Assignment 1 – IaaS and FaaS - Reference

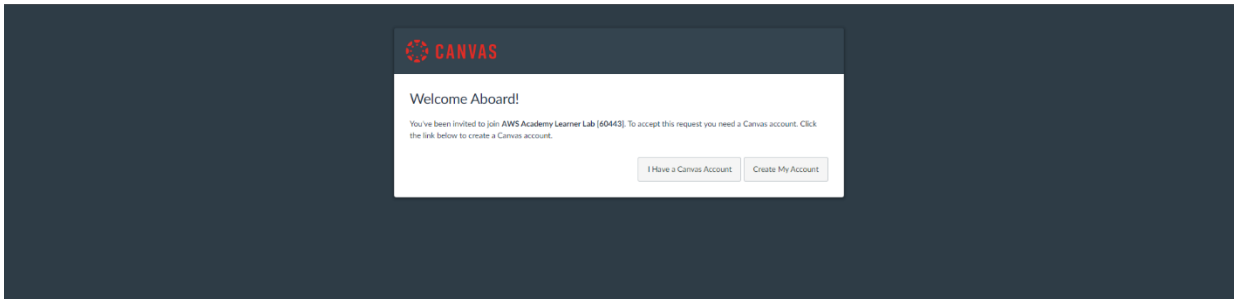
You should follow the specs only. If you get stuck, try to figure it out yourself by putting some efforts and time and referring the official AWS docs.

Don't blindly follow these step by step screenshots. They are tend to outdated.

Login instructions to AWS Academy

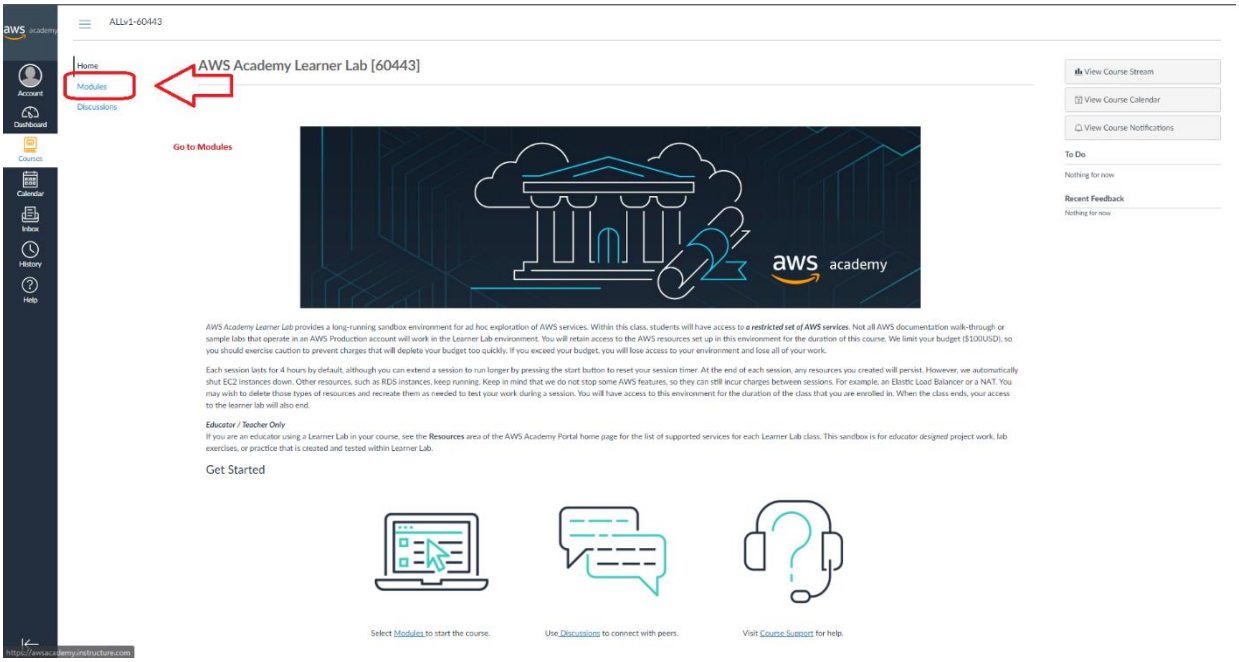
Steps to Access AWS console through AWS Academy

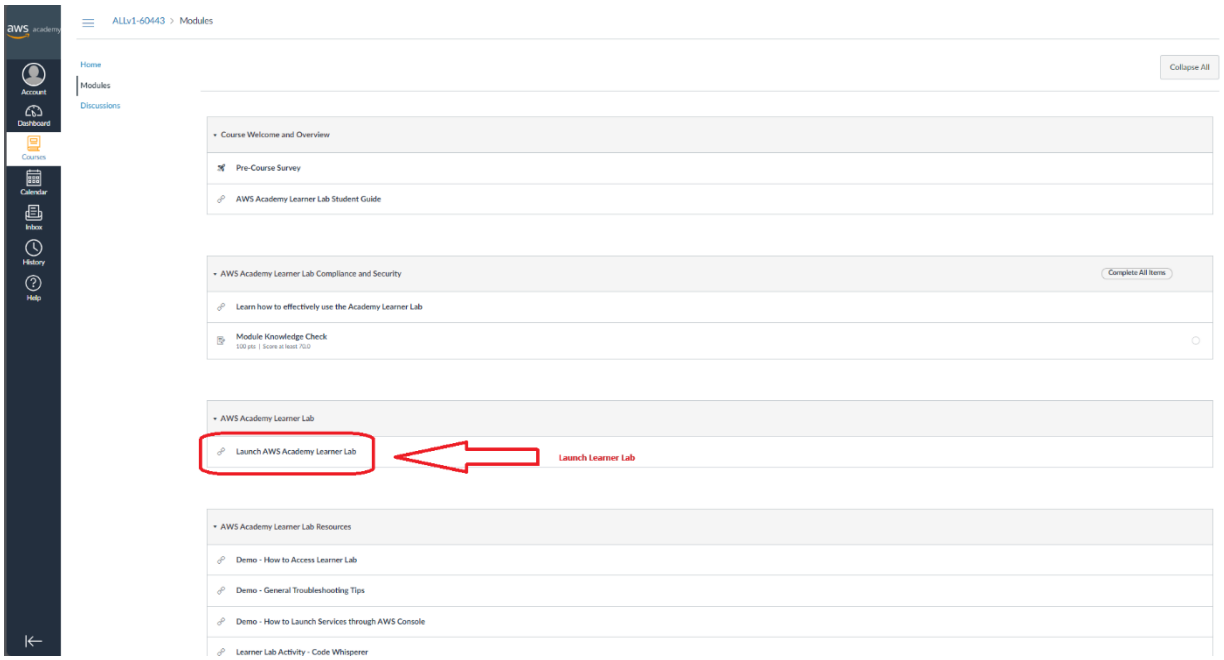
1. Create a Canvas account.
   - Create a username
   - Create a password for your Canvas Account
   - Agree to the EULA
   - You should be redirected back to AWS academy.



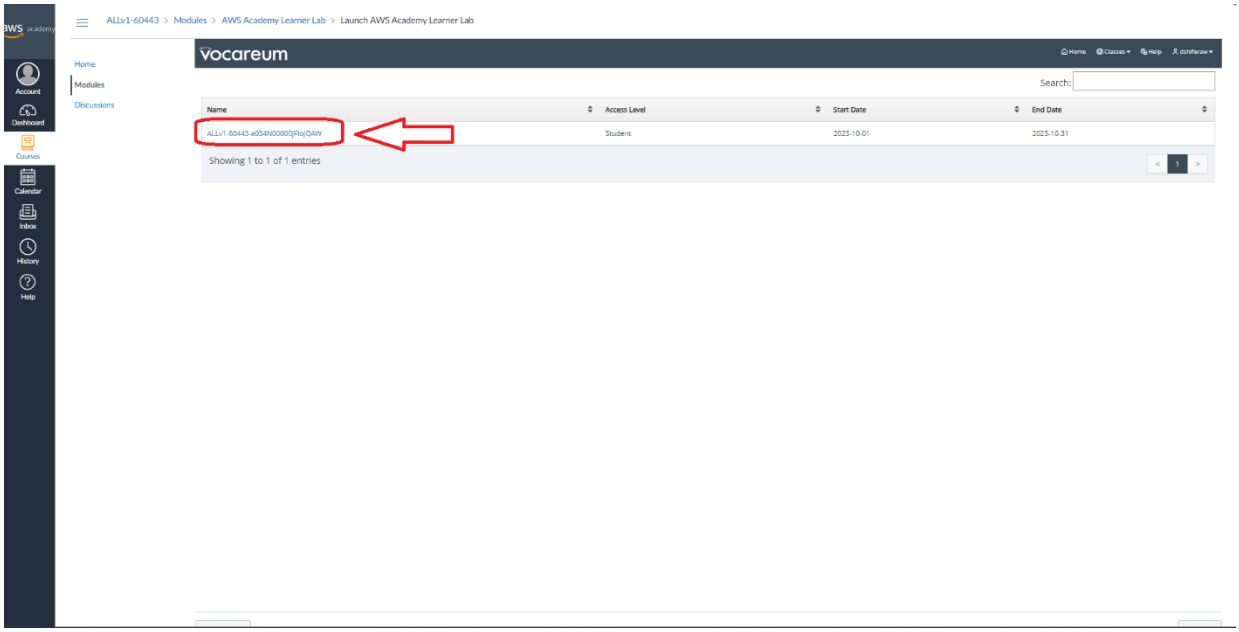
2. Once you are on AWS page, you should see the following:

   - Go to courses on the left tab → modules.

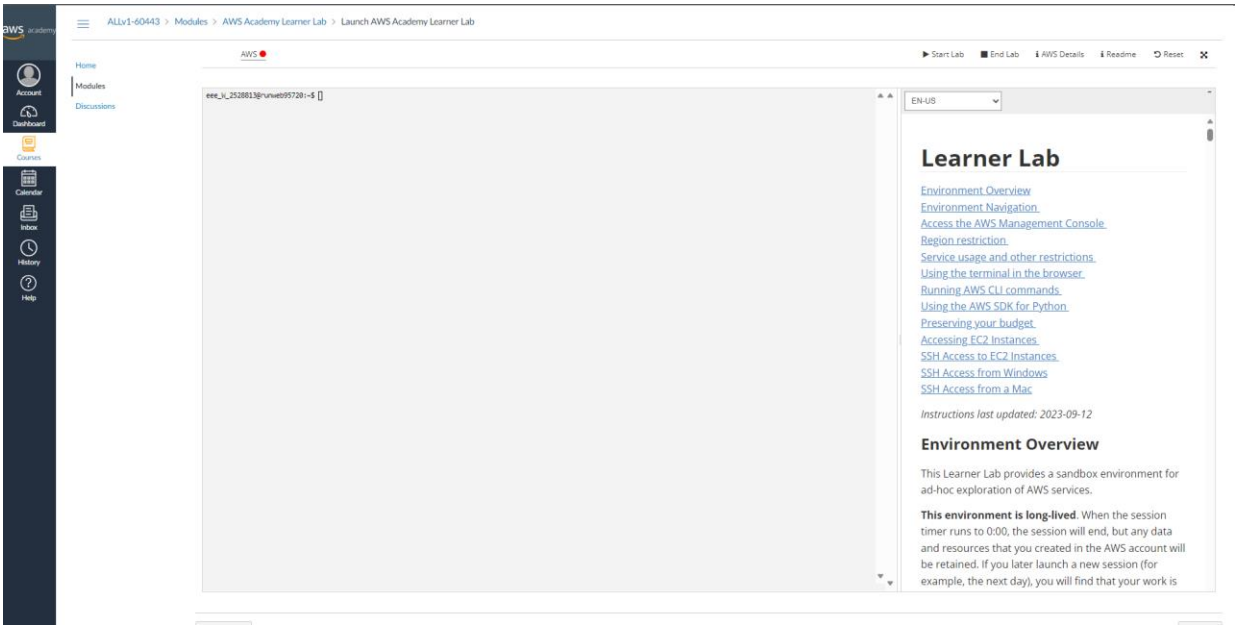




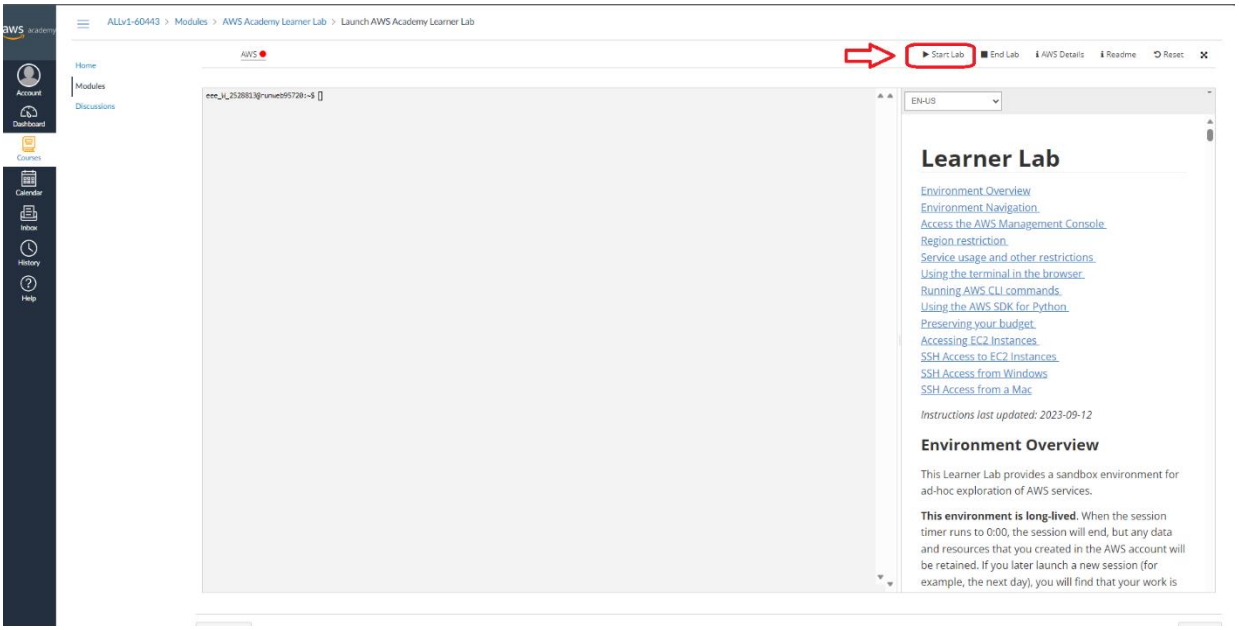
4. You will come across multiple Agreement forms, agree to all of them.
5. Once you have agreed to the terms and conditions, you will get to your dashboard with your auto-generated name, access level, and duration of access.
    a. Click on your generated name.



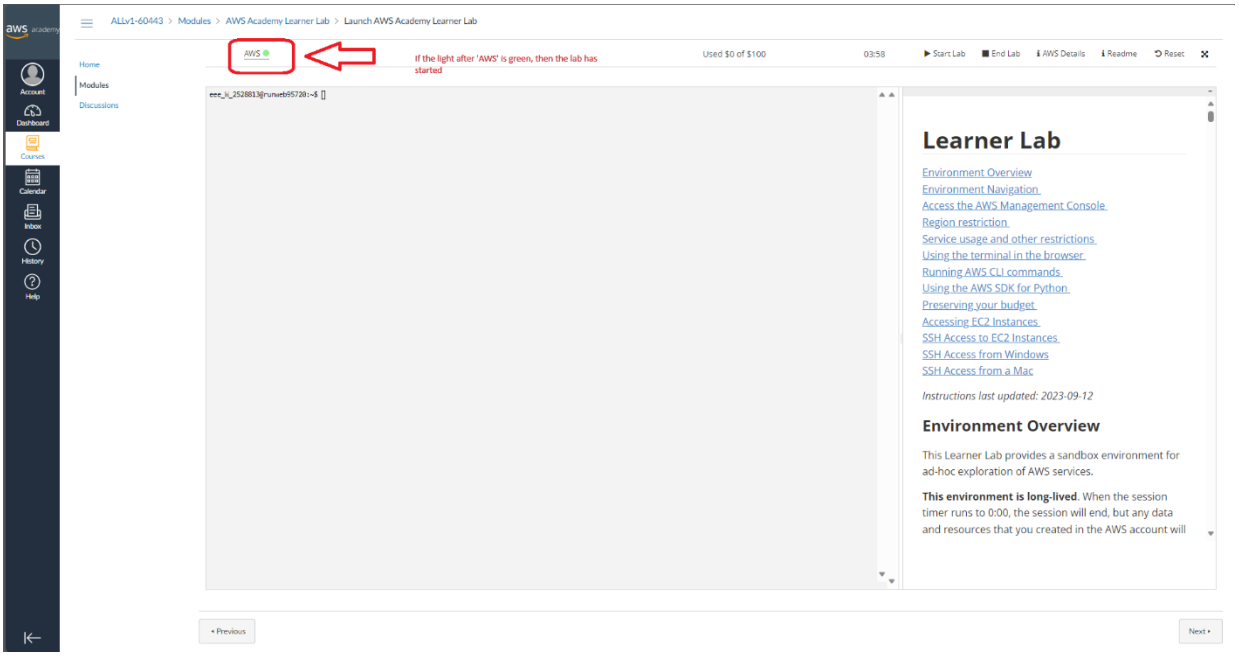
6. Once you click your name, you should see this terminal page.



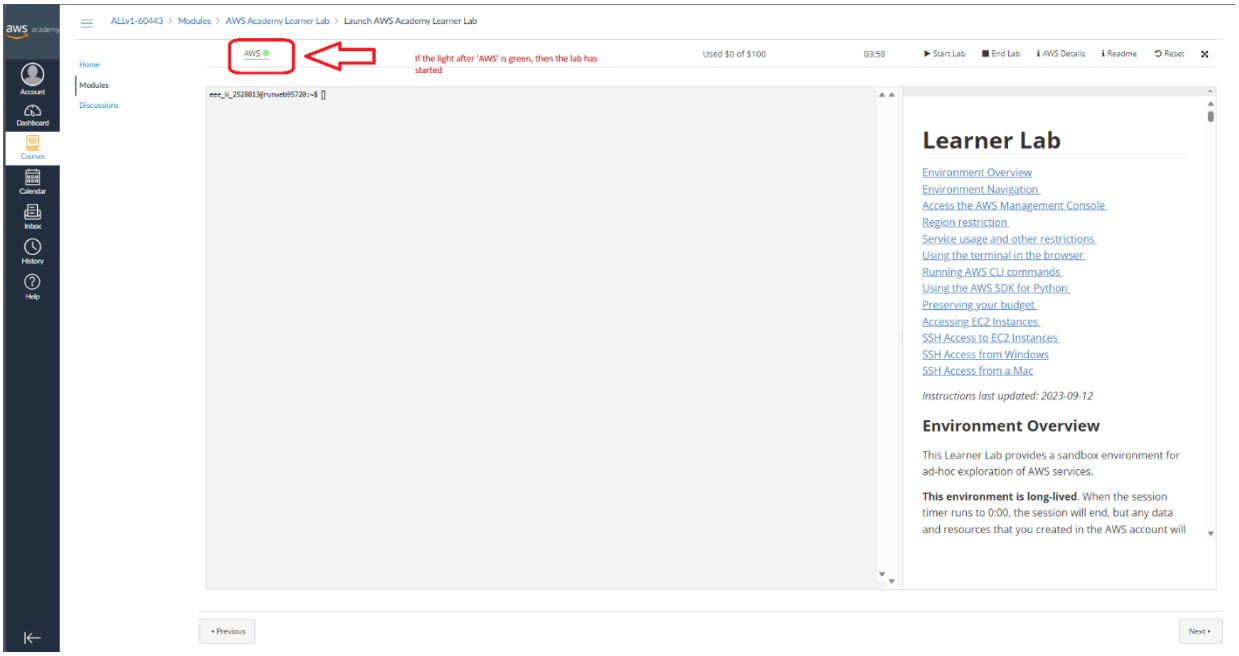
7. Once you see the terminal page, click on Start Lab



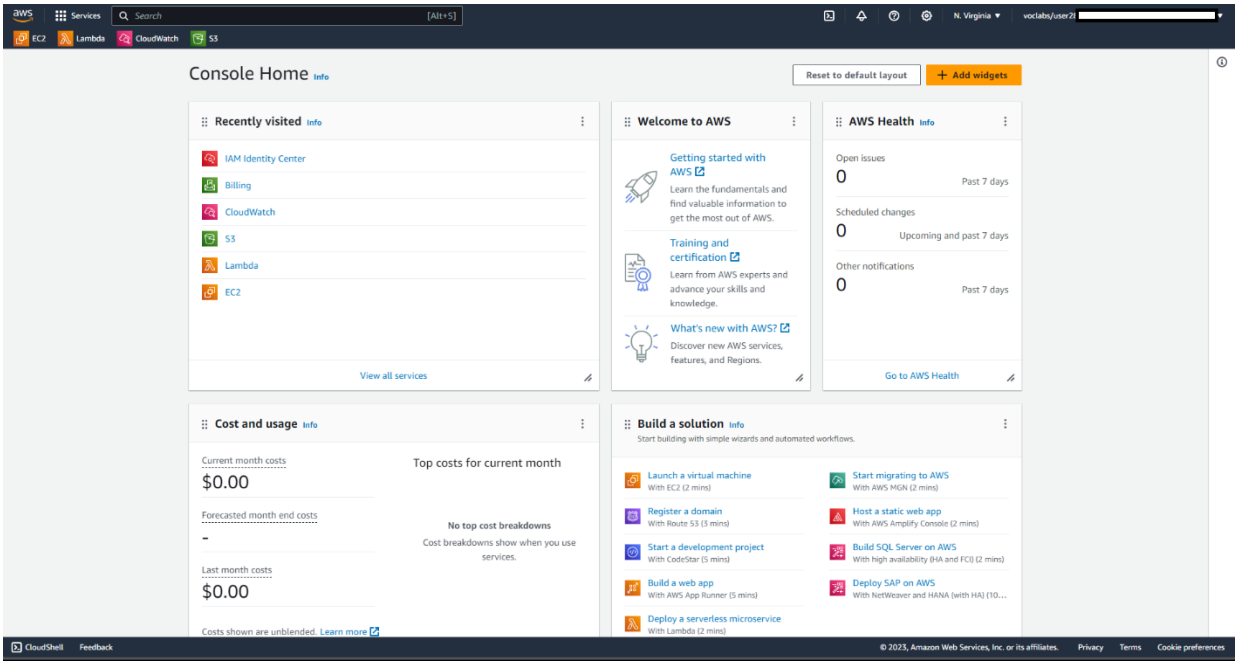
8. Once it loads, you can identify whether the lab has started by the icon alongside 'AWS'.



9. Click on AWS and it will redirect you to the AWS management console.

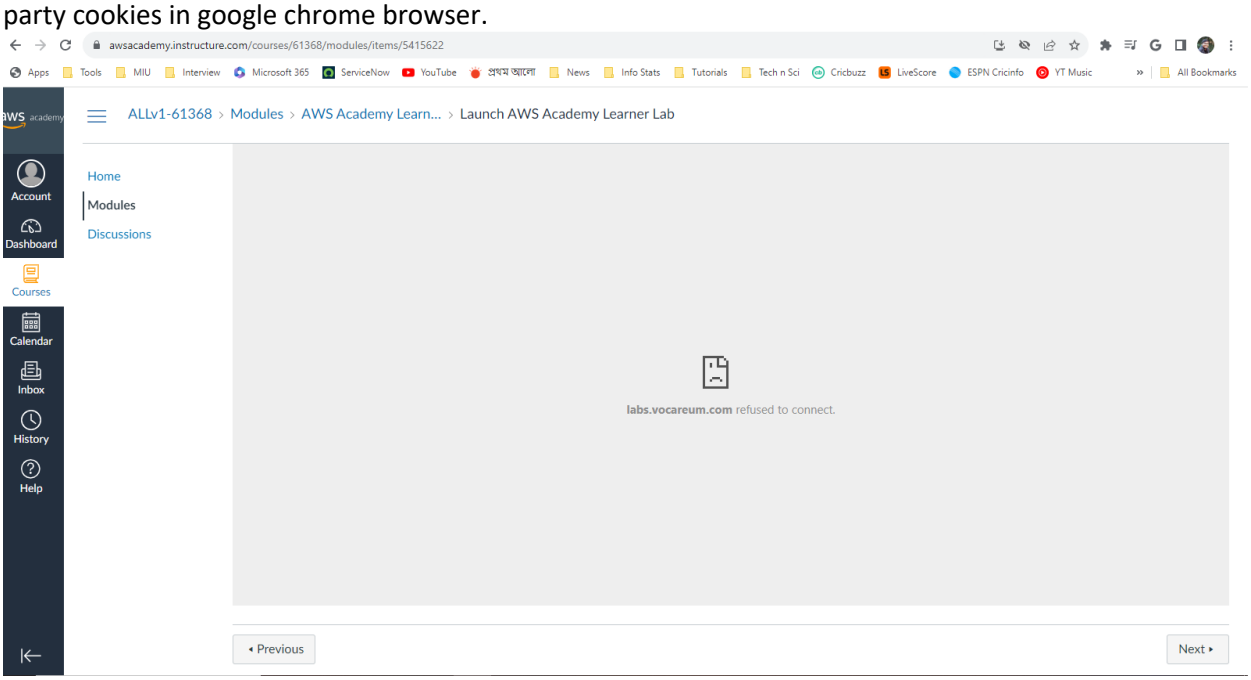


10. Finally, you should be able to see the AWS management console.



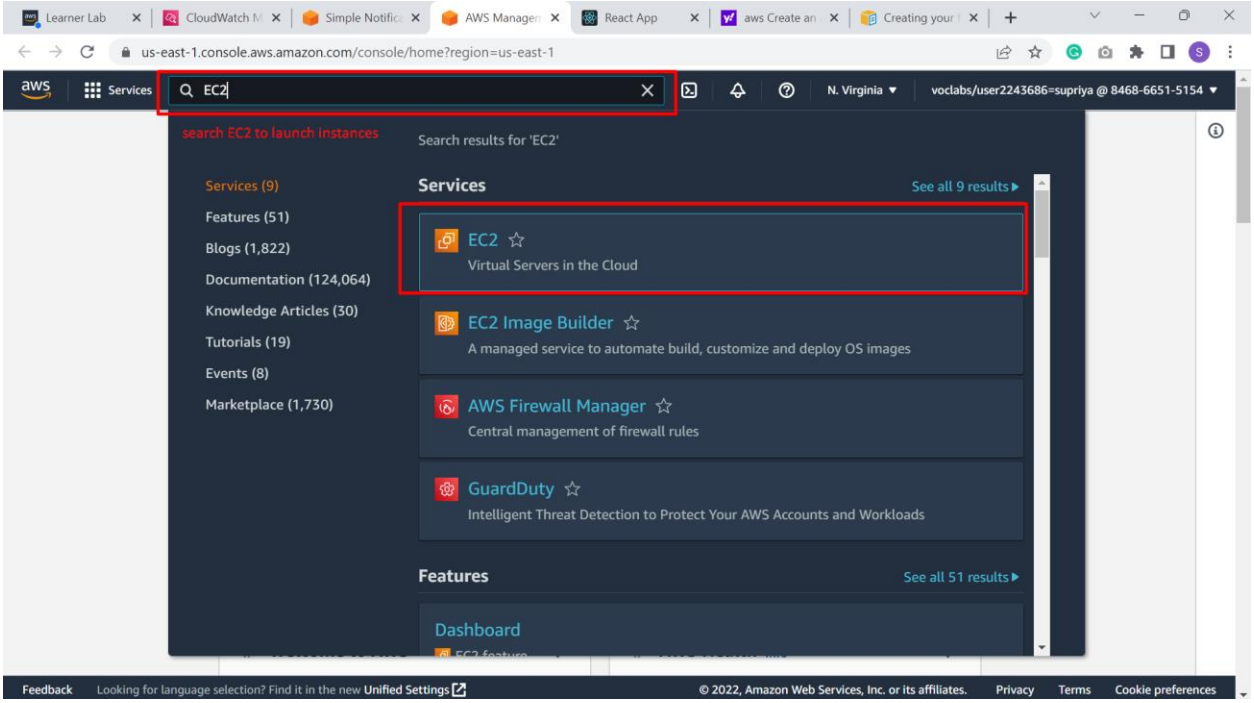
AWS Academy error

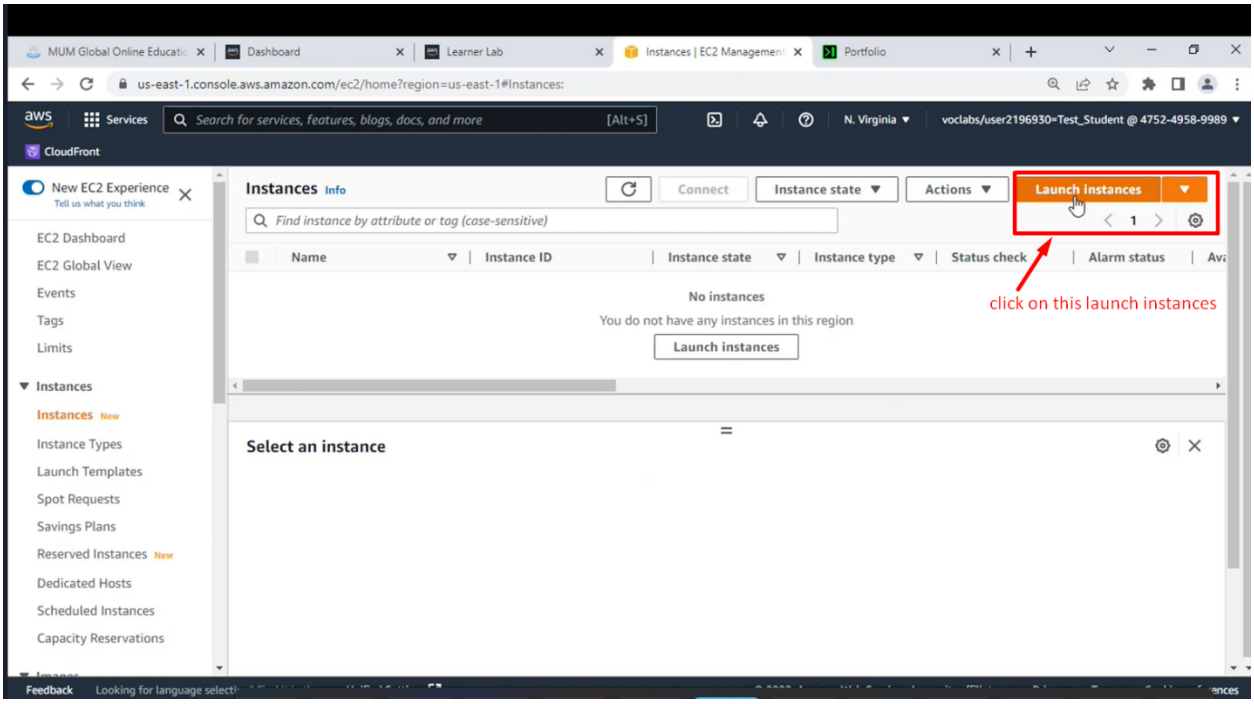
If you get this error, it is something wrong with your device or browser configuration that cannot access to the required website labs.vocareum.com. For example, one student resolved it by allowing the third party cookies in google chrome browser.

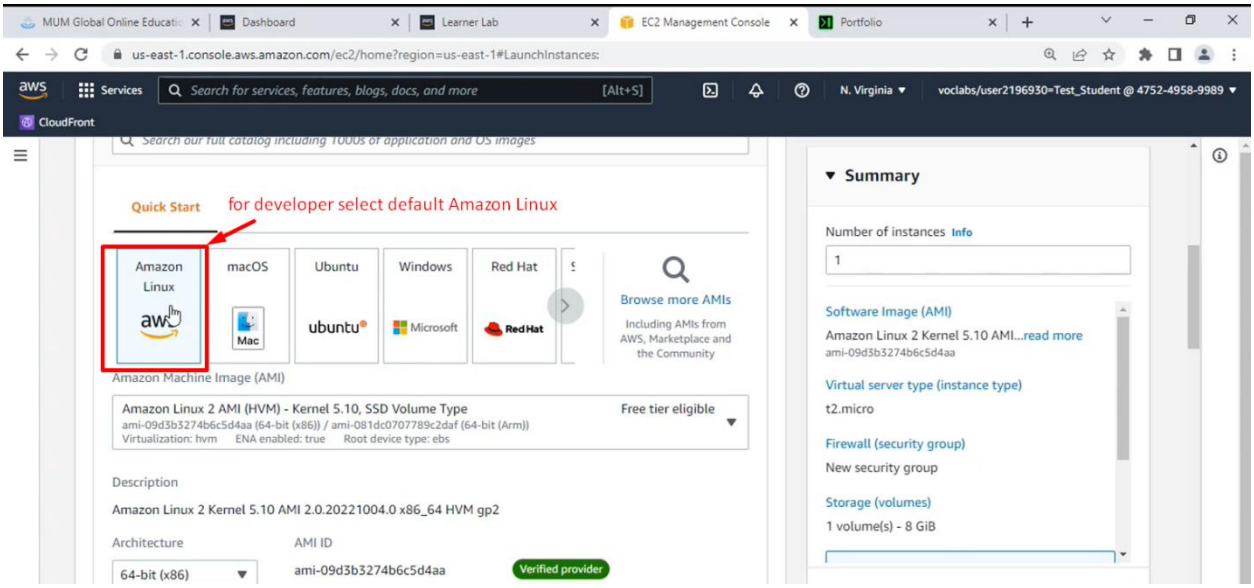


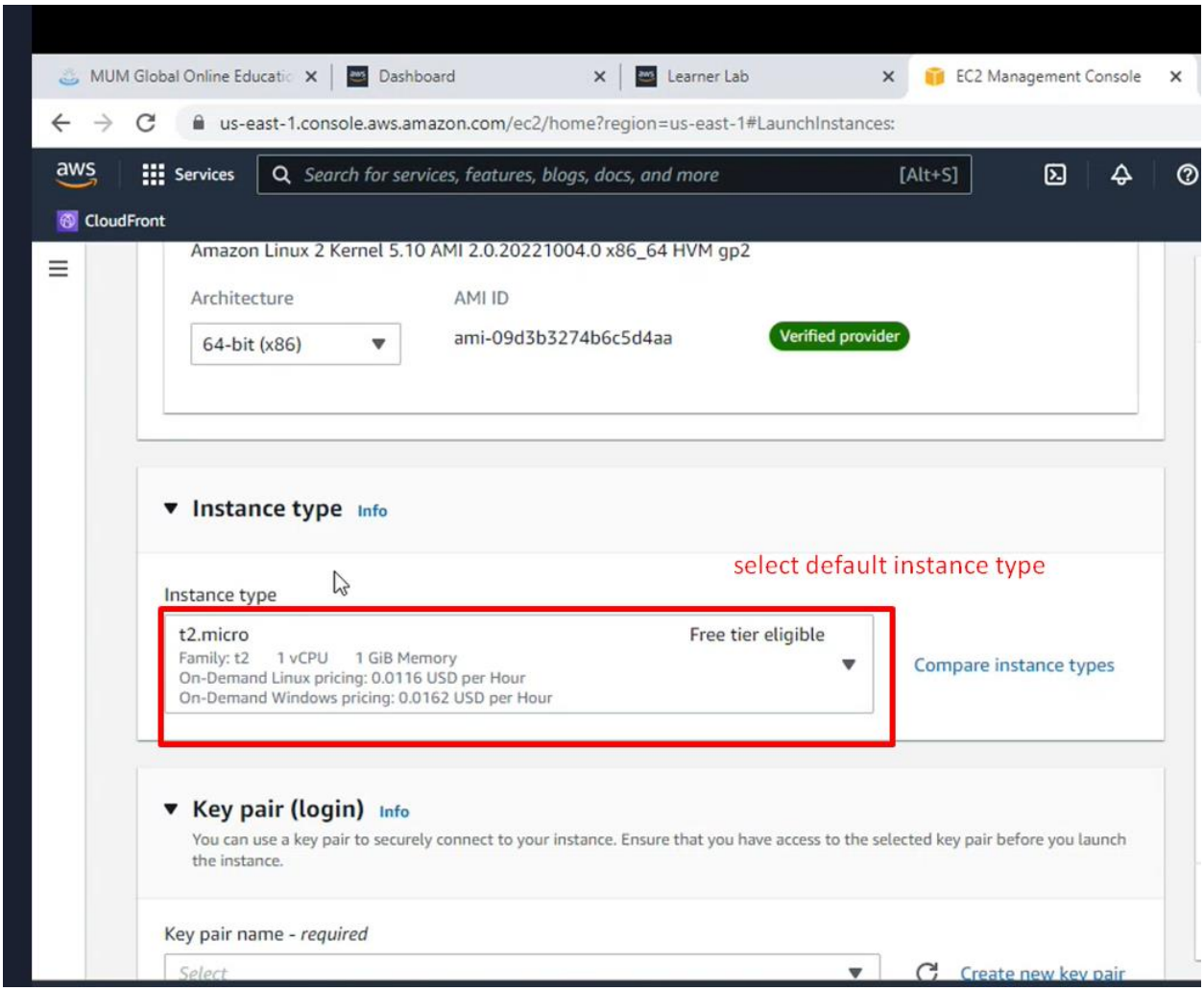
Setting up a web server on EC2

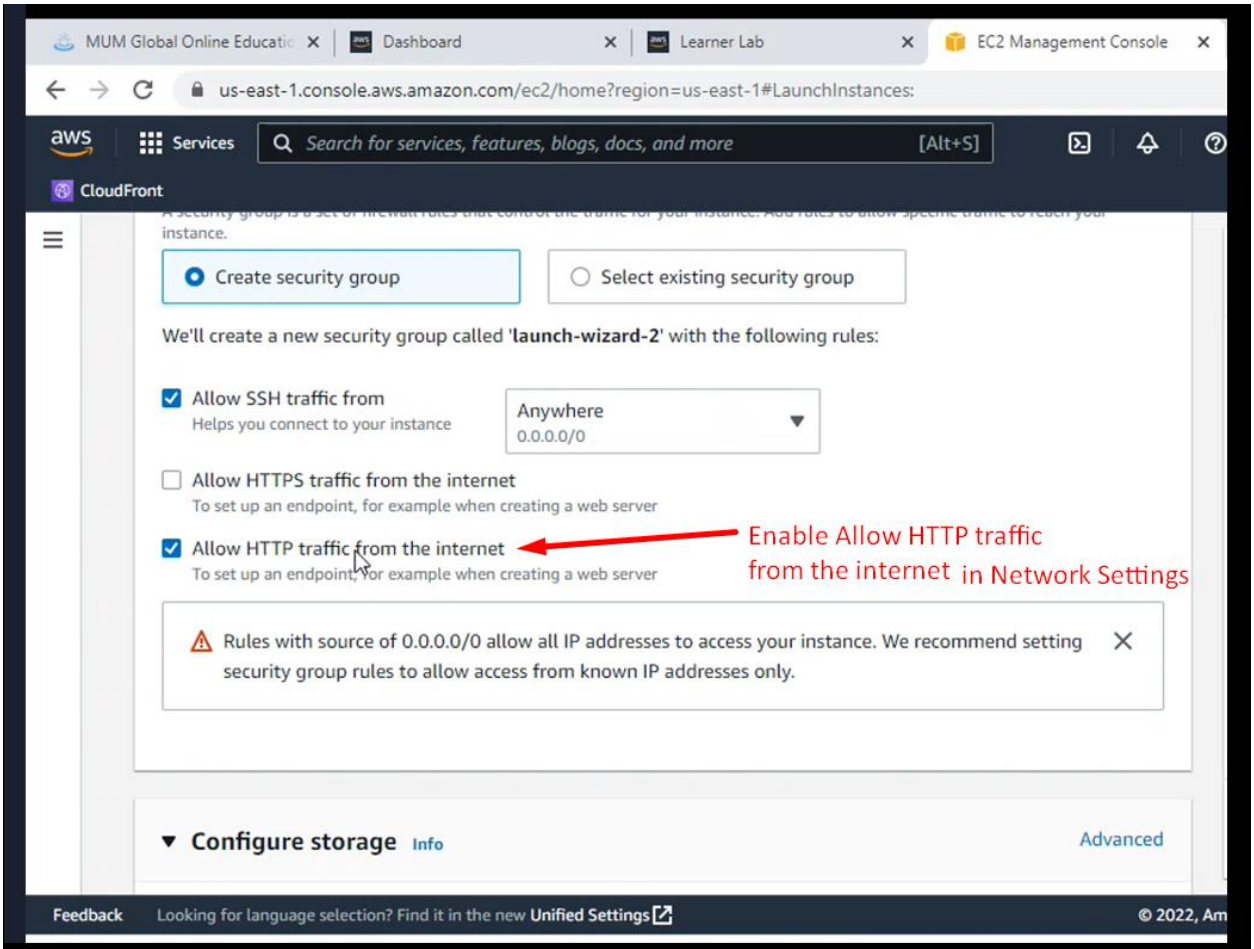
Step-by-step instructions for you to refer. There are many ways to achieve the same result. You don't have to follow it. It will waste a lot of time. Instead, you can do it on your own without following it step by step since you paid careful attention in class and understood the idea.

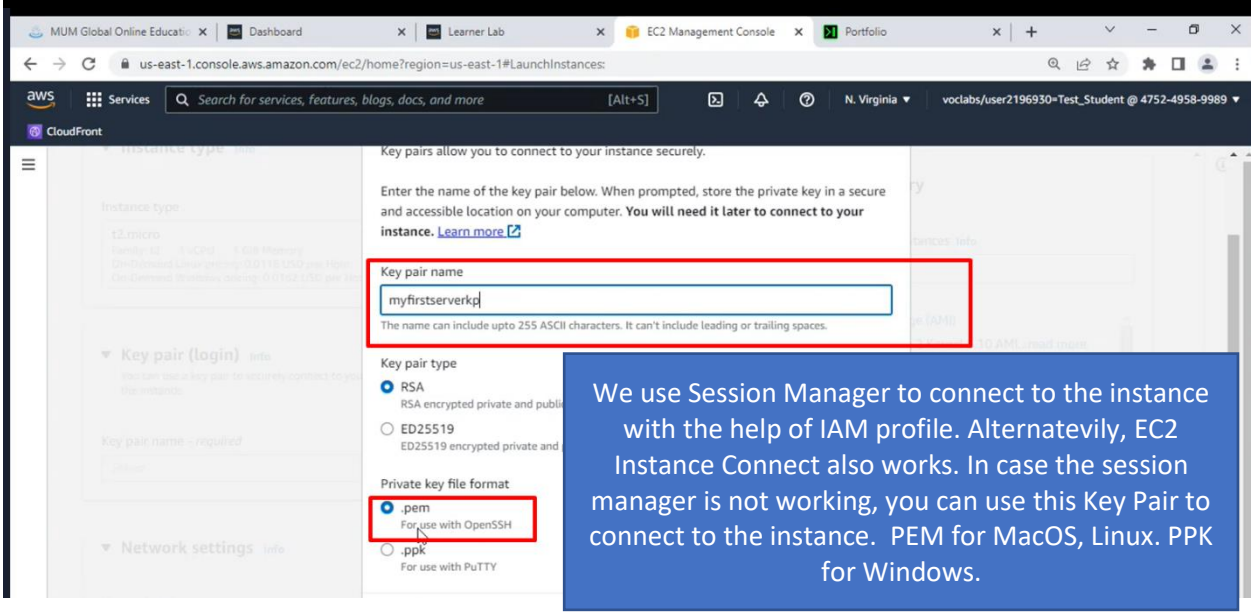

us-east-1.console.aws.amazon.com/console/home?region=us-east-1
EC2
search EC2 to launch instances
Search results for 'EC2'
Services (9)
Features (51)
Blogs (1,822)
Documentation (124,064)
Knowledge Articles (30)
Tutorials (19)
Events (8)
Marketplace (1,730)
Services
See all 9 results
EC2
Virtual Servers in the Cloud
EC2 Image Builder
A managed service to automate build, customize and deploy OS images
AWS Firewall Manager
Central management of firewall rules
GuardDuty
Intelligent Threat Detection to Protect Your AWS Accounts and Workloads
Features
See all 51 results
Dashboard

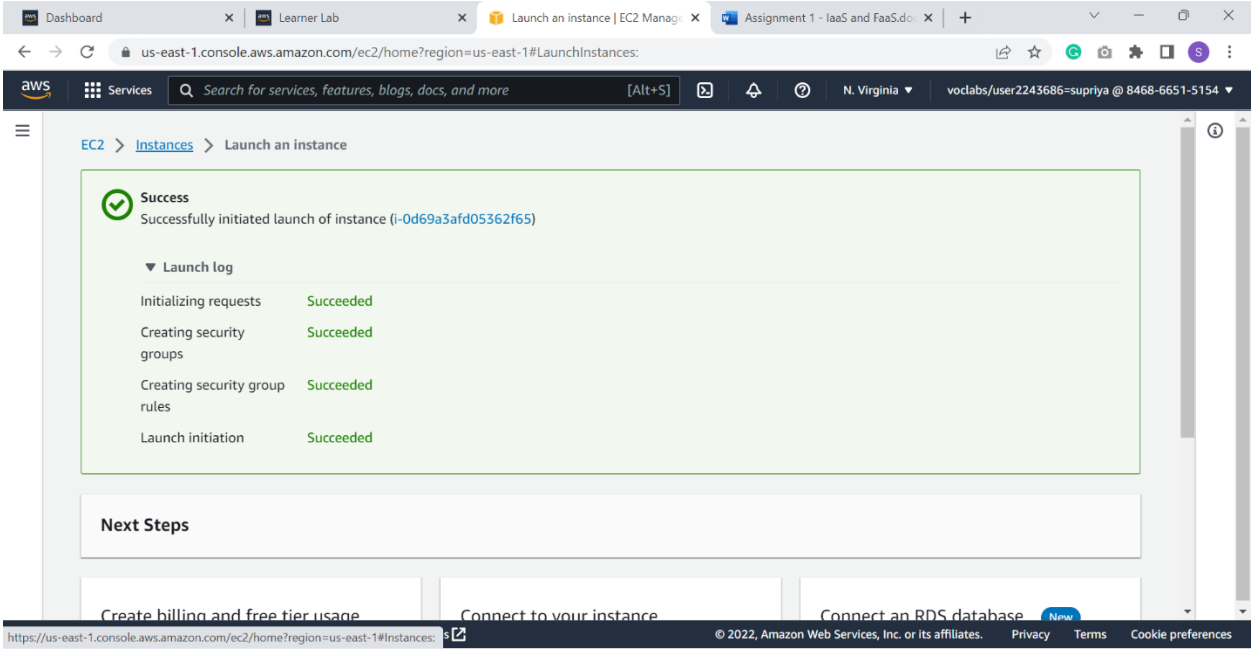

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:
Search for services, features, blogs, docs, and more
[Alt+S]
CloudFront
New EC2 Experience
EC2 Dashboard
EC2 Global View
Events
Tags
Limits
Instances
Instances New
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances New
Dedicated Hosts
Scheduled Instances
Capacity Reservations
Instances Info
Connect
Instance state
Actions
Launch instances
Find instance by attribute or tag (case-sensitive)
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
No instances
You do not have any instances in this region
Launch instances
click on this launch instances
Select an instance

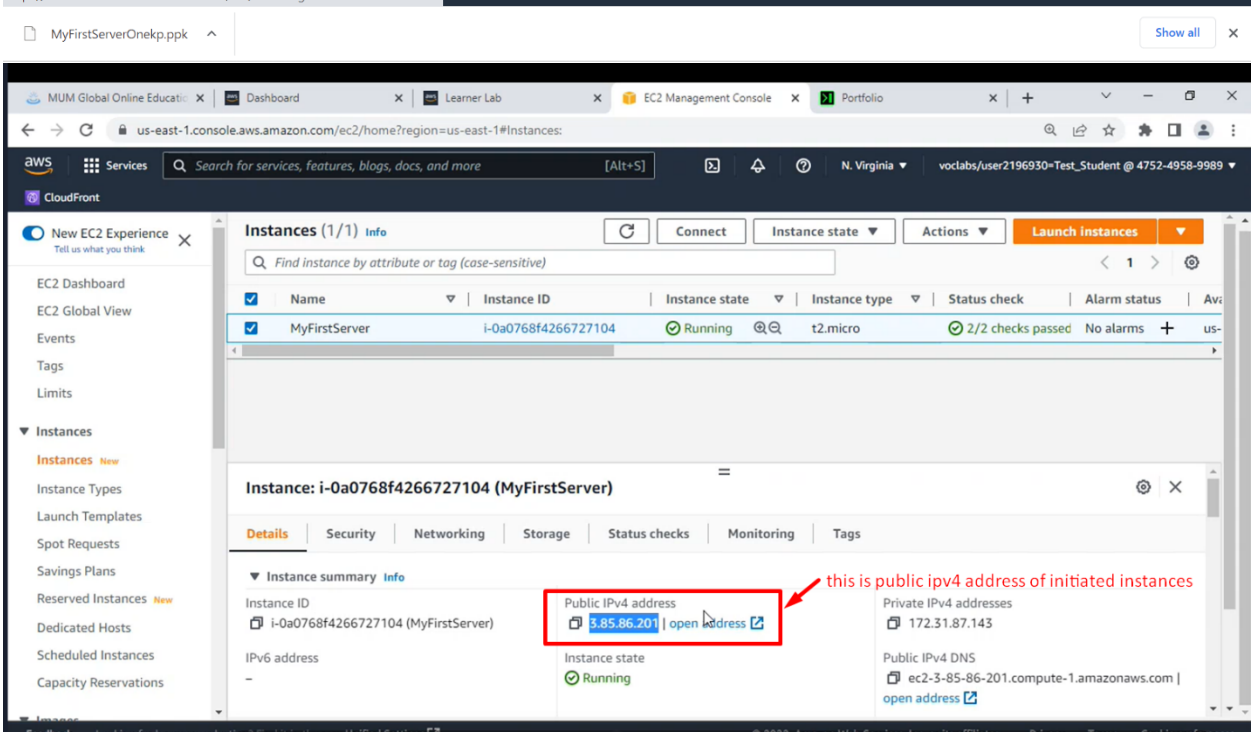

MUM Global Online Educatio
Dashboard
Learner Lab
EC2 Management Console
Portfolio
us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:
Services
Search for services, features, blogs, docs, and more
[Alt+S]
N. Virginia
voclabs/user2196930=Test_Student @ 4752-4958-9989
CloudFront
Quick Start
for developer select default Amazon Linux
Amazon Linux
macOS
Ubuntu
Windows
Red Hat
Browse more AMIs
Including AMIs from AWS, Marketplace and the Community
Amazon Machine Image (AMI)
Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type
ami-09d3b3274b6c5d4aa (64-bit (x86)) / ami-081dc0707789c2daf (64-bit (Arm))
Virtualization: hvm ENA enabled: true Root device type: ebs
Free tier eligible
Description
Amazon Linux 2 Kernel 5.10 AMI 2.0.20221004.0 x86_64 HVM gp2
Architecture
AMI ID
64-bit (x86)
ami-09d3b3274b6c5d4aa
Verified provider
Summary
Number of instances Info
1
Software Image (AMI)
Amazon Linux 2 Kernel 5.10 AMI...read more
ami-09d3b3274b6c5d4aa
Virtual server type (instance type)
t2.micro
Firewall (security group)
New security group
Storage (volumes)
1 volume(s) - 8 GiB


MUM Global Online Educatio
Dashboard
Learner Lab
EC2 Management Console
us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:
Services
Search for services, features, blogs, docs, and more
[Alt+S]
CloudFront
Amazon Linux 2 Kernel 5.10 AMI 2.0.20221004.0 x86_64 HVM gp2
Architecture
AMI ID
64-bit (x86)
ami-09d3b3274b6c5d4aa
Verified provider
Instance type Info
select default instance type
Instance type
t2.micro
Free tier eligible
Family: t2 1 vCPU 1 GiB Memory
On-Demand Linux pricing: 0.0116 USD per Hour
On-Demand Windows pricing: 0.0162 USD per Hour
Compare instance types
Key pair (login) Info
You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.
Key pair name - required
Select
Create new key pair


MUM Global Online Educatio
Dashboard
Learner Lab
EC2 Management Console
us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:
aws
Services
Search for services, features, blogs, docs, and more
[Alt+S]
CloudFront
instance.
Create security group
Select existing security group
We'll create a new security group called 'launch-wizard-2' with the following rules:
Allow SSH traffic from
Helps you connect to your instance
Anywhere
0.0.0.0/0
Allow HTTPS traffic from the internet
To set up an endpoint, for example when creating a web server
Allow HTTP traffic from the internet
To set up an endpoint, for example when creating a web server
Enable Allow HTTP traffic from the internet in Network Settings
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.
Configure storage Info
Advanced
Feedback
Looking for language selection? Find it in the new Unified Settings
© 2022, Am

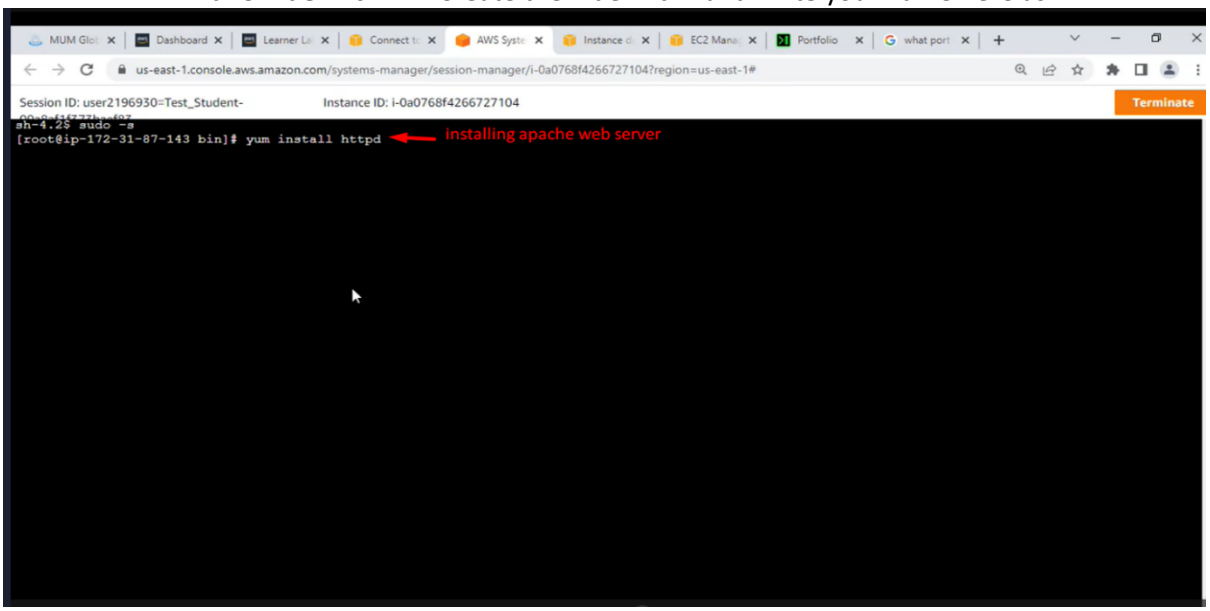

MUM Global Online Educatio
Dashboard
Learner Lab
EC2 Management Console
Portfolio
us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:
aws
Services
Search for services, features, blogs, docs, and more
[Alt+S]
N. Virginia
voclabs/user2196930=Test_Student @ 4752-4958-9989
CloudFront
Key pairs allow you to connect to your instance securely.
Enter the name of the key pair below. When prompted, store the private key in a secure and accessible location on your computer. You will need it later to connect to your instance. Learn more
Key pair name
myfirstserverkp
The name can include upto 255 ASCII characters. It can't include leading or trailing spaces.
Key pair type
RSA
ED25519
Private key file format
.pem
For use with OpenSSH
.ppk
For use with PuTTY
We use Session Manager to connect to the instance with the help of IAM profile. Alternatevily, EC2 Instance Connect also works. In case the session manager is not working, you can use this Key Pair to connect to the instance. PEM for MacOS, Linux. PPK for Windows.

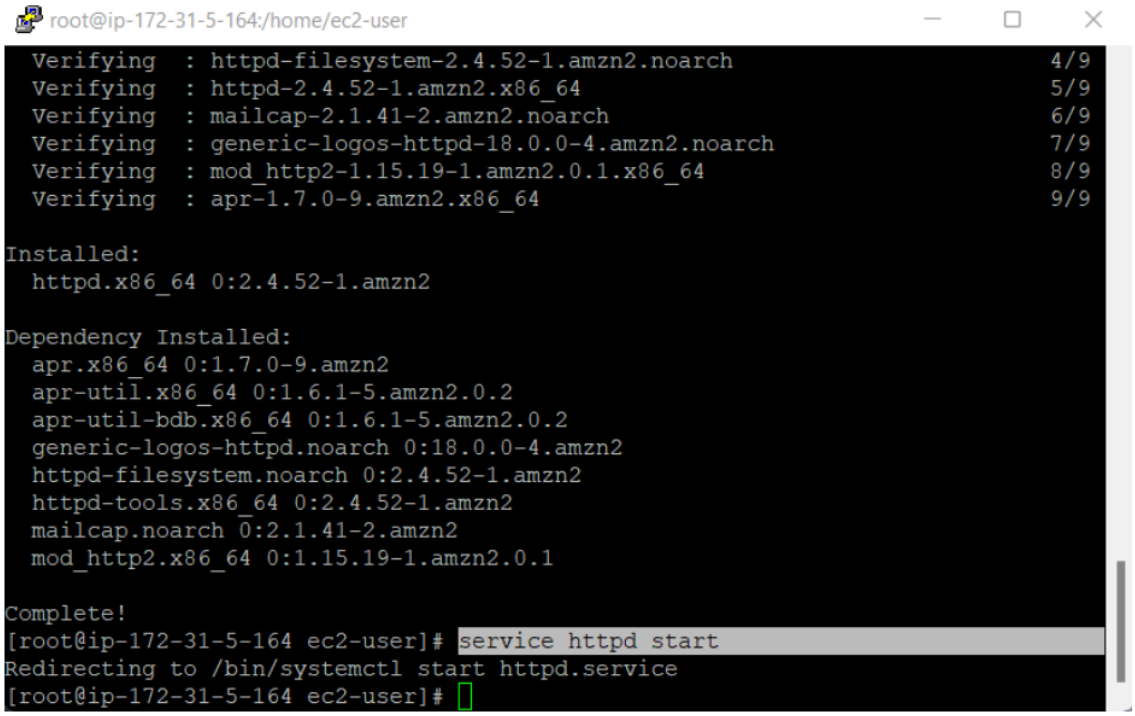


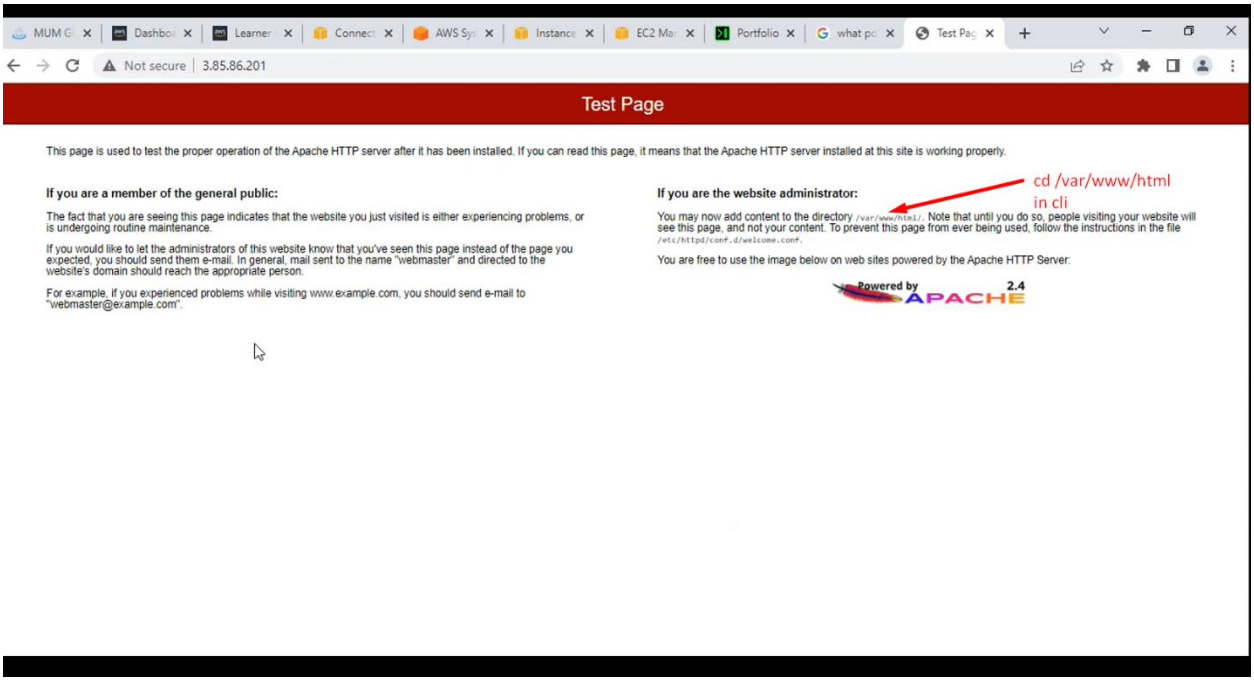


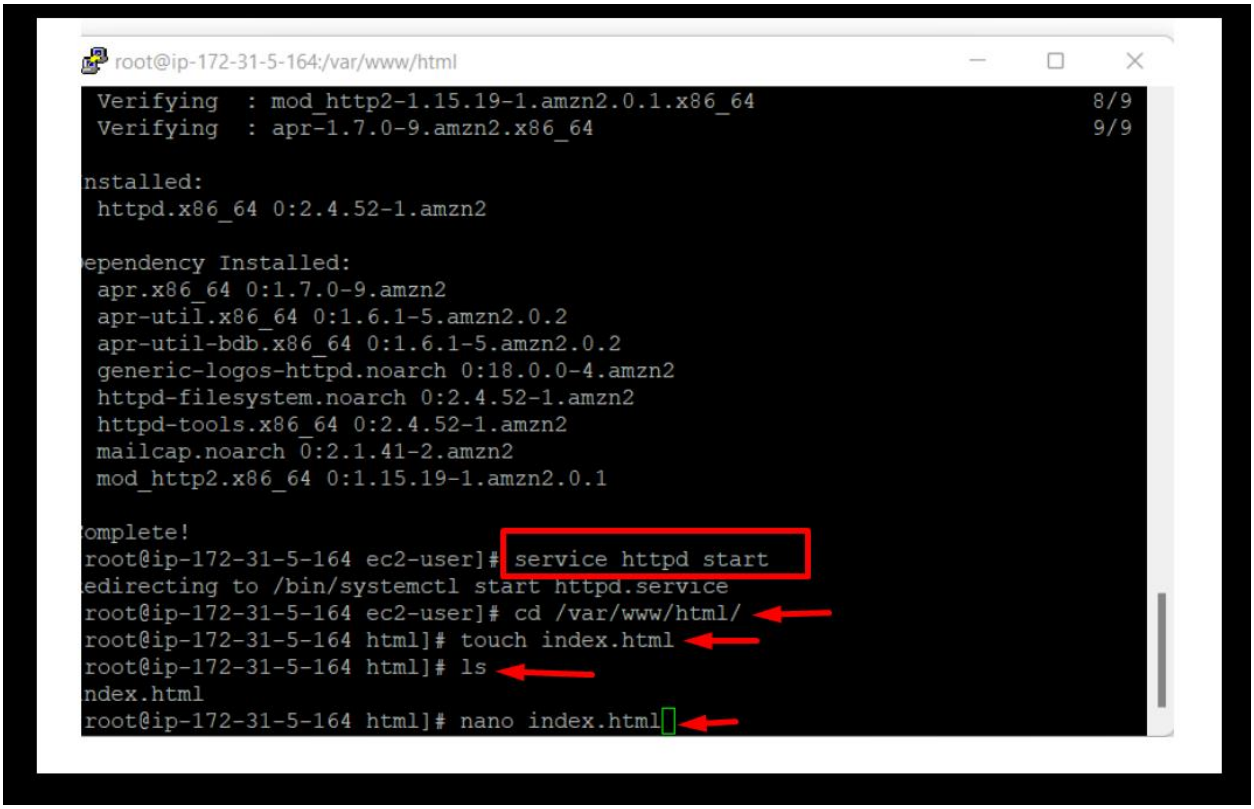
1. Configure a web server on EC2.
    a. Select the instance
    b. Hit Connect
    c. Select the "**EC2 Instance Connect**" tab and hit Connect. For more information: https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/connect.html
    d. To install and customize a web server:
    sudo -s => Logging as a root user so you can start the HTTPD service
    yum install httpd -y => Installing a web server
    service httpd start => Starting the server

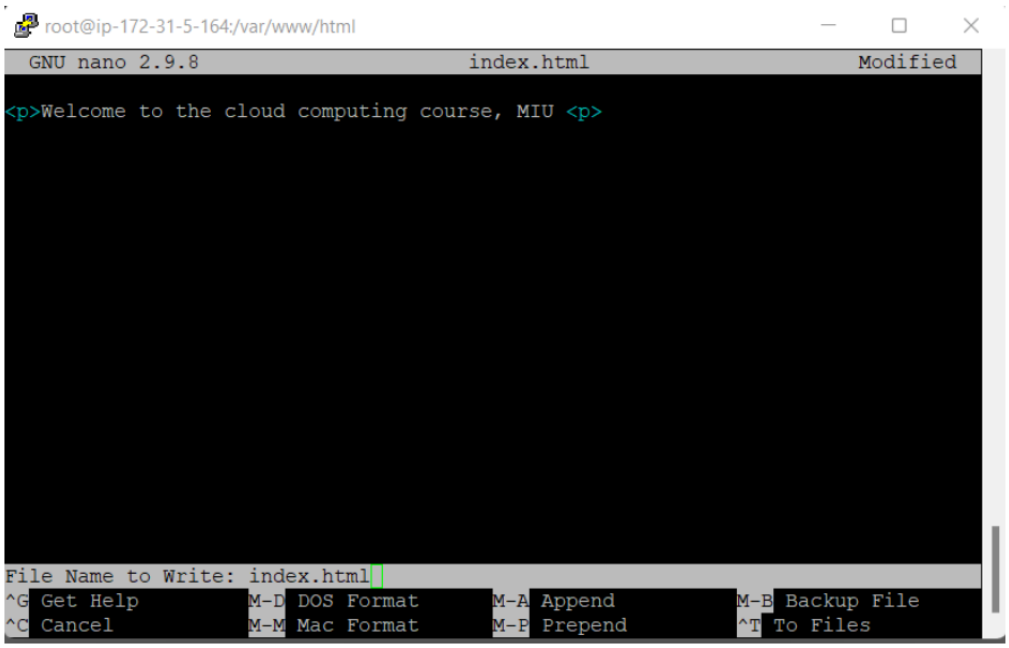
cd /var/www/html => Changing the directory to customize the default Apache page.
nano index.html => Create the index.html and write your name here as HTML.



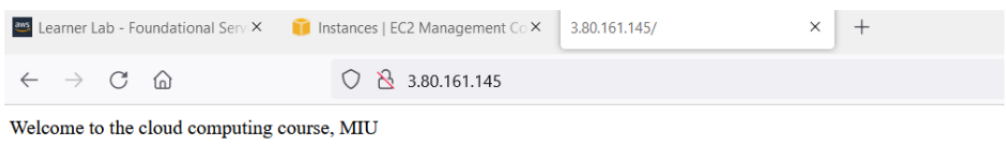



Not secure | 3.85.86.201
Test Page
This page is used to test the proper operation of the Apache HTTP server after it has been installed. If you can read this page, it means that the Apache HTTP server installed at this site is working properly.
If you are a member of the general public:
The fact that you are seeing this page indicates that the website you just visited is either experiencing problems, or is undergoing routine maintenance.
If you would like to let the administrators of this website know that you've seen this page instead of the page you expected, you should send them e-mail. In general, mail sent to the name "webmaster" and directed to the website's domain should reach the appropriate person.
For example, if you experienced problems while visiting www.example.com, you should send e-mail to "webmaster@example.com".
If you are the website administrator:
cd /var/www/html
in cli
You may now add content to the directory /var/www/html/. Note that until you do so, people visiting your website will see this page, and not your content. To prevent this page from ever being used, follow the instructions in the file /etc/httpd/conf.d/welcome.conf.
You are free to use the image below on web sites powered by the Apache HTTP Server:
Powered by
APACHE
2.4


root@ip-172-31-5-164:/var/www/html
Verifying : mod_http2-1.15.19-1.amzn2.0.1.x86_64 8/9
Verifying : apr-1.7.0-9.amzn2.x86_64 9/9
nstalled:
httpd.x86_64 0:2.4.52-1.amzn2
ependency Installed:
apr.x86_64 0:1.7.0-9.amzn2
apr-util.x86_64 0:1.6.1-5.amzn2.0.2
apr-util-bdb.x86_64 0:1.6.1-5.amzn2.0.2
generic-logos-httpd.noarch 0:18.0.0-4.amzn2
httpd-filesystem.noarch 0:2.4.52-1.amzn2
httpd-tools.x86_64 0:2.4.52-1.amzn2
mailcap.noarch 0:2.1.41-2.amzn2
mod_http2.x86_64 0:1.15.19-1.amzn2.0.1
omplete!
root@ip-172-31-5-164 ec2-user]# service httpd start
edirecting to /bin/systemctl start httpd.service
root@ip-172-31-5-164 ec2-user]# cd /var/www/html/
root@ip-172-31-5-164 html]# touch index.html
root@ip-172-31-5-164 html]# ls
ndex.html
root@ip-172-31-5-164 html]# nano index.html



Go to the website and reload



Creating a public Lambda endpoint

Change the IAM role to LabRole if it is AWS Academy Account. If it is your regular account, go with the default. You can create a new role with basic permissions.

Create function Info

AWS Serverless Application Repository applications have moved to Create application.

Author from scratch
Start with a simple Hello World example.

Basic information

Function name
Enter a name that describes the purpose of your function.

myFunctionName

Use only letters, numbers, hyphens, or underscores with no spaces.

Runtime Info
Choose the language to use to write your function. Note that the console code editor supports only Node.js, Python, and Ruby.

Node.js 18.x

Architecture Info
Choose the instruction set architecture you want for your function code.

- (●) x86_64
- ( ) arm64

Permissions Info
By default, Lambda will create an execution role with permissions to upload logs to Amazon CloudWatch Logs. You can customize this default role later when adding triggers.

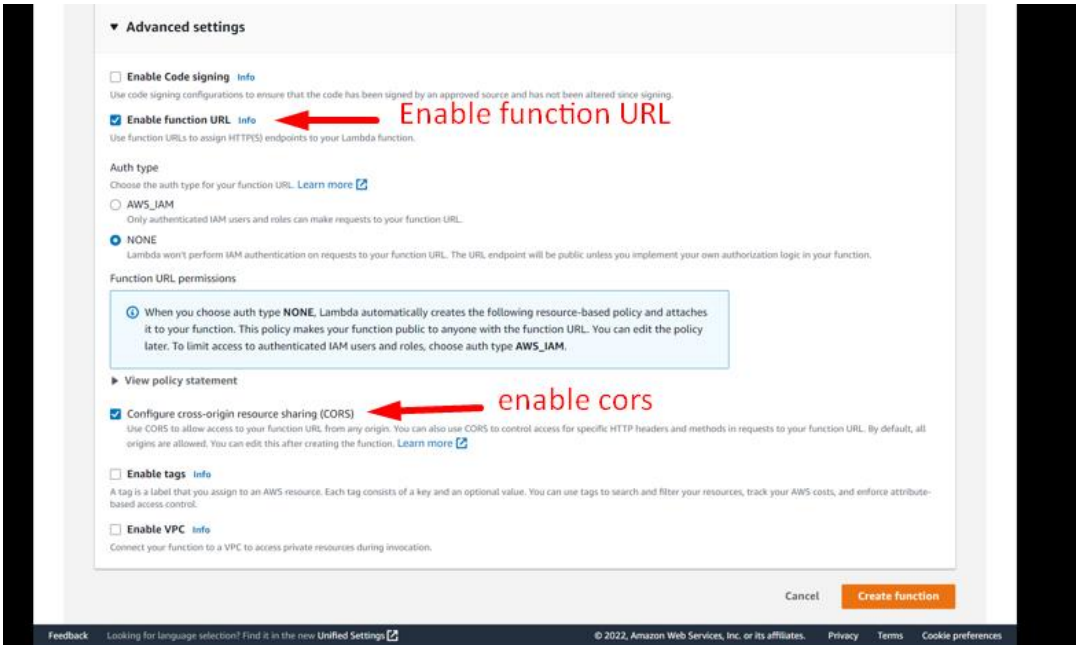
▼ Change default execution role ← Expand

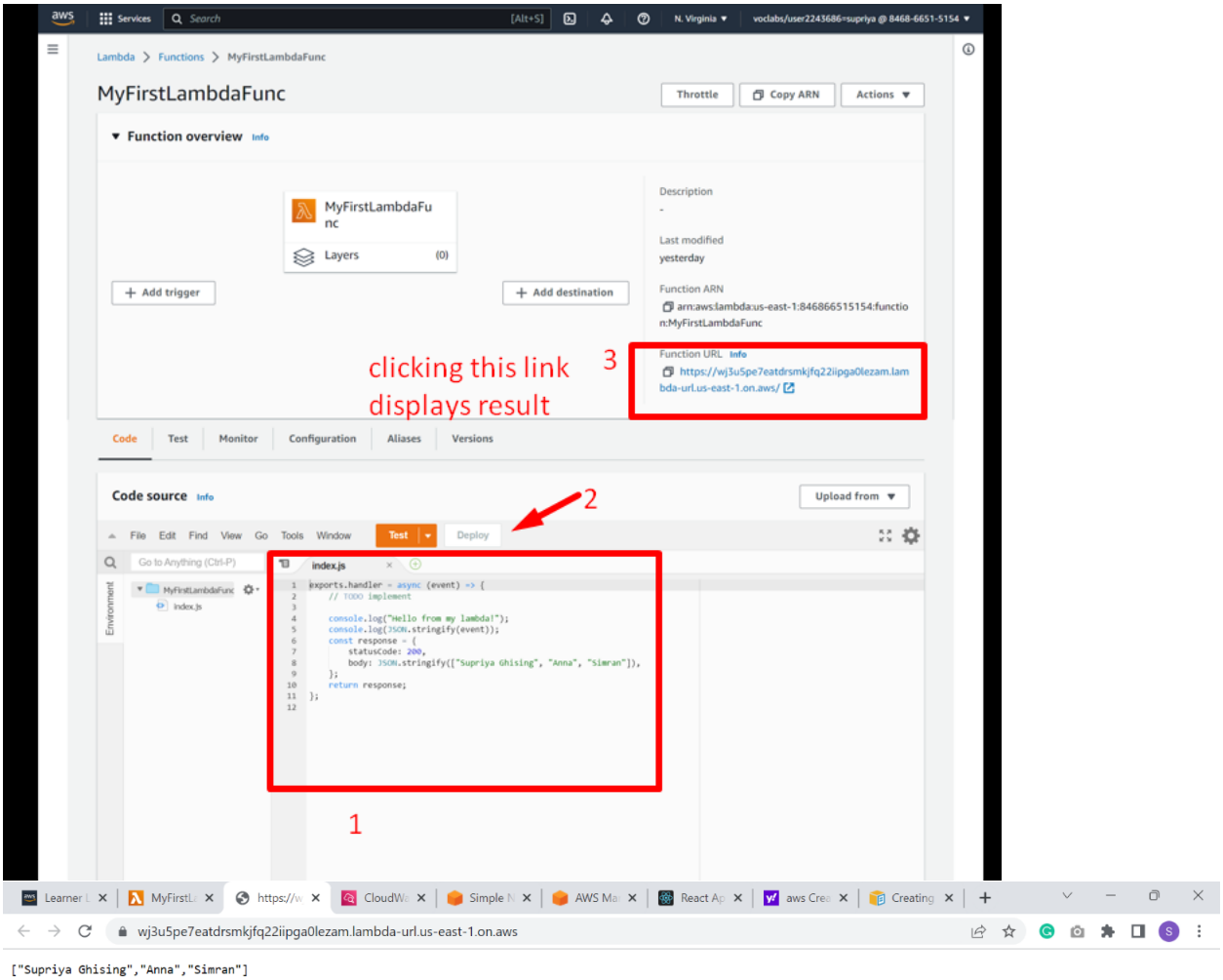
Execution role
Choose a role that defines the permissions of your function. To create a custom role, go to the IAM console.

- ( ) Create a new role with basic Lambda permissions
- (●) Use an existing role ← select
- ( ) Create a new role from AWS policy templates

Existing role
Choose an existing role that you've created to be used with this Lambda function. The role must have permission to upload logs to Amazon CloudWatch Logs.

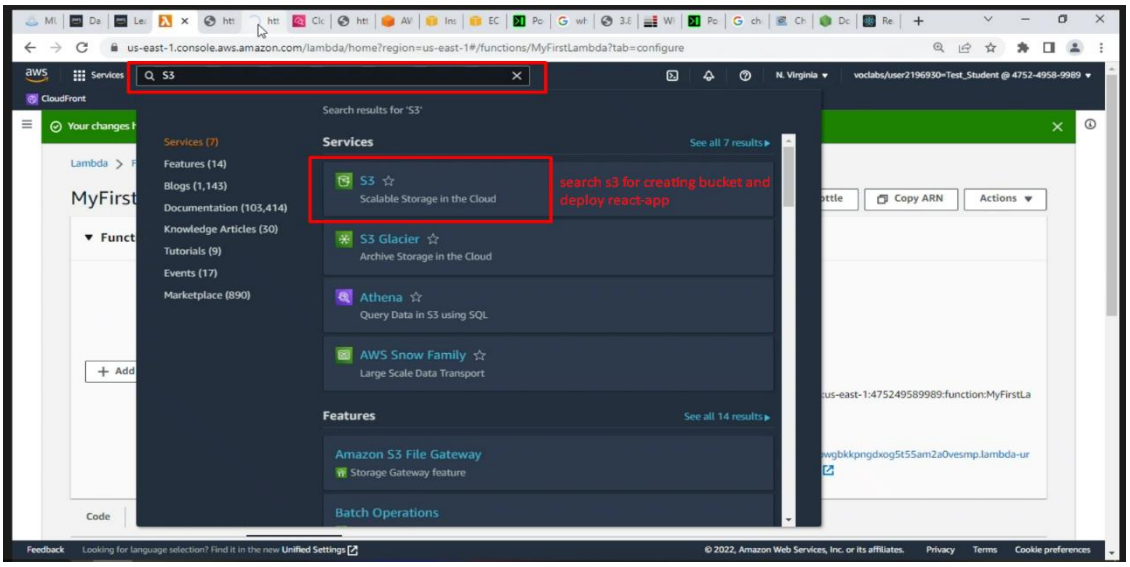
LabRole

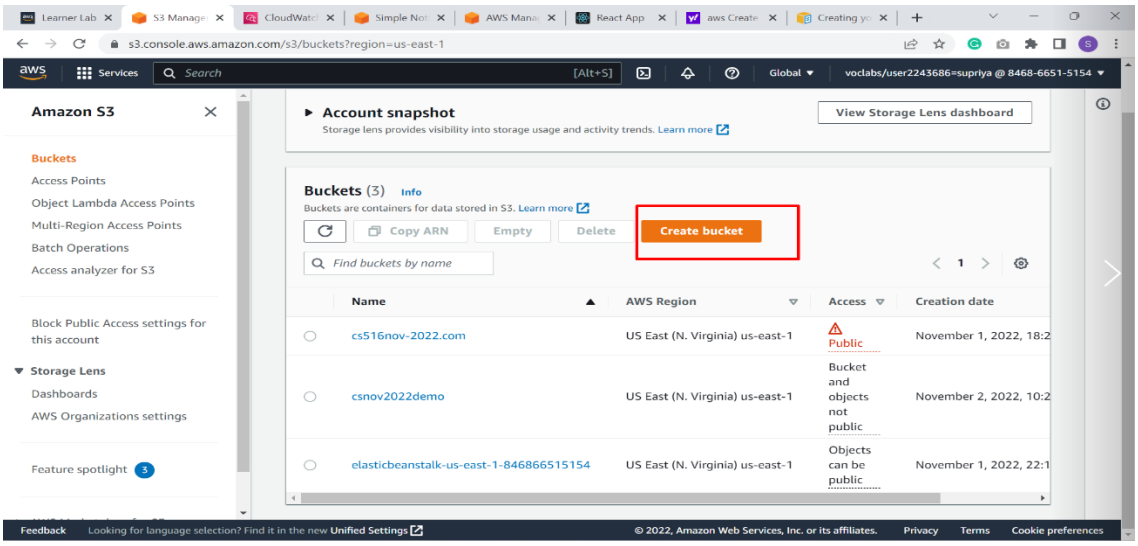


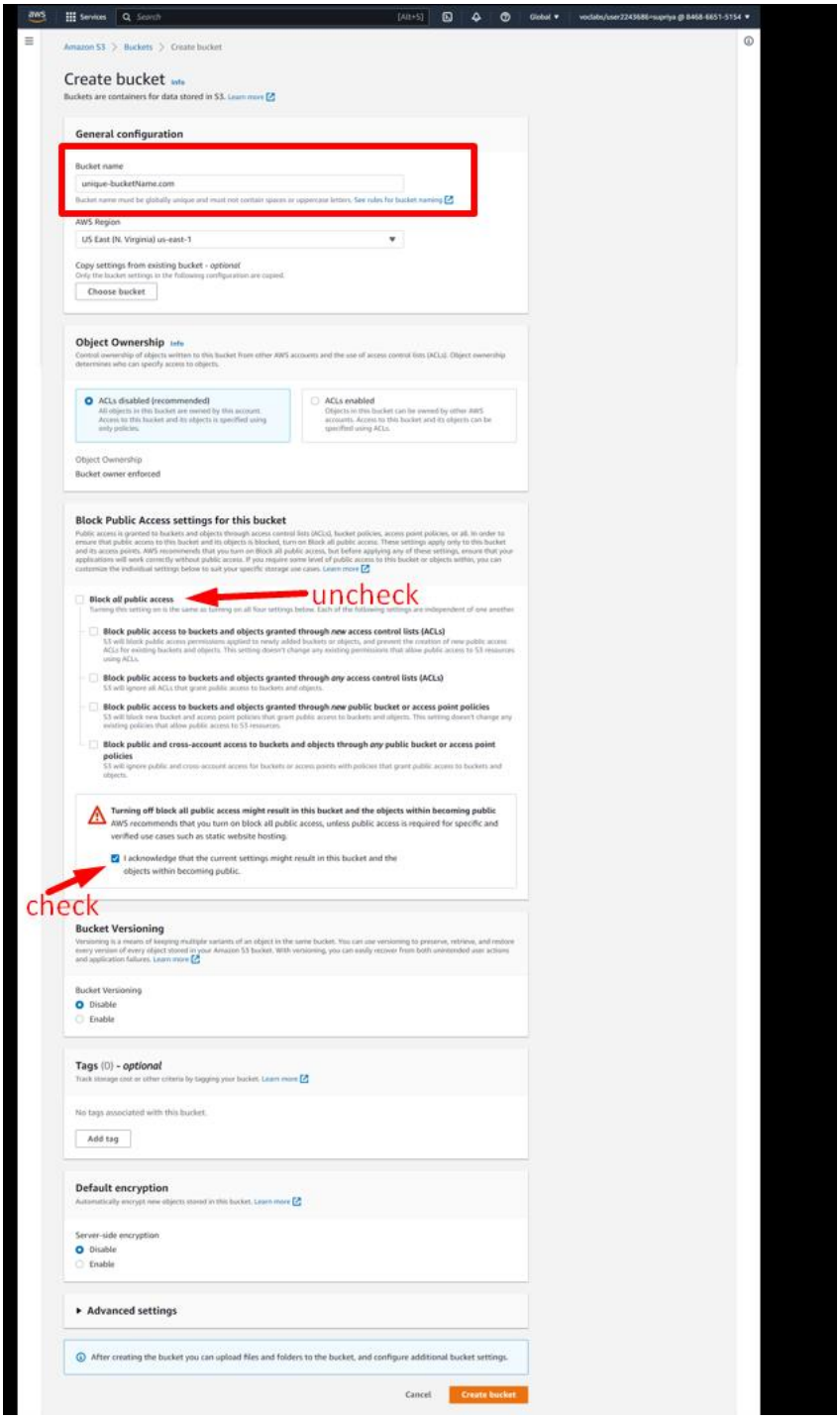


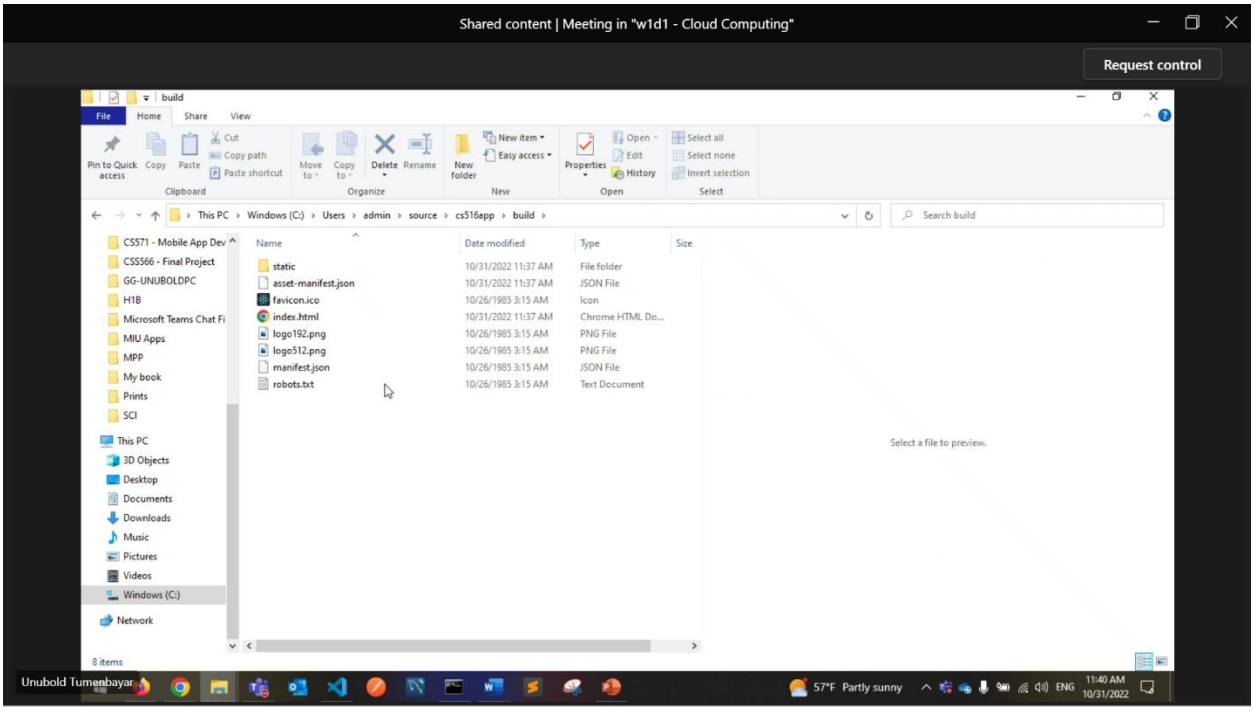

```
["Supriya Ghising","Anna","Simran"]
```

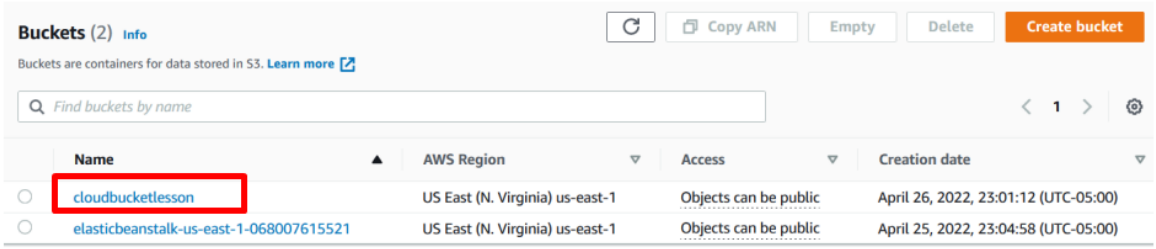
Deploying a React app to S3





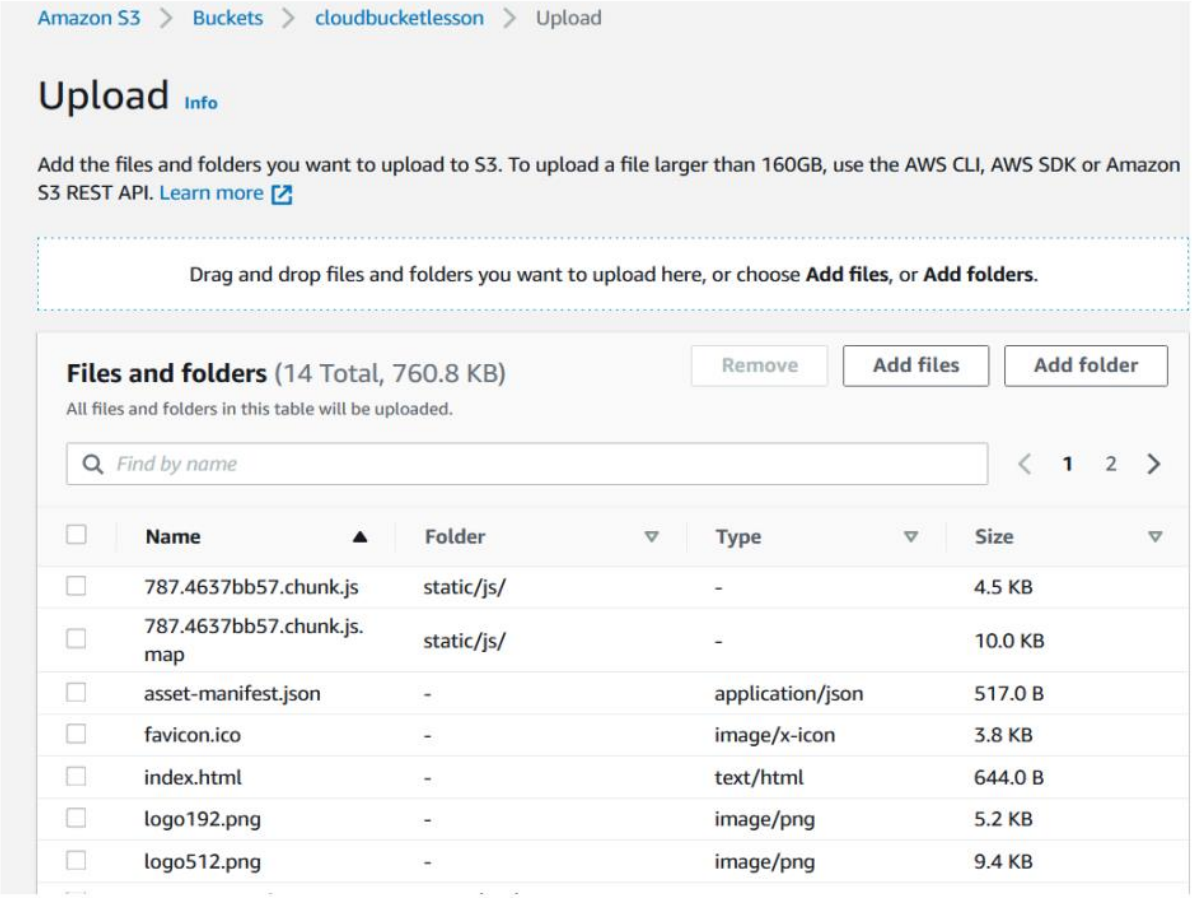

Amazon S3 > Buckets > Create bucket
Create bucket
Buckets are containers for data stored in S3.
General configuration
Bucket name
unique-bucketName.com
AWS Region
US East (N. Virginia) us-east-1
Choose bucket
Object Ownership
ACLs disabled (recommended)
ACLs enabled
Bucket owner enforced
Block Public Access settings for this bucket
Block all public access
uncheck
Block public access to buckets and objects granted through new access control lists (ACLs)
Block public access to buckets and objects granted through any access control lists (ACLs)
Block public access to buckets and objects granted through new public bucket or access point policies
Block public and cross-account access to buckets and objects through any public bucket or access point policies
Turning off block all public access might result in this bucket and the objects within becoming public
AWS recommends that you turn on block all public access, unless public access is required for specific and verified use cases such as static website hosting.
I acknowledge that the current settings might result in this bucket and the objects within becoming public.
check
Bucket Versioning
Disable
Enable
Tags (0) - optional
No tags associated with this bucket.
Add tag
Default encryption
Server-side encryption
Disable
Enable
Advanced settings
After creating the bucket you can upload files and folders to the bucket, and configure additional bucket settings.
Cancel
Create bucket



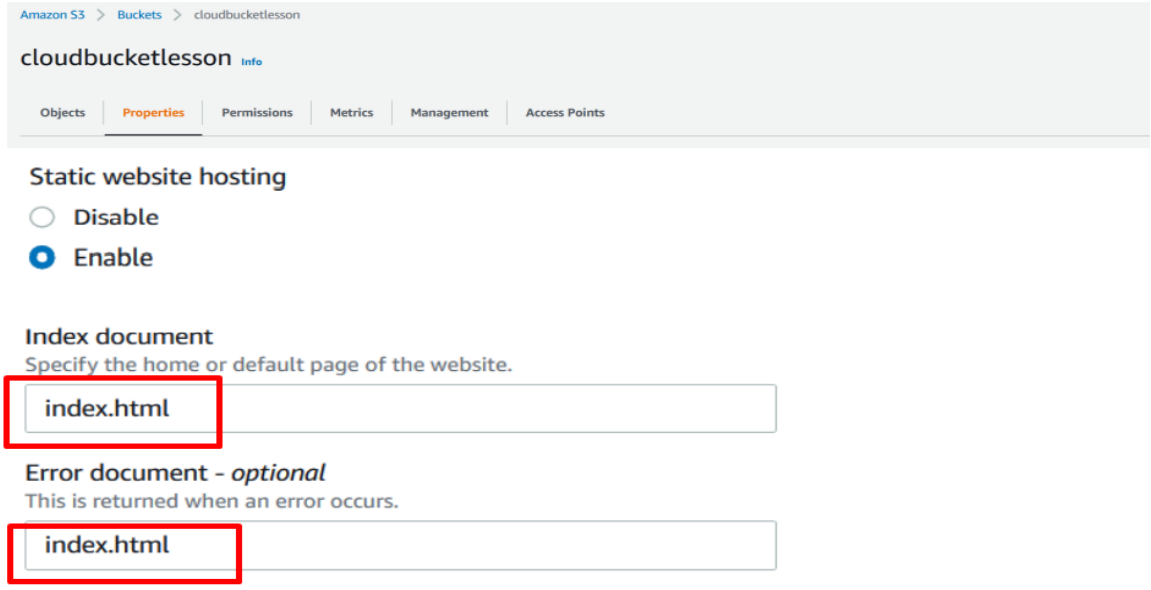


Go to the cloudbucketlesson bucket to upload build folders files of project.

click to the created bucket and upload files or folders of project, you can upload images, videos

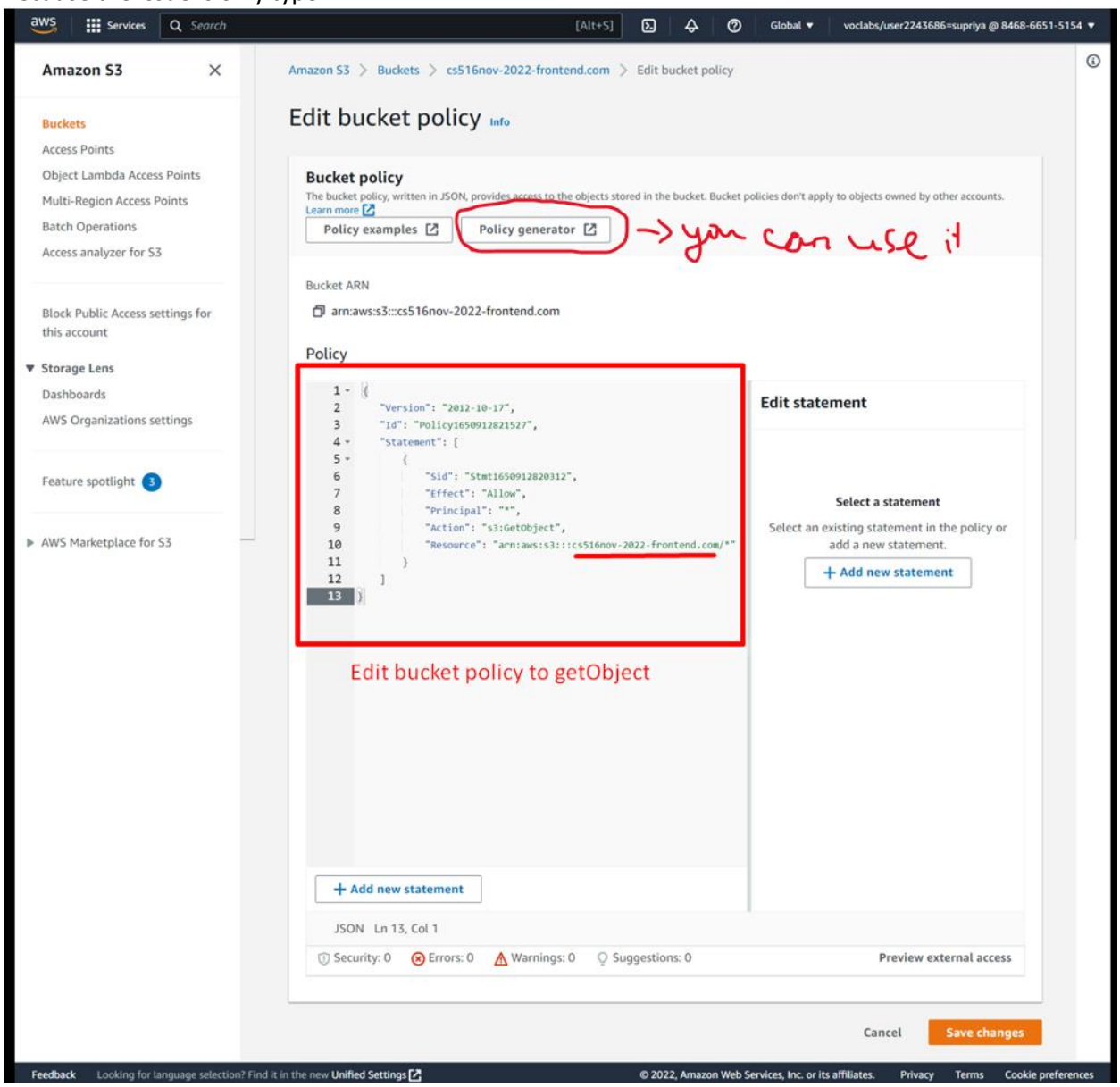


After uploading complete go to the properties tab of bucket.



Then save changes.

Sid may not be required. Make sure there is no type. You can use policy generator to generate it. Don't forget "/*" in the resource. Again, in this step take your time and find it out yourself if face issue. Because the issue is only type.



aws | Services | Search [Alt+S] | Global | voclabs/user2243686=supriya @ 8468-6651-5154

Uploading 26%

Total remaining: 11 files: 538.0 KB(73.94%)
Estimated time remaining: a few seconds
Transfer rate: 13.9 KB/s

Cancel

Upload: status

Close

The information below will no longer be available after you navigate away from this page.

Summary

Destination	Succeeded	Failed
s3://cs516nov-2022-frontend.com	3 files, 189.6 KB (26.06%)	0 files, 0 B (0%)

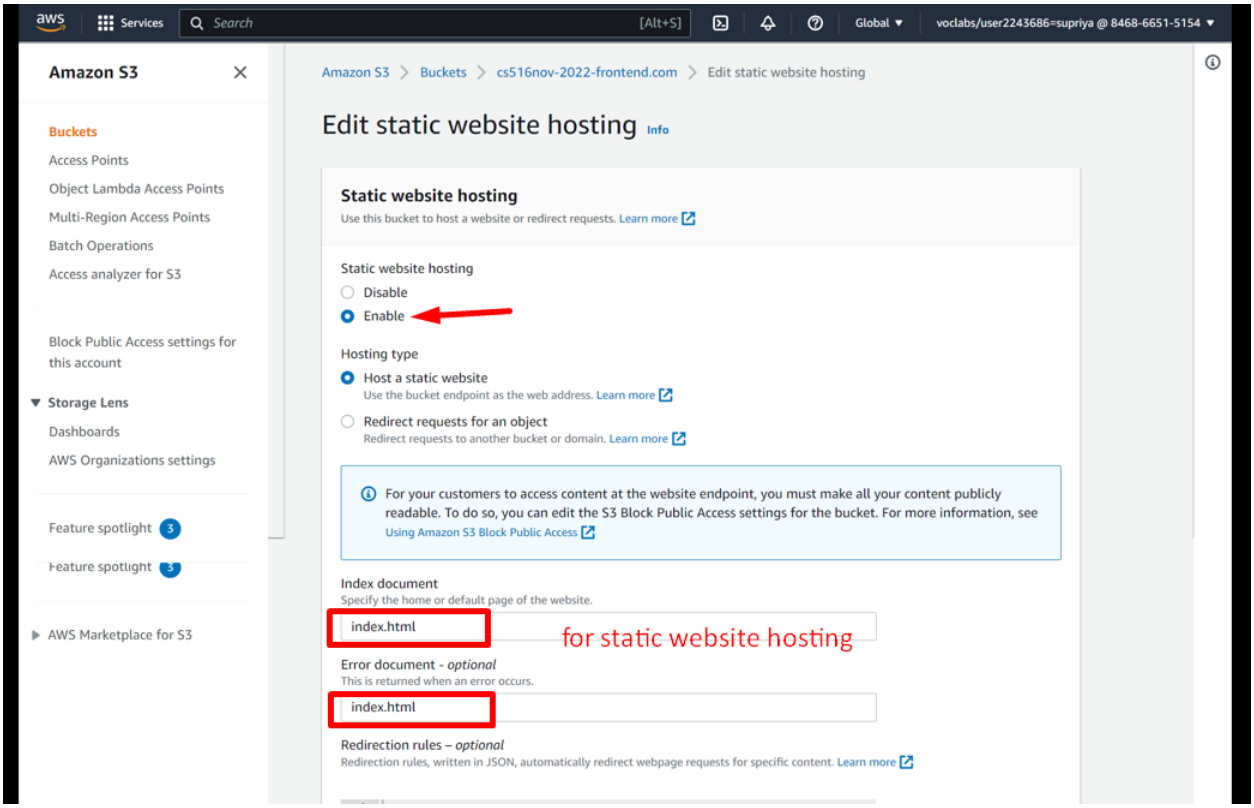
Files and folders | Configuration

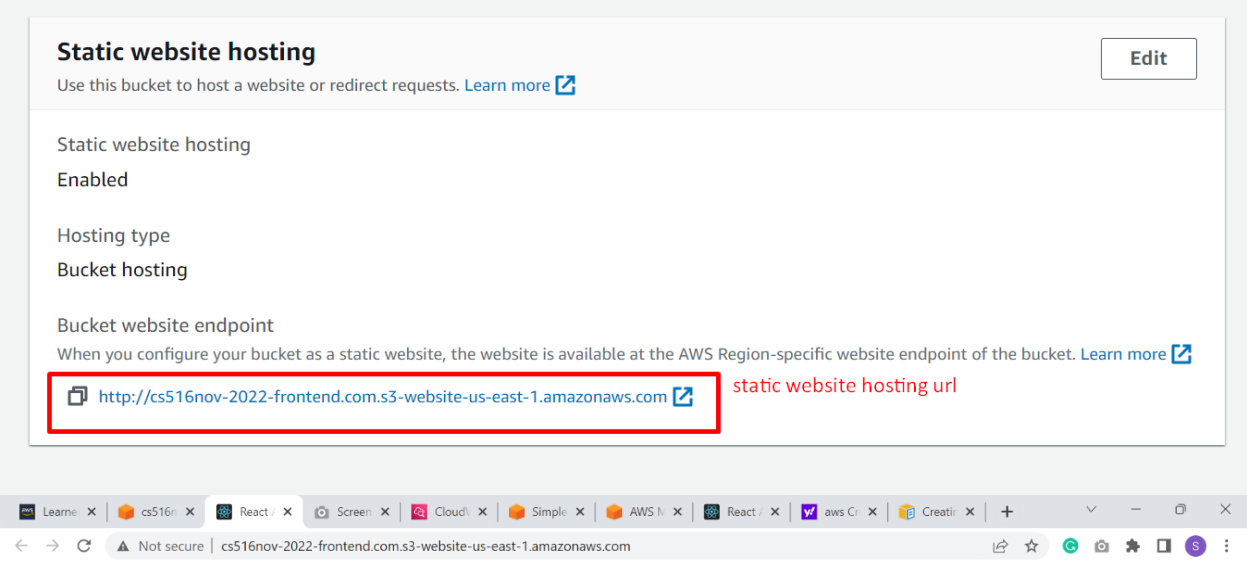
Files and folders (14 Total, 727.7 KB)

Find by name

1 2

Name	Folder	Type	Size	Status	Error
787.36db6797.chunk.js	static/js/	text/javascript	4.5 KB	Succeeded	-
787.36db6797.chunk.js.map	static/js/	-	10.3 KB	Succeeded	-
asset-manifest.json	-	application/json	517.0 B	Pending	-
favicon.ico	-	image/x-icon	3.8 KB	Pending	-
index.html	-	text/html	644.0 B	Pending	-
logo192.png	-	image/png	5.2 KB	Pending	-
logo512.png	-	image/png	9.4 KB	Pending	-
main.2dbd410b.js	static/js/	text/javascript	174.8 KB	Succeeded	-
main.2dbd410b.js.LICENSE.txt	static/js/	text/plain	1.1 KB	In Progress (100%)	-
main.2dbd410b.js.map	static/js/	-	515.9 KB	Pending	-





Cloud Computing course

1. Supriya Ghising
2. Anna
3. Simran