for Amazon S3, Buckets, Batch operations, Access analyzer for S3, Block public access (account settings), and Feature spotlight. The main content area displays a 'Buckets (1)' table listing the details of the 'demo-bucket-j'.

Name	Region	Access	Bucket created
demo-bucket-j	US East (Ohio) us-east-2	Objects can be public	2020-03-28T15:35:59.000Z

Buttons for 'Copy ARN', 'Empty', 'Delete', and 'Create bucket' are located above the table. A search bar 'Find bucket by name' is also present.

## Amazon Rekognition:

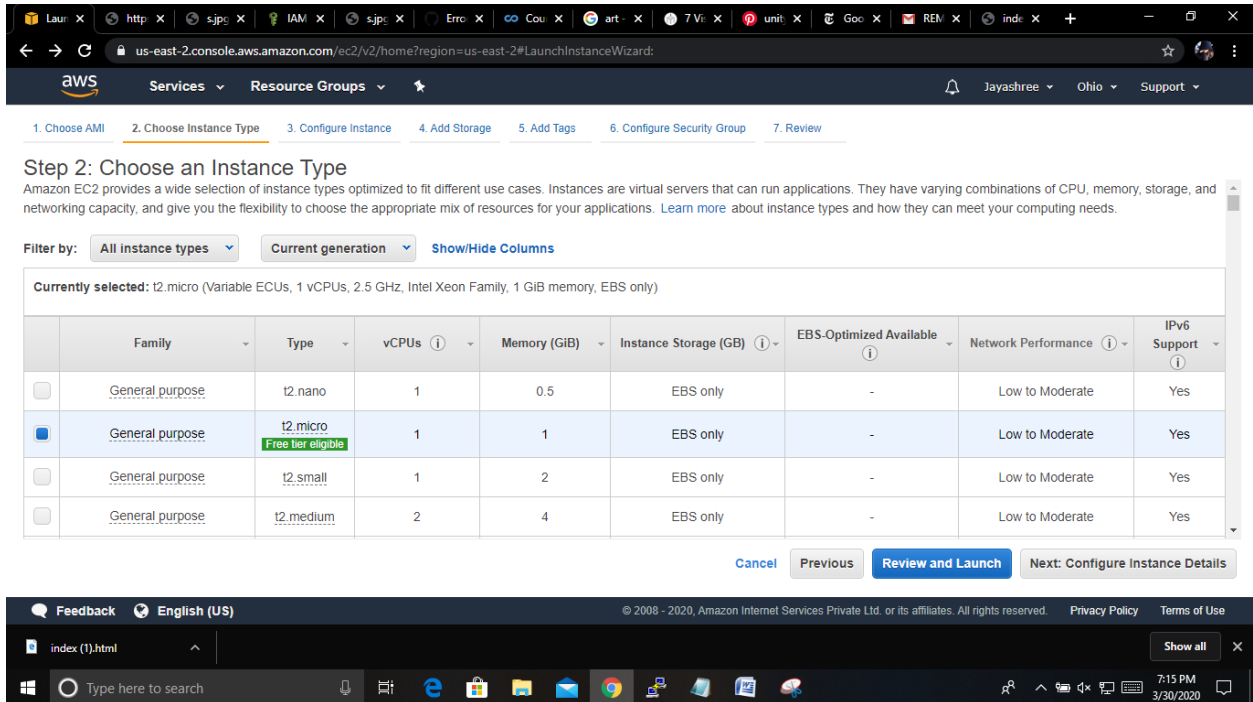
The screenshot shows the Amazon Rekognition console interface. The top navigation bar includes the AWS logo, 'Services', 'Resource Groups', and user information (Jayashree, Ohio, Support). The left sidebar lists navigation options: Amazon Rekognition, Custom Labels (with a 'New' tag), Use Custom Labels, Demos (with sub-items: Object and scene detection, Image moderation, Facial analysis, Celebrity recognition, Face comparison, Text in image), Video Demos (with sub-item: Video analysis), Metrics, and Metrics. The main content area features a large header with the title 'Amazon Rekognition' and the description 'Deep learning-based visual analysis service. Search, verify, and organize millions of images and videos.' Below this are buttons for 'Try Demo' and 'Download SDKs'. Three key features are highlighted with icons: 'Easily Integrate Powerful Visual Analysis into Your App' (stack of images icon), 'Continuously Learning' (circuit icon), and 'Integrated with AWS Services' (puzzle pieces icon). The footer contains a feedback link, language selector (English (US)), copyright notice (© 2008 - 2020, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved.), Privacy Policy, and Terms of Use. The Windows taskbar at the bottom shows the search bar and various application icons.

## Creating EC2 Instance:

### Choosing AMI:

The screenshot displays the 'Step 1: Choose an Amazon Machine Image (AMI)' page in the AWS Management Console. The top navigation bar is identical to the previous screenshot. The breadcrumb trail shows the steps: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage, 5. Add Tags, 6. Configure Security Group, and 7. Review. The main heading is 'Step 1: Choose an Amazon Machine Image (AMI)'. Below the heading is a descriptive paragraph about AMIs. A search bar is provided with the placeholder text 'Search for an AMI by entering a search term e.g. "Windows"'. The 'Quick Start' section on the left lists 'My AMIs', 'AWS Marketplace', and 'Community AMIs', with a 'Free tier only' filter. The main list of AMIs shows two options: 'Amazon Linux 2 AMI (HVM), SSD Volume Type' and 'Amazon Linux AMI 2018.03.0 (HVM), SSD Volume Type'. Each entry includes its AMI ID, architecture (64-bit x86), and a 'Select' button. The Windows taskbar at the bottom shows the search bar and various application icons.

## Choosing an Instance type:



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

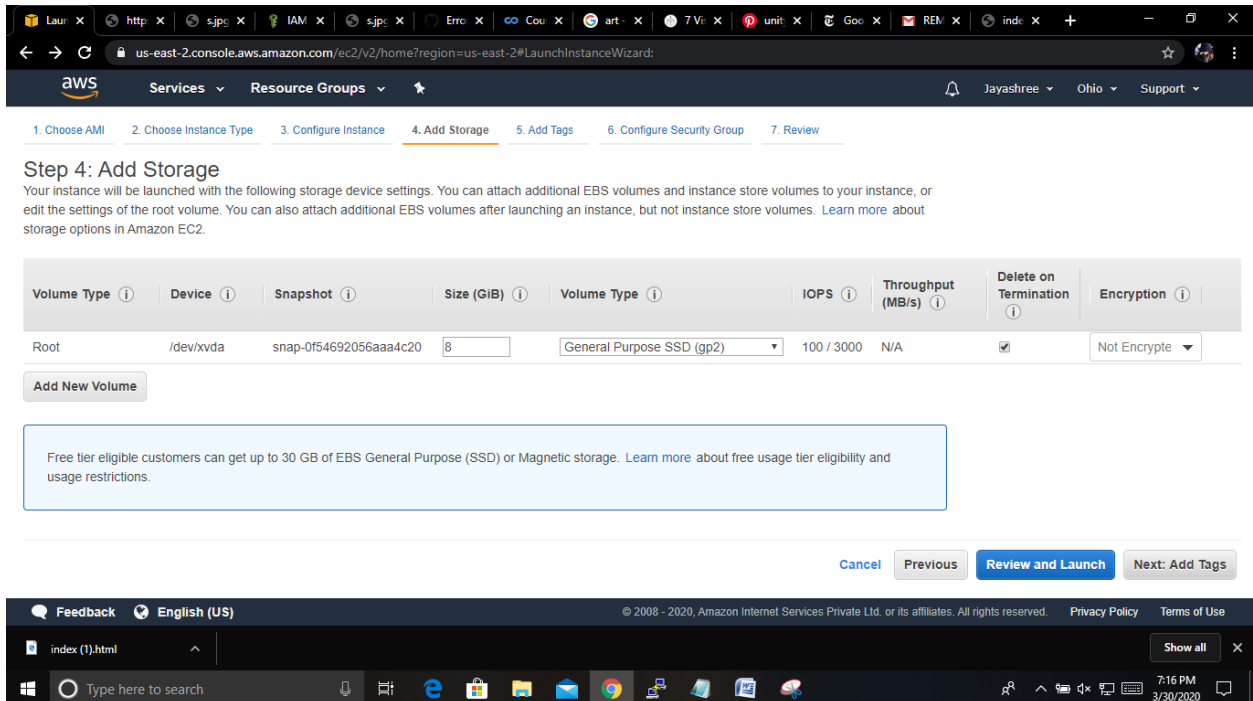
Cancel Previous Review and Launch Next: Configure Instance Details

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index (1).html Show all

Type here to search 7:15 PM 3/30/2020

## Adding Storage :



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

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index (1).html Show all

Type here to search 7:16 PM 3/30/2020

## Configuring Security Group :

**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](#)

## Launching instance:

**Step 7: Review Instance Launch**

**AMI Details** [Edit AMI](#)

**Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-0e01ce4ee18447327**

Free tier eligible  
Amazon Linux 2 comes with five years support. It provides Linux kernel 4.14 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.26, Binutils 2.29.1, and the latest software packages through extras.  
Root Device Type: ebs Virtualization type: hvm

**Instance Type** [Edit instance type](#)

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	Variable	1	1	EBS only	-	Low to Moderate

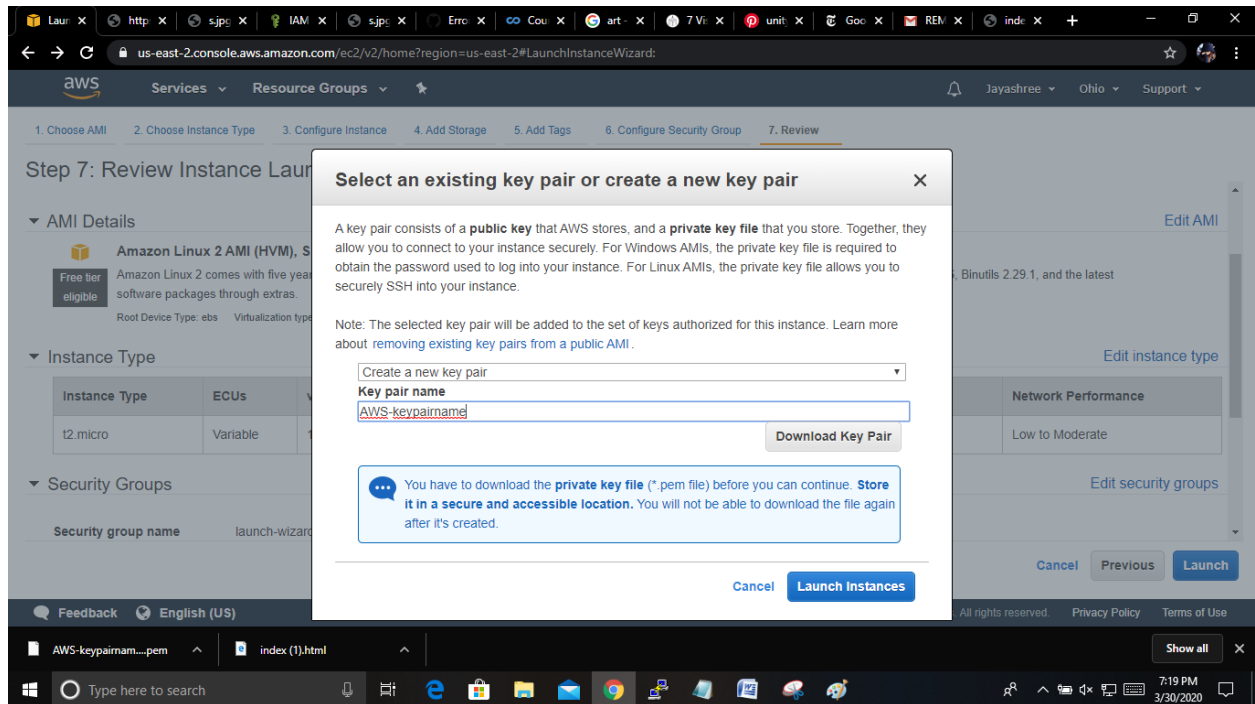
**Security Groups** [Edit security groups](#)

**Security group name**

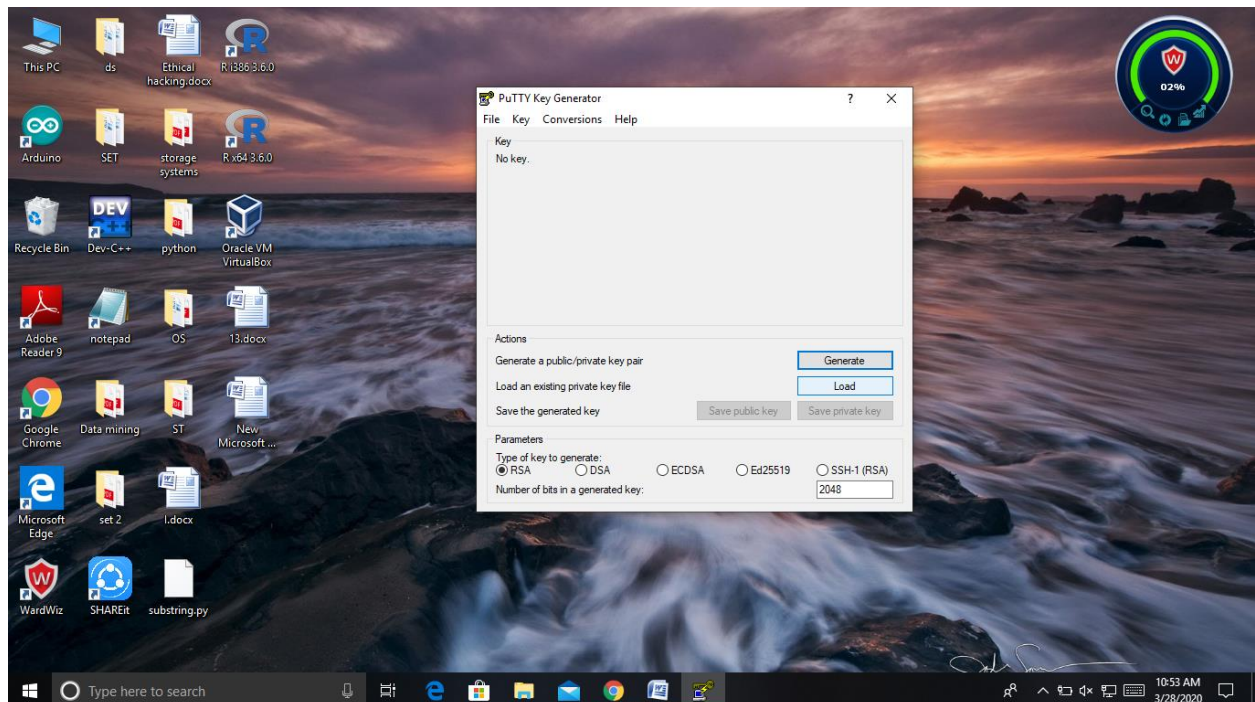
[Cancel](#) [Previous](#) [Launch](#)

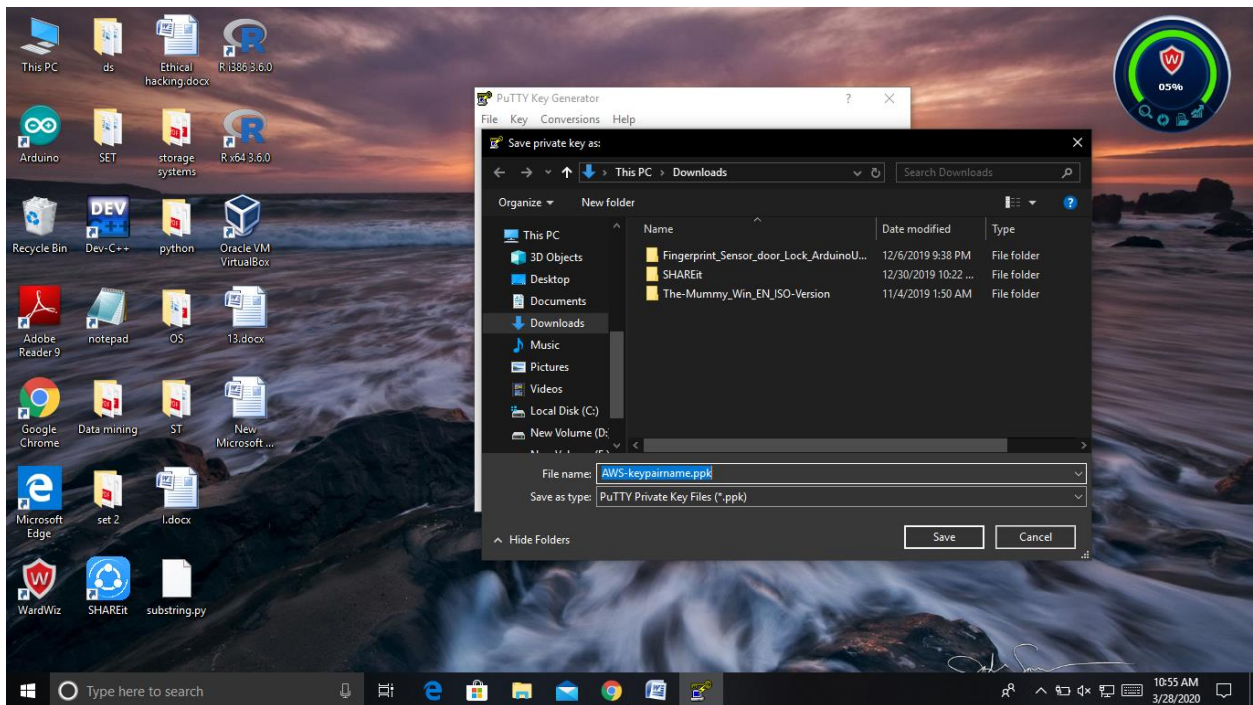
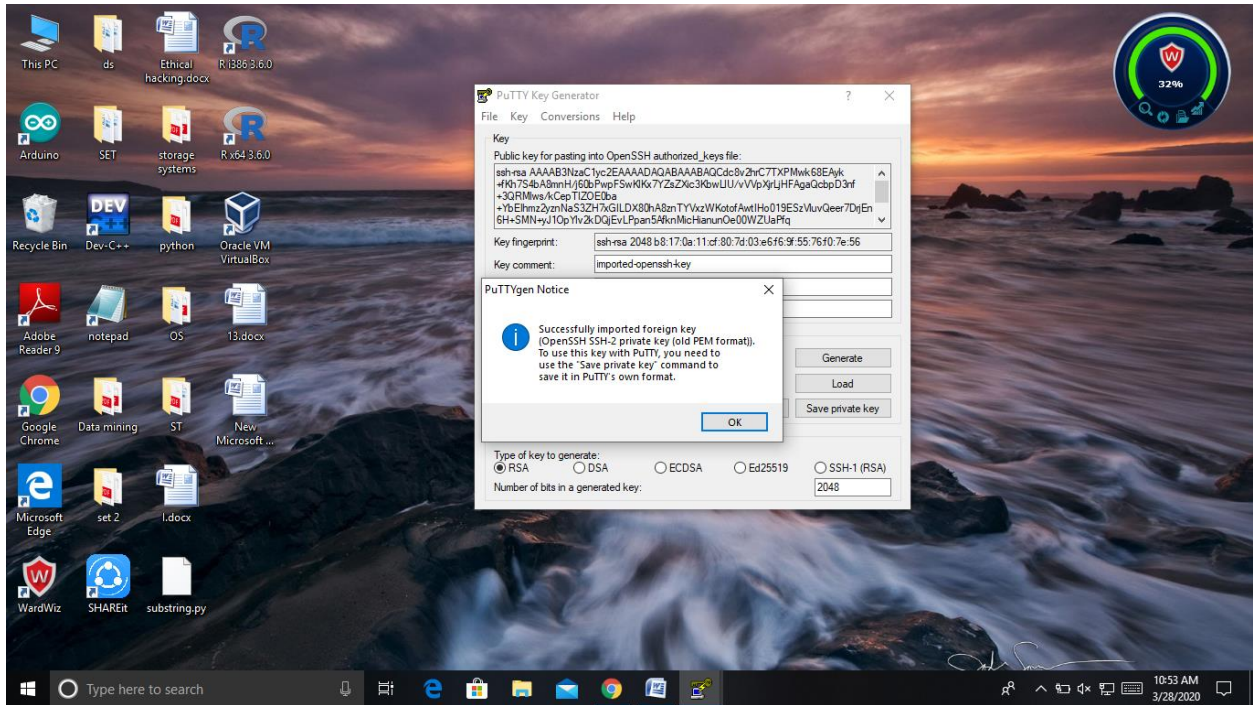


## Downloading Keypair:

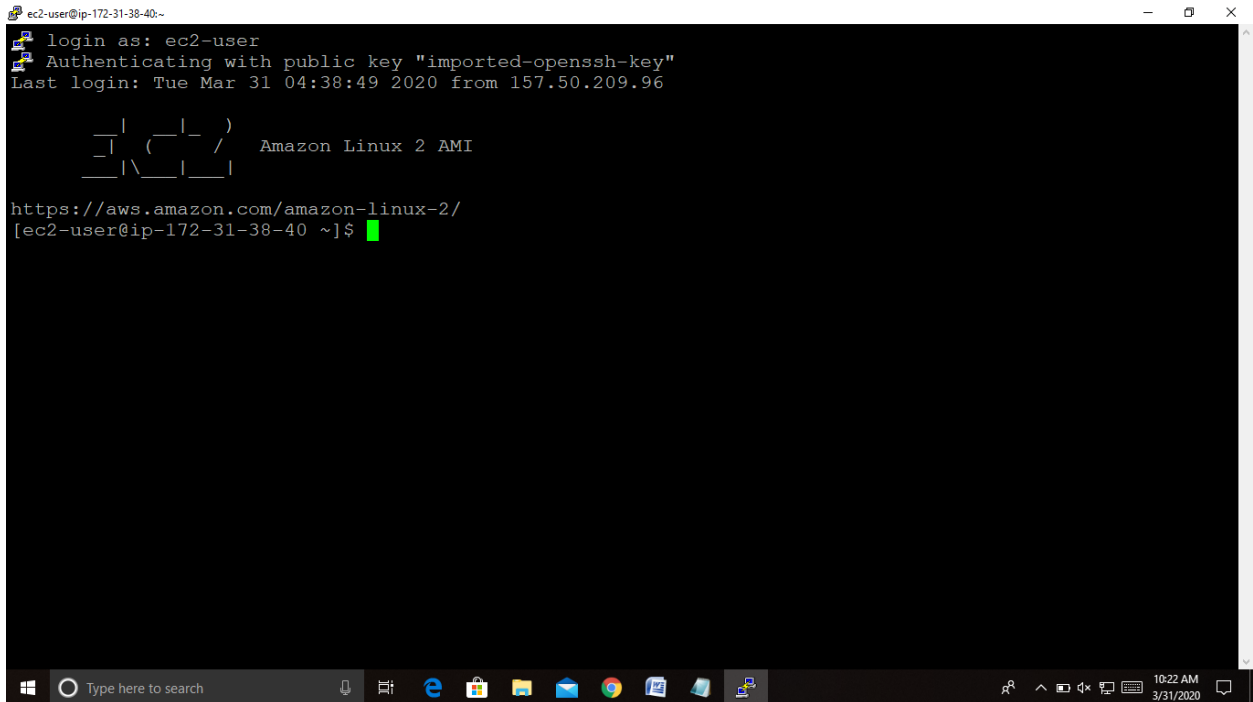


## Converting PEM to PPK using Puttygen:





## Login to Putty:

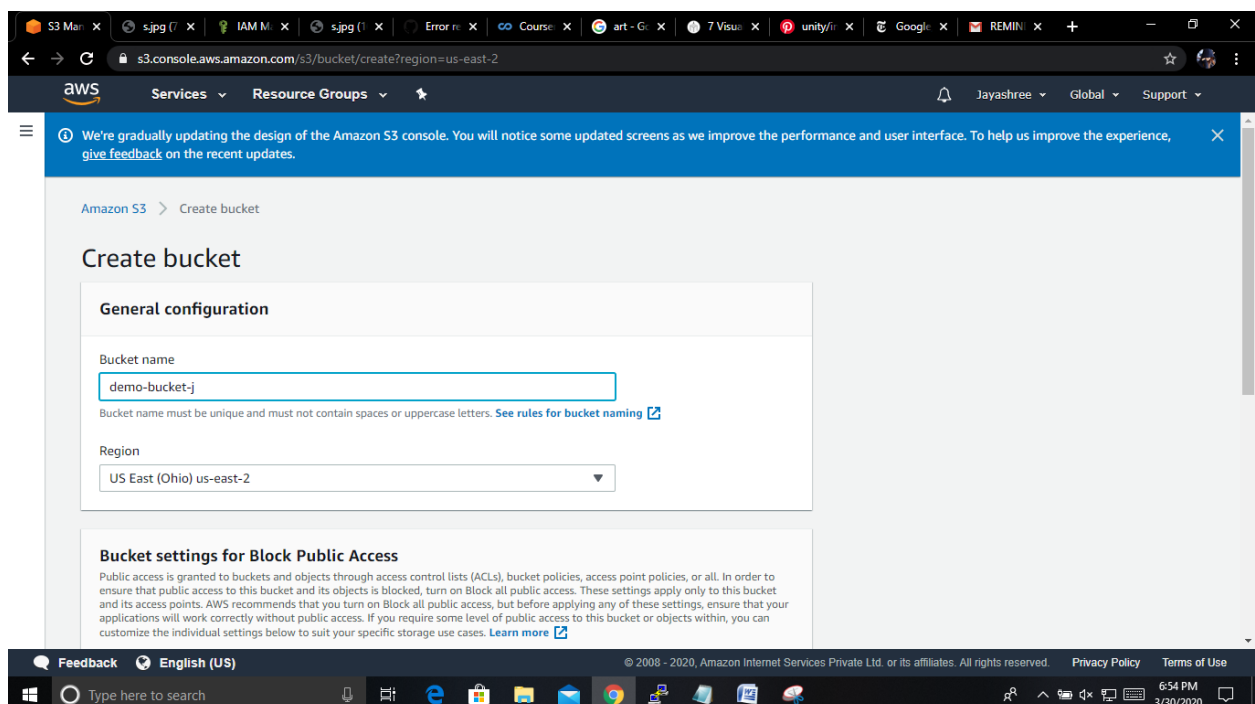


```
ec2-user@ip-172-31-38-40:~  
login as: ec2-user  
Authenticating with public key "imported-openssh-key"  
Last login: Tue Mar 31 04:38:49 2020 from 157.50.209.96  
  
  _   _   _  
 _/___(_)_/   Amazon Linux 2 AMI  
/_/___/_/___/  
  
https://aws.amazon.com/amazon-linux-2/  
[ec2-user@ip-172-31-38-40 ~]$
```

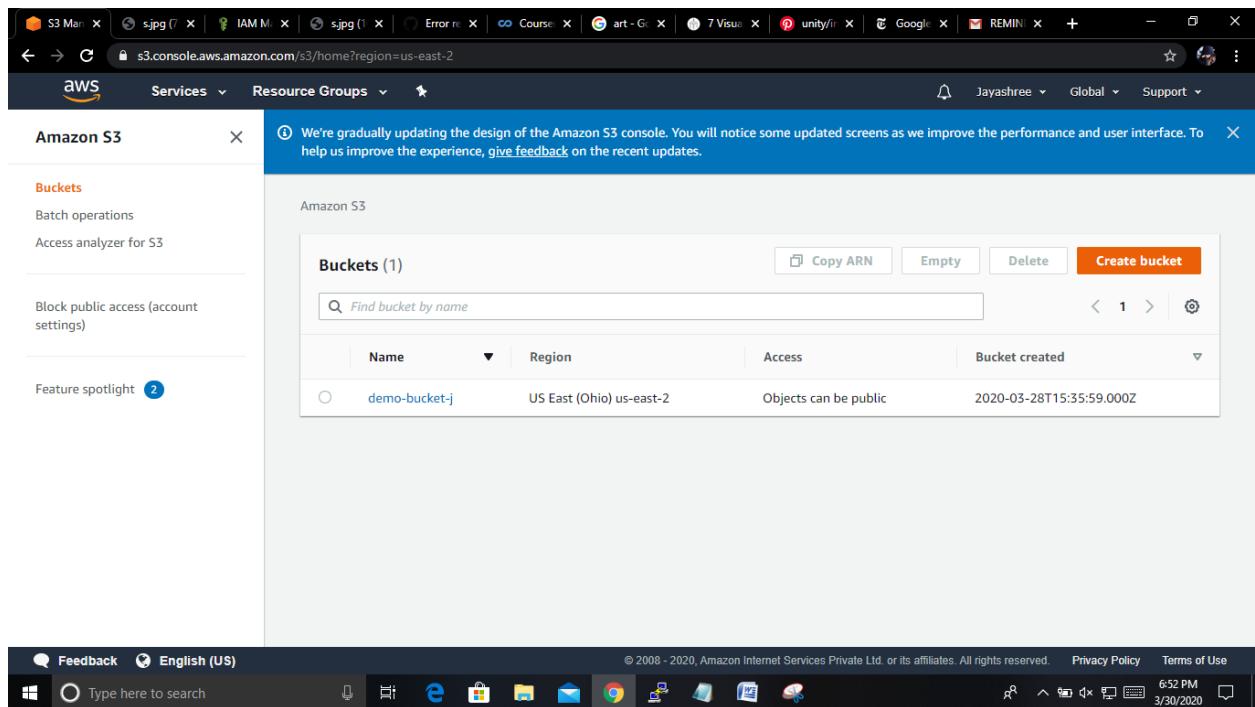
## DAY-2

### A . Creating S3 Bucket:

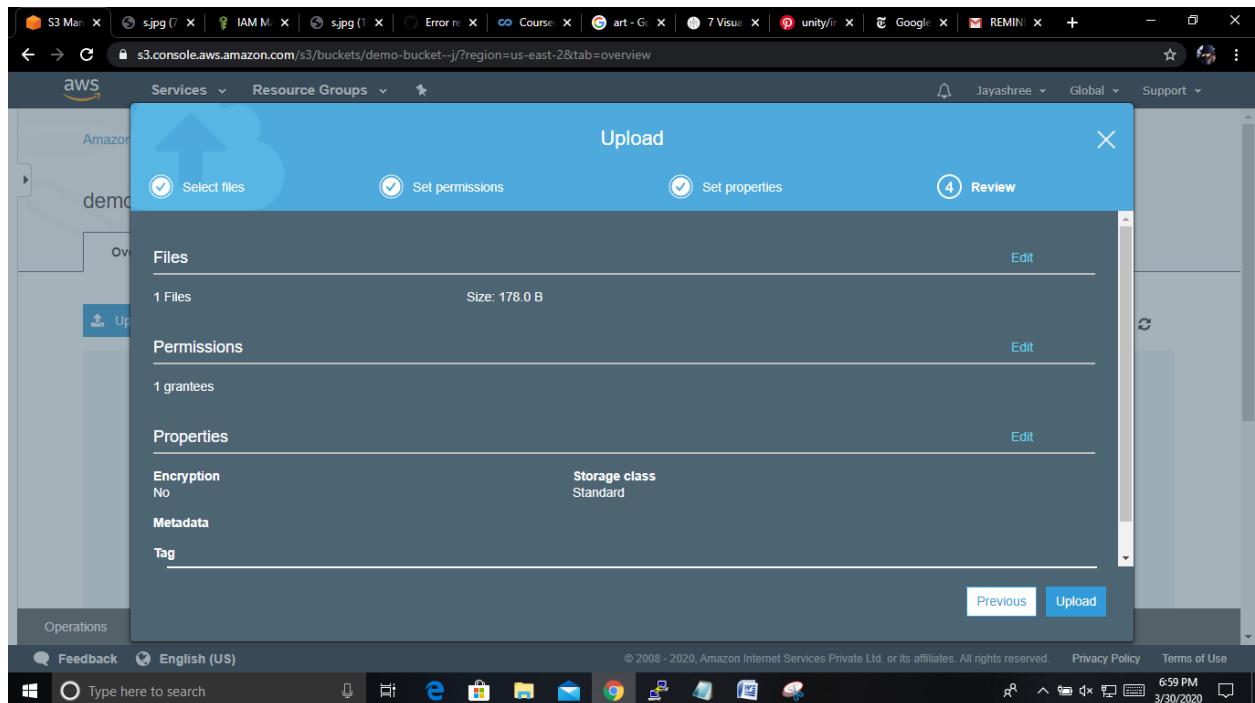
**Bucket name:** demo-bucket-j

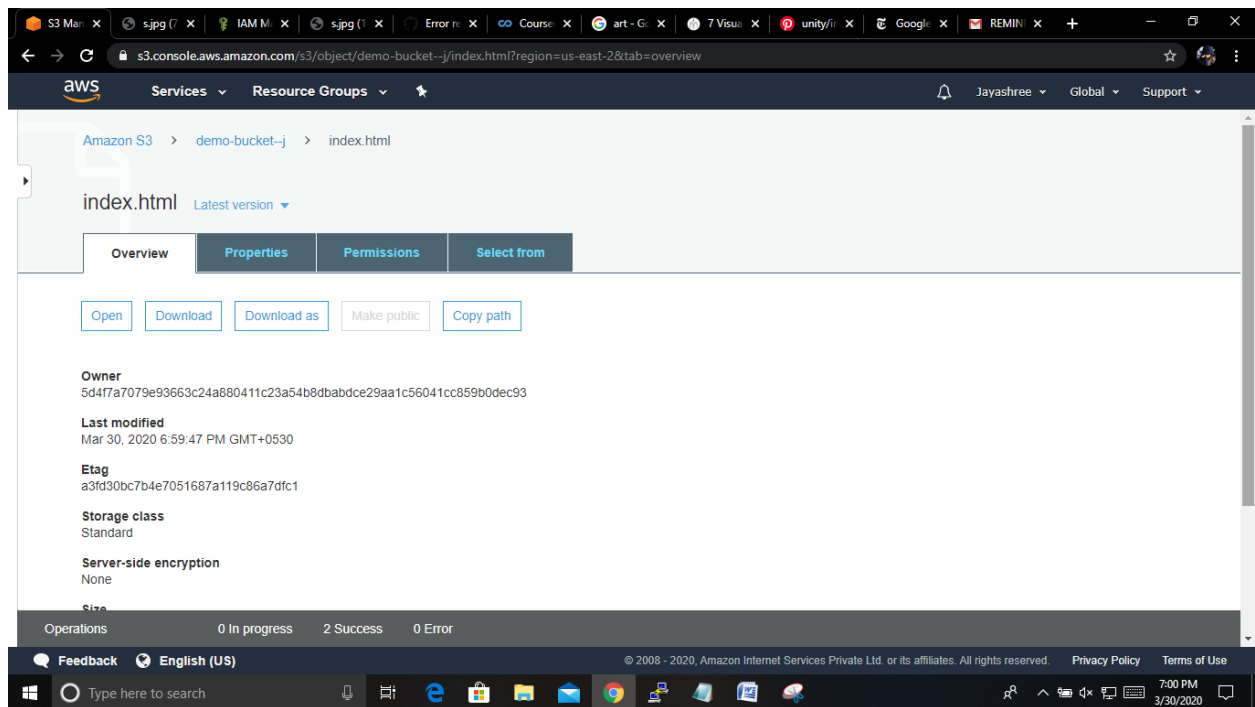




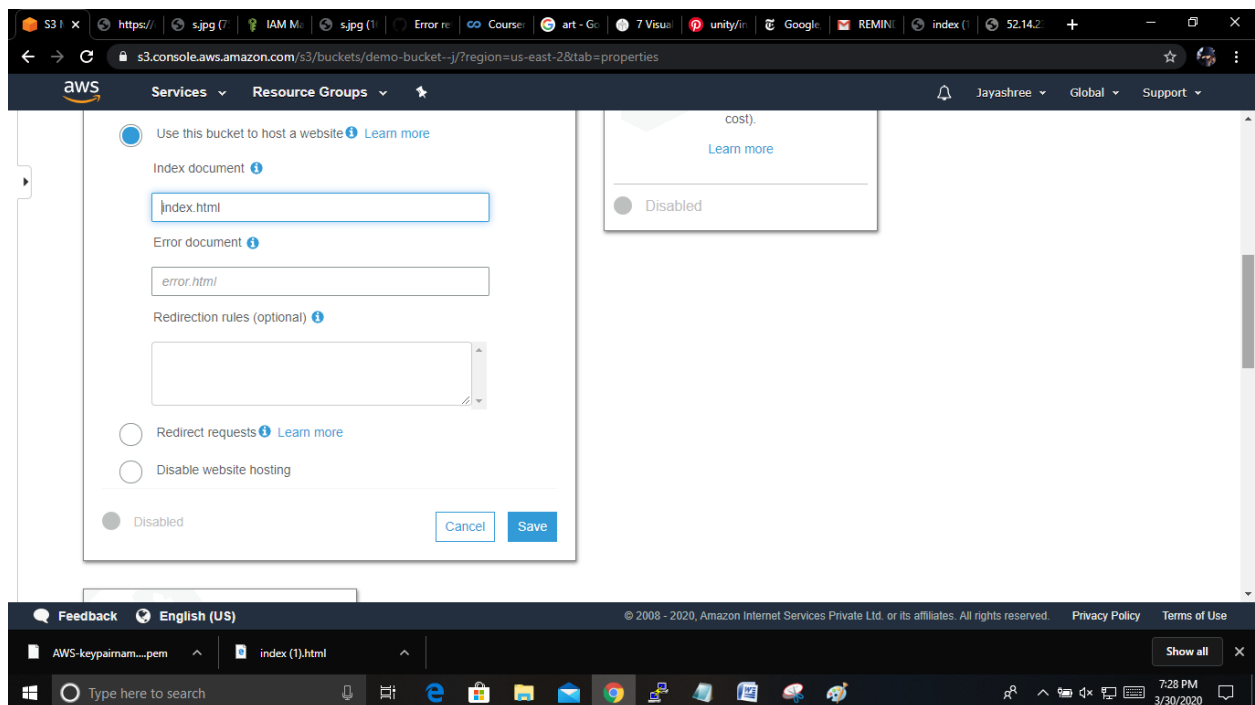


## B. Uploading an object:





## C. Enabling static website hosting:



## D. Making the object as public:

The screenshot shows the AWS S3 console interface for a bucket named 'demo-bucket-j'. The 'Permissions' tab is selected, and the 'Block public access' button is highlighted. Below the tabs, there are four buttons: 'Block public access', 'Access Control List', 'Bucket Policy', and 'CORS configuration'. The 'Block public access' button is active, and the settings are displayed below. The settings are as follows:

- ☐ **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 ACLs for existing buckets and objects. This setting doesn't change any existing permissions that allow public access to S3 resources using ACLs.
- ☐ **Block public access to buckets and objects granted through any access control lists (ACLs)**  
S3 will ignore all ACLs that grant public access to buckets and objects.

The 'Save' button is visible in the top right corner of the settings panel. The bottom of the screenshot shows the Windows taskbar with the time 7:31 PM on 3/30/2020.

The screenshot shows the AWS S3 console interface for a bucket named 'demo-bucket-j' after the settings have been updated. The 'Block public access' button is still highlighted, and the settings are displayed below. A green success message is visible at the top of the settings panel:

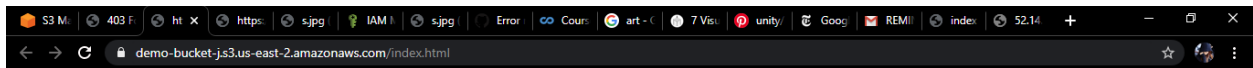
✓ Public access settings updated successfully

The settings are as follows:

- ☒ **Block all public access**  
Off
- ☒ **Block public access to buckets and objects granted through new access control lists (ACLs)**  
Off
- ☒ **Block public access to buckets and objects granted through any access control lists (ACLs)**  
Off

The 'Edit' button is visible in the top right corner of the settings panel. The bottom of the screenshot shows the Windows taskbar with the time 7:32 PM on 3/30/2020.

## E. Checking s3 link on the browser:



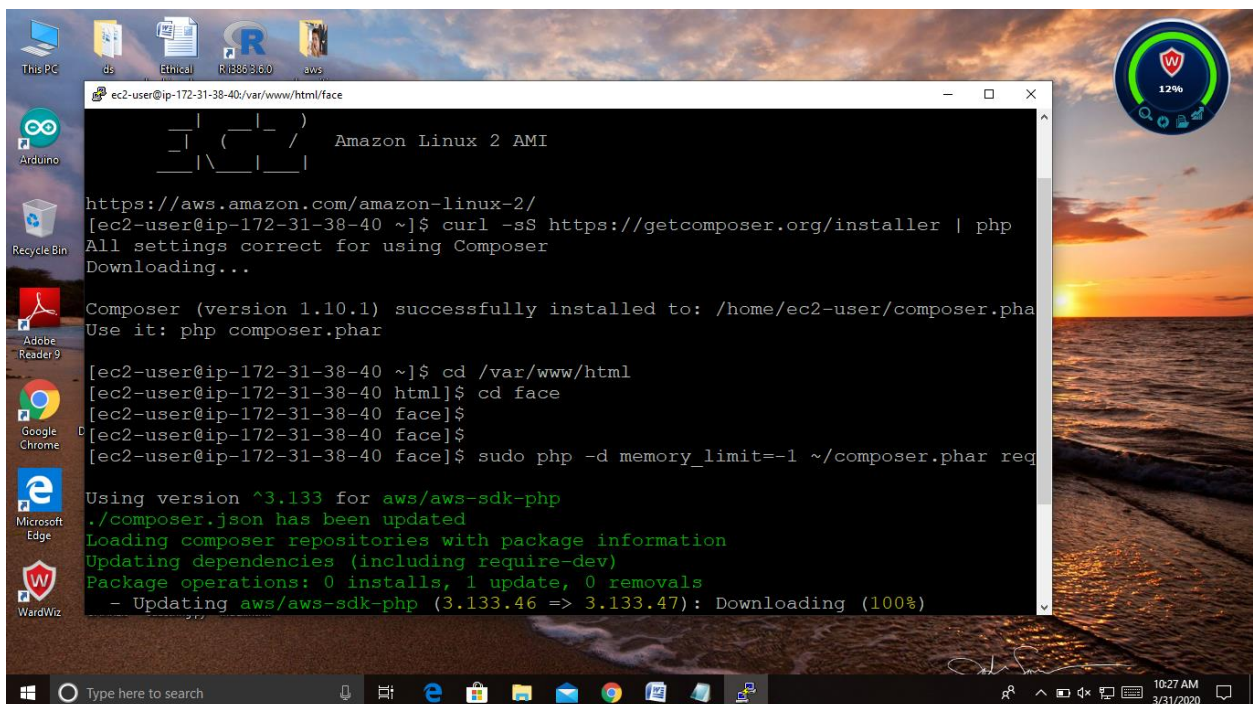
This is the s3 bucket creation demo which i have been learning from the Ethunus. Thanks for teaching.



## DAY-3:

### EC2 and S3

### Installing AWS-SDK:



## Installing php:

```
ec2-user@ip-172-31-38-40:/var/www/html/face

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
Downloading packages:
php-7.2.28-1.amzn2.x86_64.rpm | 2.9 MB 00:00:00
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : php-7.2.28-1.amzn2.x86_64 1/1
  Verifying  : php-7.2.28-1.amzn2.x86_64 1/1

Installed:
php.x86_64 0:7.2.28-1.amzn2

Complete!
[ec2-user@ip-172-31-38-40 face]$
```

## Index.php file uploading:

```
ec2-user@ip-172-31-38-40:/var/www/html/face

[ec2-user@ip-172-31-38-40 face]$ sudo yum install php
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Package php-7.2.28-1.amzn2.x86_64 already installed and latest version
Nothing to do
[ec2-user@ip-172-31-38-40 face]$ sudo vim index.php
```



```
ec2-user@ip-172-31-38-40:/var/www/html/face

    'ACL' => 'public-read-write'
]);

// Print the URL to the object.
$imageUrl = $result['ObjectURL'];
if($imageUrl) {
    echo "Image upload done... Here is the URL: " . $imageUrl;

    $rekognition = new RekognitionClient([
        'region' => 'us-east-2',
        'version' => 'latest',
    ]);

    $result = $rekognition->detectFaces([
        'Attributes' => ['DEFAULT'],
        'Image' => [
            'S3Object' => [
                'Bucket' => $bucket,
                'Name' => $keyname,
                'Key' => $keyname,
            ],
        ],
    ]);

    echo "Totally there are " . count($result["FaceDetails"]) . " faces";
}
} catch (Exception $e) {
    echo $e->getMessage() . PHP_EOL;
}
:wg
```

## Image upload done:

```
ec2-user@ip-172-31-38-40:/var/www/html/face

[ec2-user@ip-172-31-38-40 face]$ sudo yum install php
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Package php-7.2.28-1.amzn2.x86_64 already installed and latest version
Nothing to do
[ec2-user@ip-172-31-38-40 face]$ sudo vim inex.php
[ec2-user@ip-172-31-38-40 face]$ sudo vim index.php
[ec2-user@ip-172-31-38-40 face]$ sudo php index.php
Image upload done... Here is the URL: https://demo-bucket-j.s3.us-east-2.amazonaws.com/s.jpgTotally the
re are 9 faces[ec2-user@ip-172-31-38-40 face]$
```

## DAY-4:

### EC2 and Rekognition:

```
ec2-user@ip-172-31-38-40:/var/www/html/face
[ec2-user@ip-172-31-38-40 face]$ sudo vim index.php
[ec2-user@ip-172-31-38-40 face]$ sudo php index.php
Image upload done... Here is the URL: https://demo-bucket-j.s3.us-east-2.amazonaws.com/s.jpgTotally the
re are 9 faces[ec2-user@ip-172-31-38-40 face]$
```

### AWS Rekognition:

#### Facial analysis:

The screenshot displays the AWS Rekognition console interface. On the left, a sidebar lists various services including Object and scene detection, Image moderation, Facial analysis (highlighted), Celebrity recognition, Face comparison, Text in image, Video Demos, Video analysis, Metrics, and Additional Resources. The main content area shows a sample image of a woman's face with a bounding box. Below the image, there are options to 'Choose a sample image' or 'Use your own image'. The 'Results' section on the right provides detailed facial analysis data:

Analysis Result	Confidence
looks like a face	99.9 %
appears to be female	99.6 %
age range	21 - 33 years old
not smiling	99.9 %
appears to be calm	96.3 %
not wearing glasses	99.6 %

At the bottom of the console, a taskbar shows several open files: facial.jpg, text with image.png, objects.jpg, modi.jpg, and GROUP.jpg. The system clock indicates 7:46 PM on 3/30/2020.

## Celebrity recognition:

The screenshot displays the AWS Rekognition console interface. The left sidebar contains navigation links: Celebrity recognition, Face comparison, Text in image, Video Demos, Video analysis, Metrics, Additional Resources, Getting started guide, Download SDKs, Developer resources, Pricing, and FAQ. The main content area shows a large image of Sundar Pichai with a blue bounding box around his face. Below the image are two buttons: "Choose a sample image" and "Use your own image". To the right, the "Results" section shows a small thumbnail of Sundar Pichai, his name "Sundar Pichai", and a "Match confidence" of "100 %". Below this are expandable sections for "Request" and "Response". The bottom of the console shows a Windows taskbar with various application icons and a system clock indicating 7:47 PM on 3/30/2020.

## Face comparison:

The screenshot displays the AWS Rekognition console interface for face comparison. The left sidebar is similar to the previous screenshot, but the "Face comparison" option is selected. The main content area shows two sample images of Narendra Modi. Below them are two buttons: "Choose a sample image" and "Use your own image". To the right, the "Results" section shows a comparison of two images of Narendra Modi with a "Similarity" score of "99.2 %". Below this are three more comparisons, each showing two different images with a "Not similar" (≠) result. The bottom of the console shows a Windows taskbar with various application icons and a system clock indicating 7:49 PM on 3/30/2020.

## Text in image:

The screenshot displays the AWS Rekognition console's 'Text in image' demo. The browser address bar shows the URL: `us-east-2.console.aws.amazon.com/rekognition/home?region=us-east-2#/text-detection`. The AWS logo and navigation tabs (Services, Resource Groups) are visible at the top. The left sidebar contains links for various features: Celebrity recognition, Face comparison, **Text in image** (highlighted), Video Demos, Video analysis, Metrics, Additional Resources, Getting started guide, Download SDKs, Developer resources, Pricing, and FAQ. The main content area is titled 'Text in image' and includes the text: 'Rekognition automatically detects and extracts text in your images. [Learn More](#)'. Below this is a large image of a hand holding a smartphone displaying a Google search result for 'Cut through the noise'. To the right of the image is a 'Results' panel showing the detected text: 'Google', 'Cut through the noise', 'with forced bold text', and 'on Google ads'. The bottom of the console shows a Windows taskbar with various application icons and a system clock indicating 7:49 PM on 3/30/2020.

**Text in image**  
Rekognition automatically detects and extracts text in your images. [Learn More](#)

Done with the demo?  
[Learn more](#)

▼ Results US English only

| Google |  
Cut	through		
the	noise		
with	forced	bold	text
on	Google	ads	

► Request

► Response

Choose a sample image

Use your own image  
Image must be .jpg or .png format and no larger than 5MB. Your image isn't stored.

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25modi\_group\_ph...jpg | facial.jpg | text with image.png | objects.jpg | modi.jpg [Show all](#)

Type here to search

7:49 PM  
3/30/2020