Week 2: ACF Lab 3: Introduction to EC2

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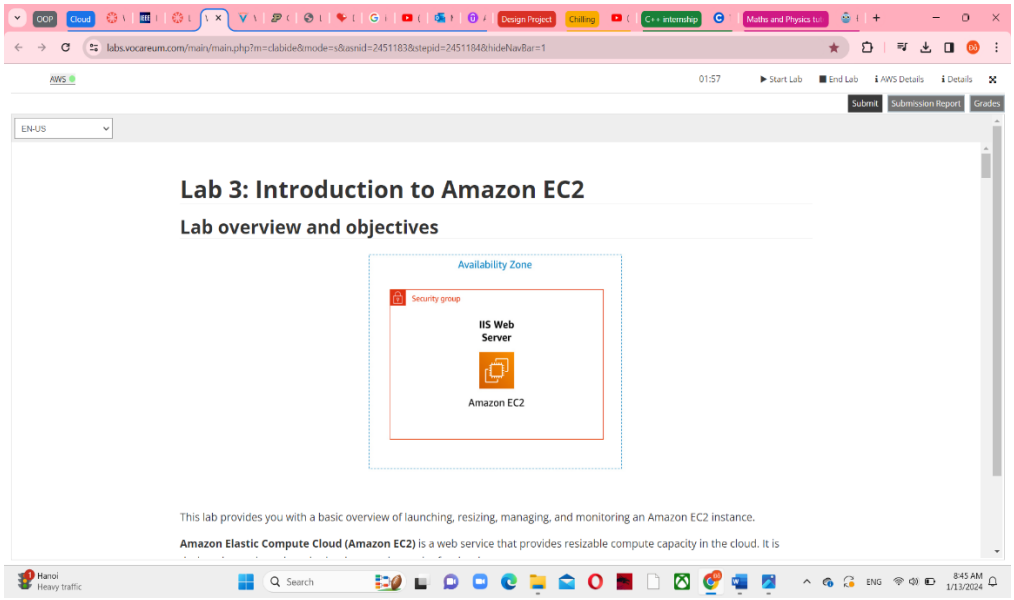
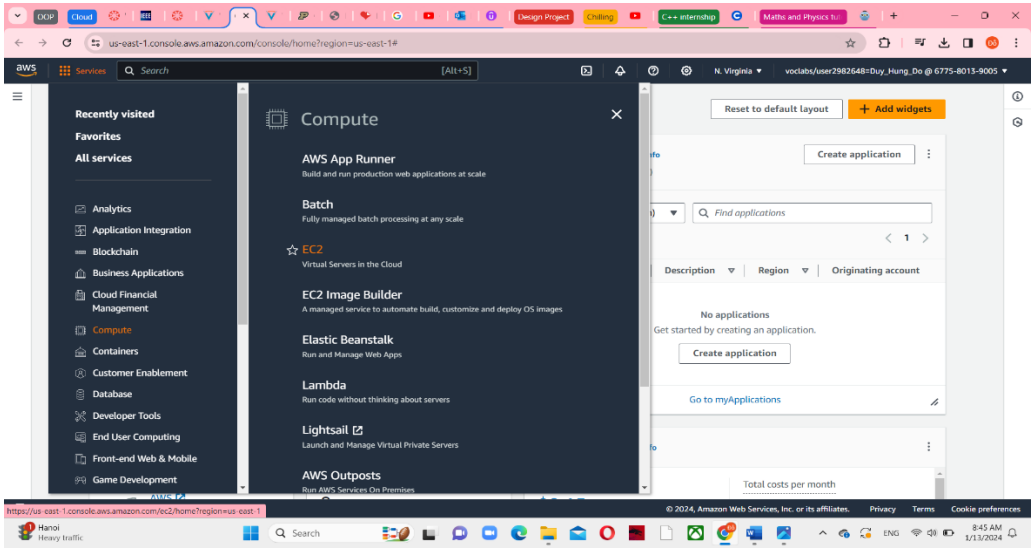
1, Choose Start Lab in the crossbar and wait for the circle icon to the right of the AWS link in the upper-left corner turns green. It takes about 2-3 minutes.

2, And if you want to connect to the AWS Management Console, click on the green button link.

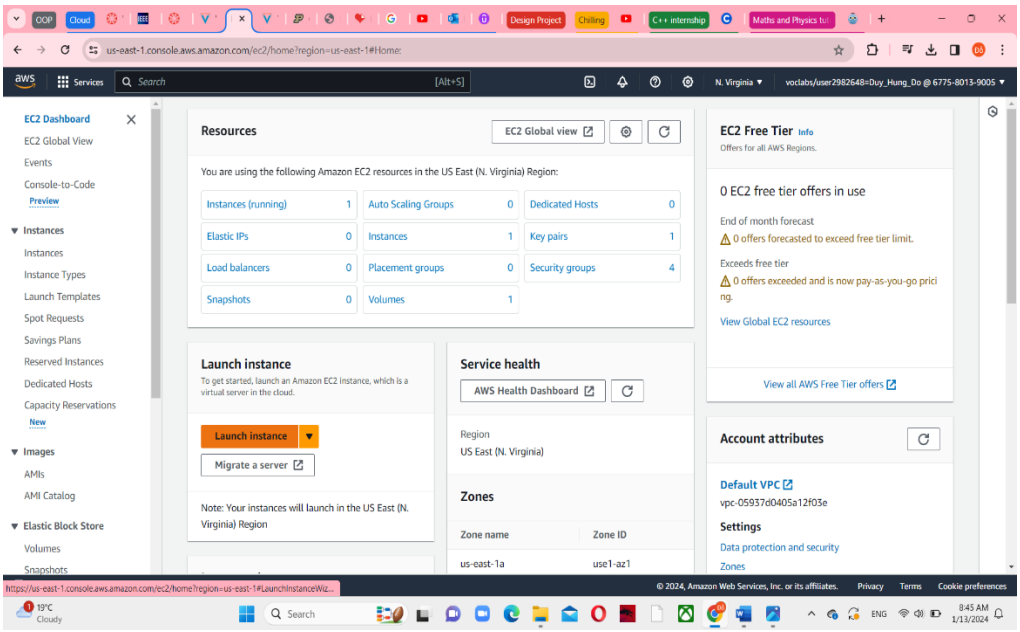


Task 1: Launch Your Amazon EC2 Instance

4, In this website, choose Services -> Compute -> EC2

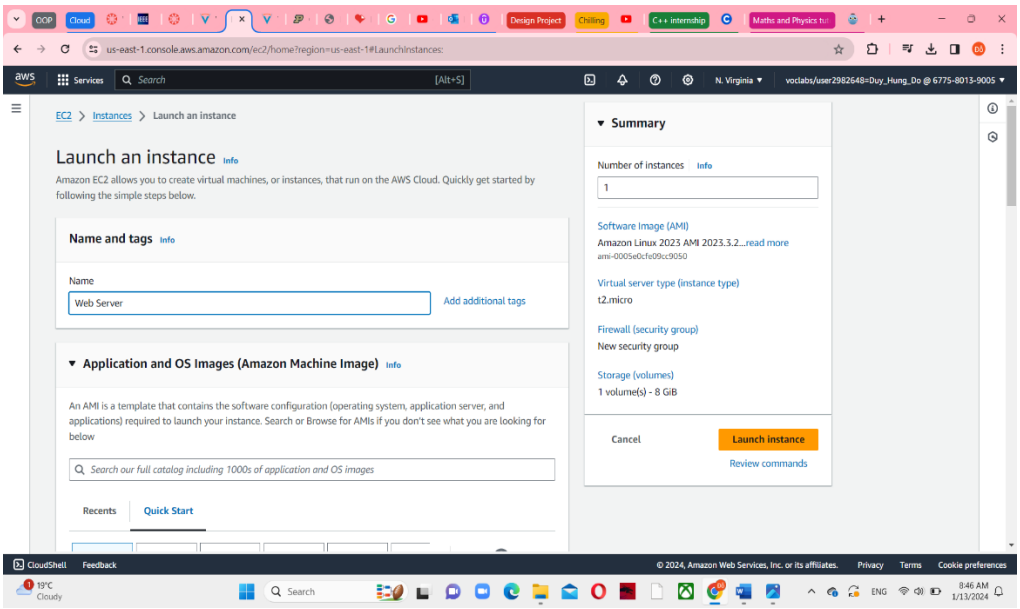


5, Select Launch instance to see some settings.



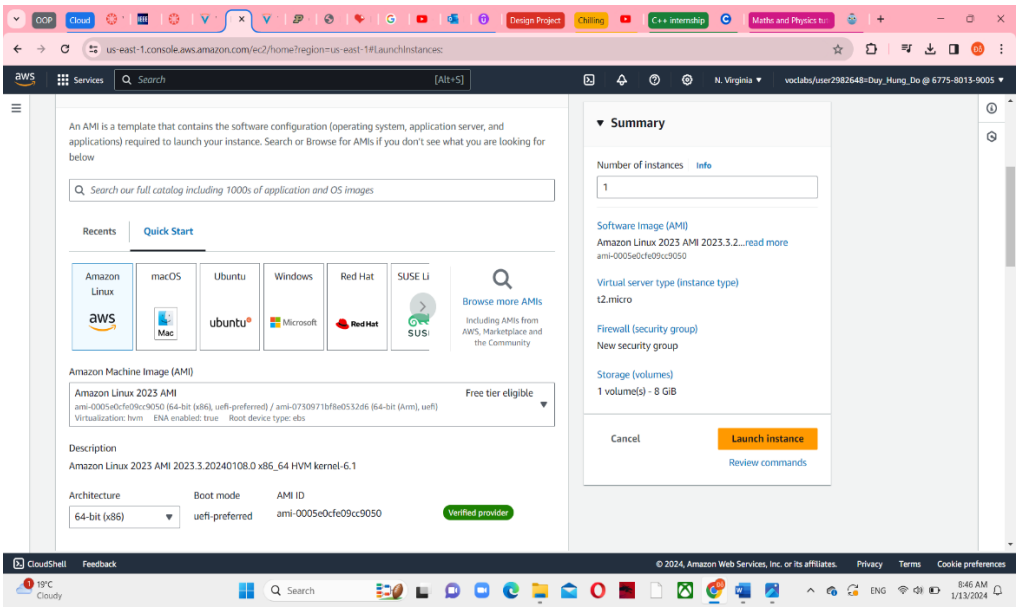
Step 1: Name and tags

6, Fill the Name's blank with the text "Web Server"



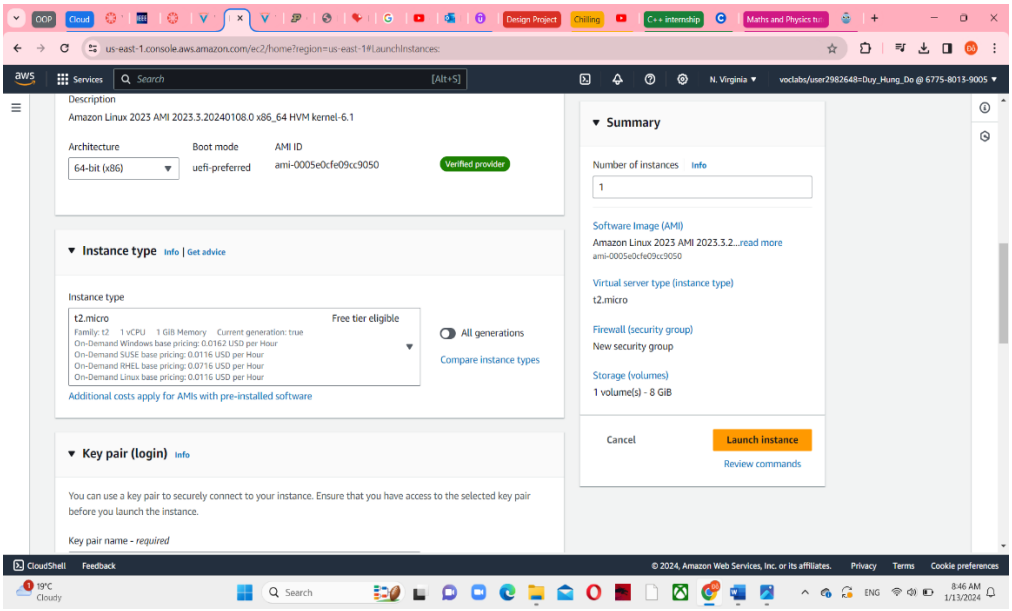
Step 2: Application and OS Images (Amazon Machine Image)

7, Keep the default settings in here. Amazon Linux and Amazon Linux 2023 AMI are automatically selected.



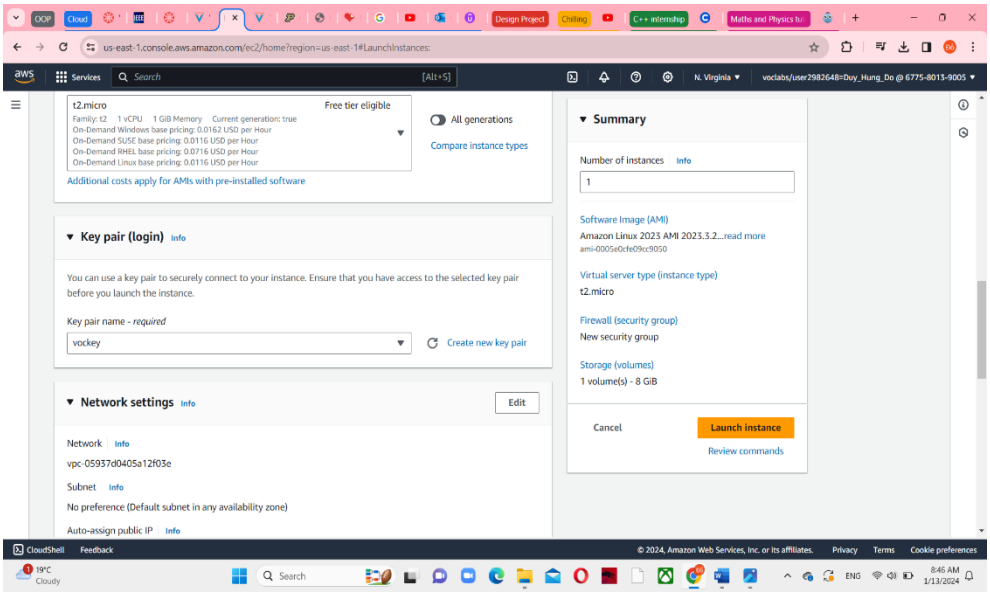
Step 3: Instance Type

9, Keep the default t2.micro selected



Step 4: Key pair (login)

10, In the Key pair name – required blank, choose vockey,

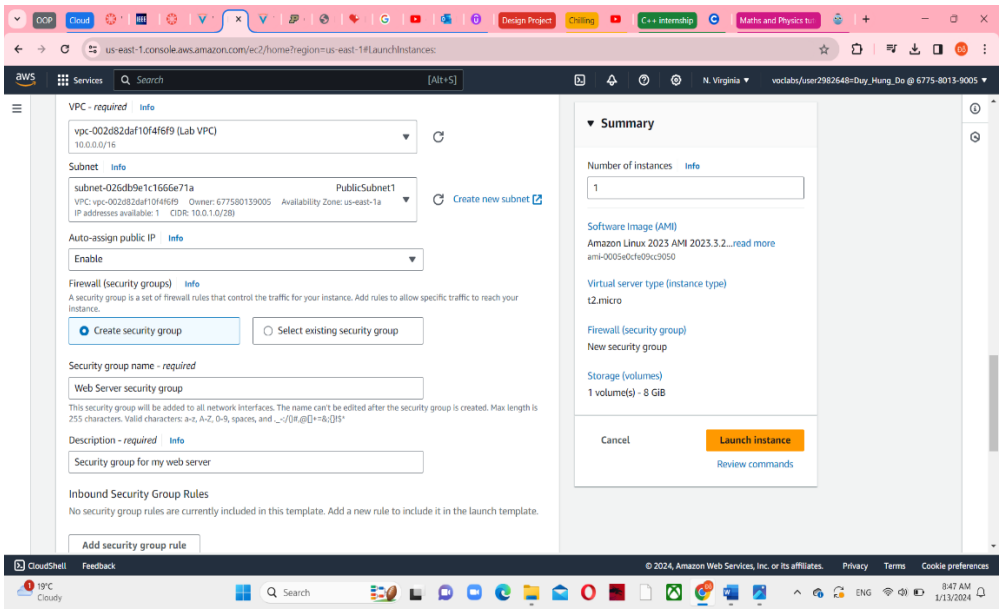


Step 5: Networks settings

11, Choose Edit button in the top right
12, In the VPC selection, choose Lab VPC
13, Under Firewall (security groups), choose Create security group and follow this instructure:

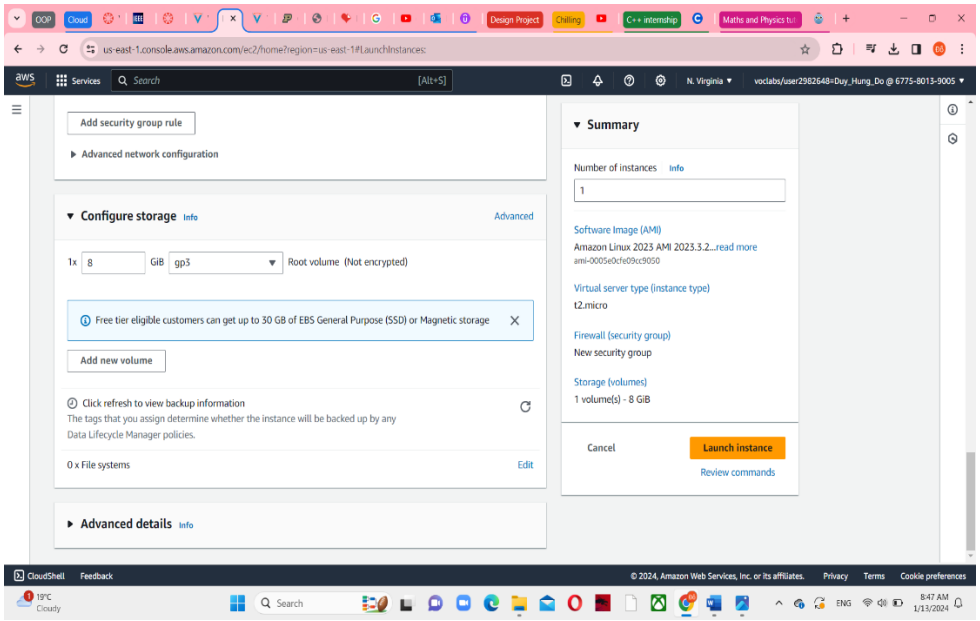
- Security group name: Web Server security group
- Description: Security group for my web server

! If one rule exists, choose Remove in the right bottom.



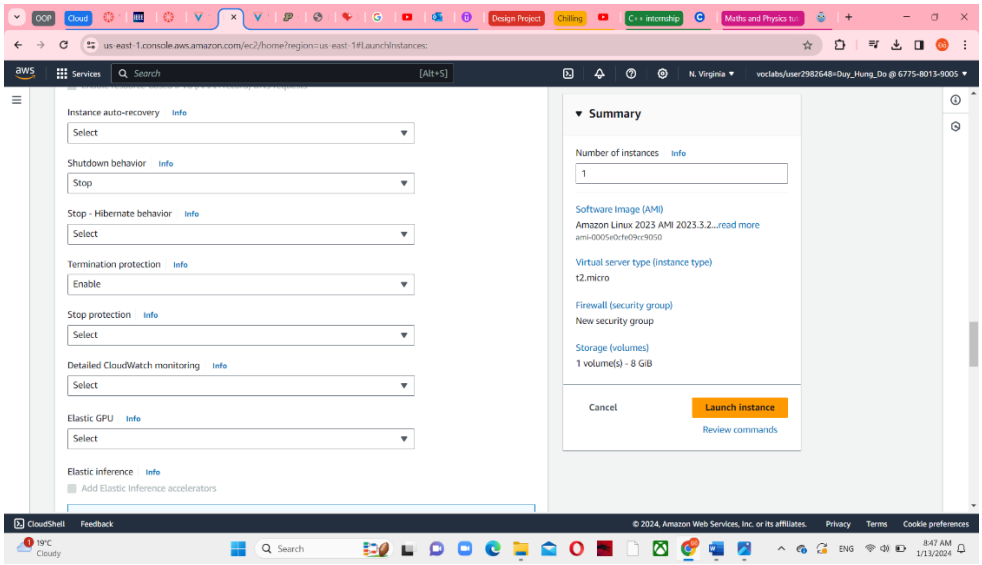
Step 6: Configure storage

14, Keep the default settings in here. Using 8 GiB disk volume is automatically selected

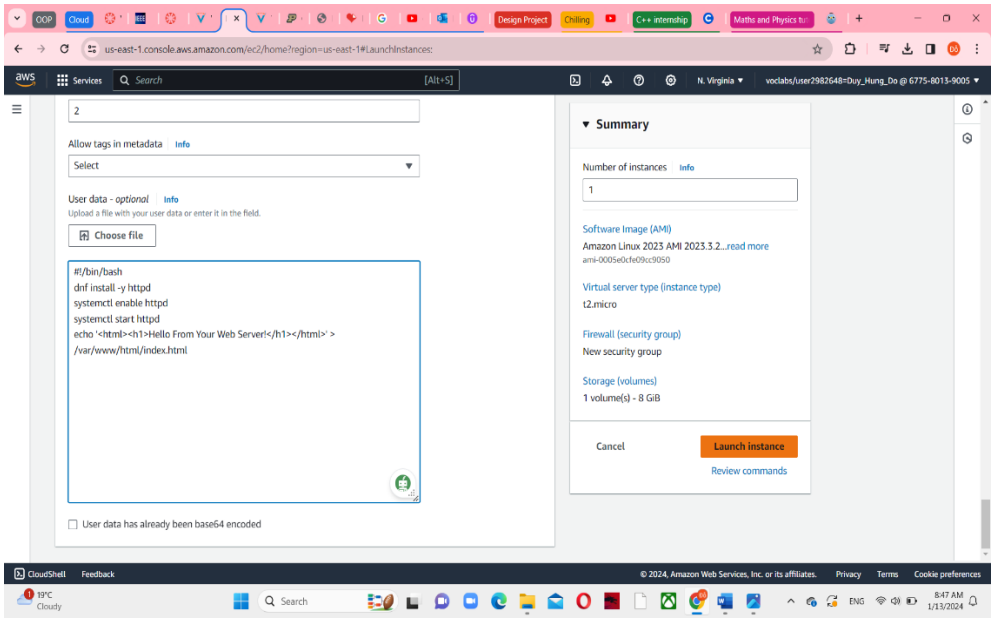


Step 7: Advanced details

16, Select Enable for Termination protection's blank

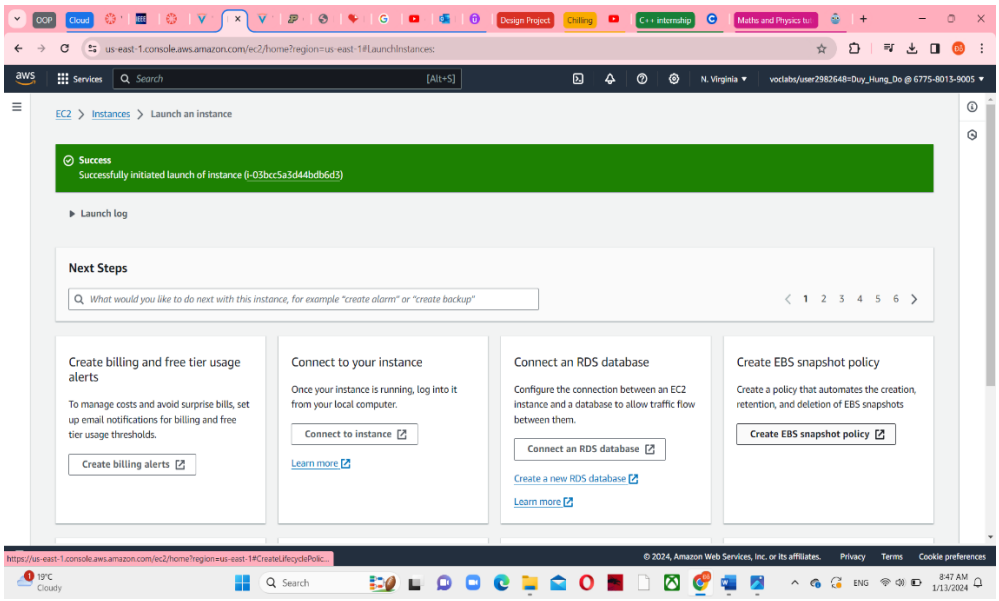


17, Put some code form html to create a web server into the User data box.

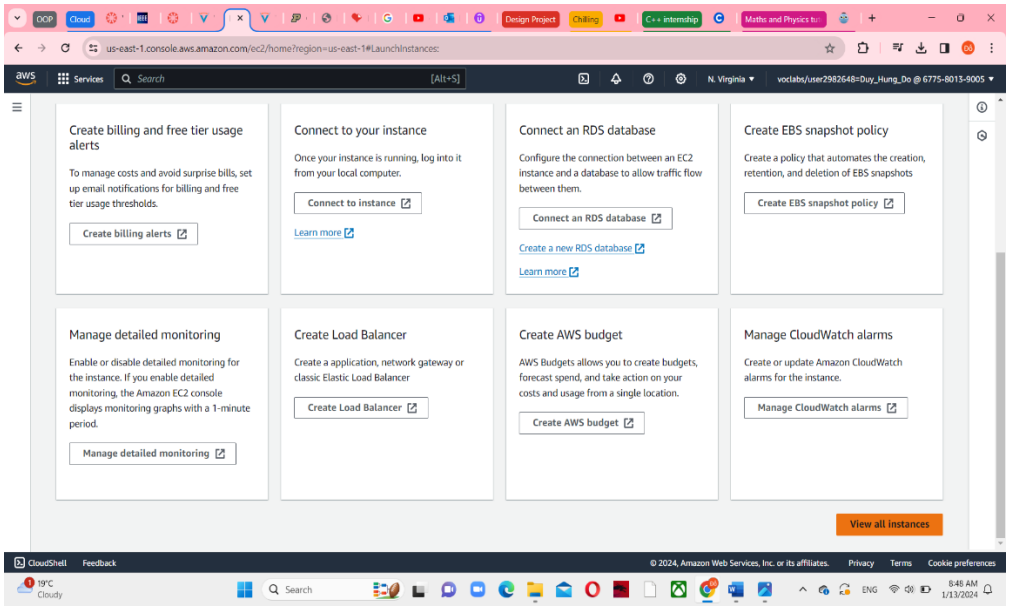


Step 8; Launch the instance

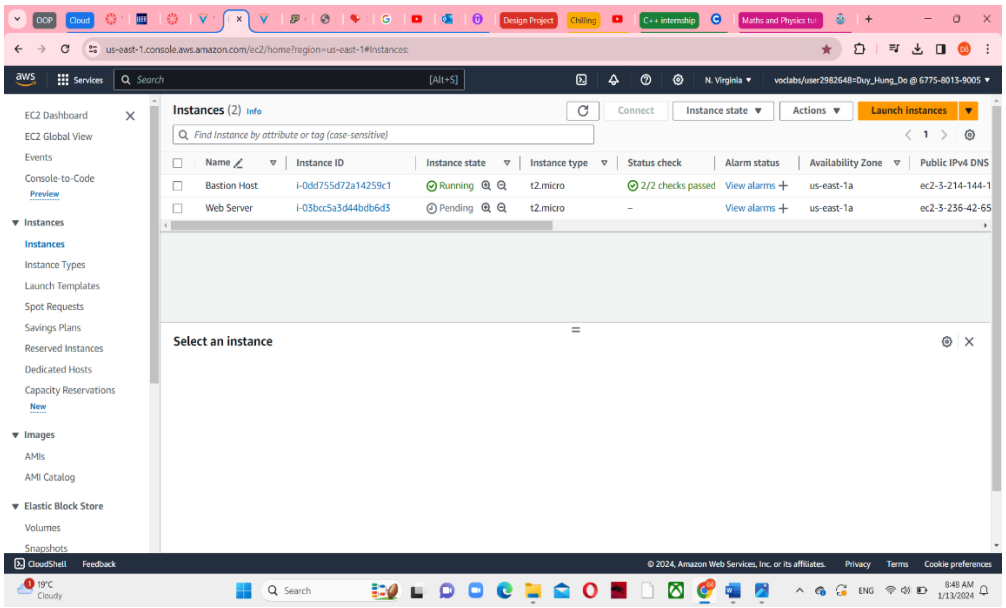
18, Choose Launch instance to see a Success message and it saves the information.

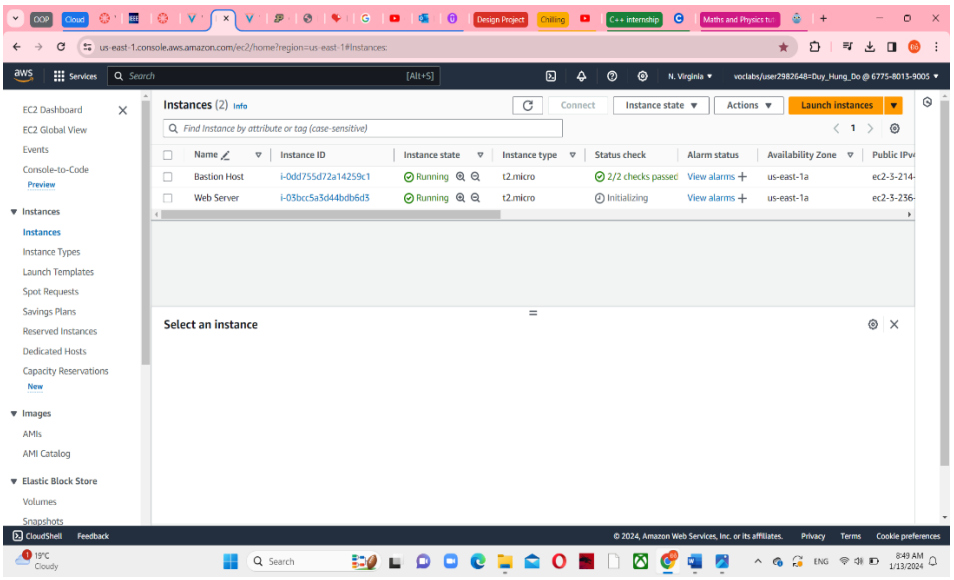


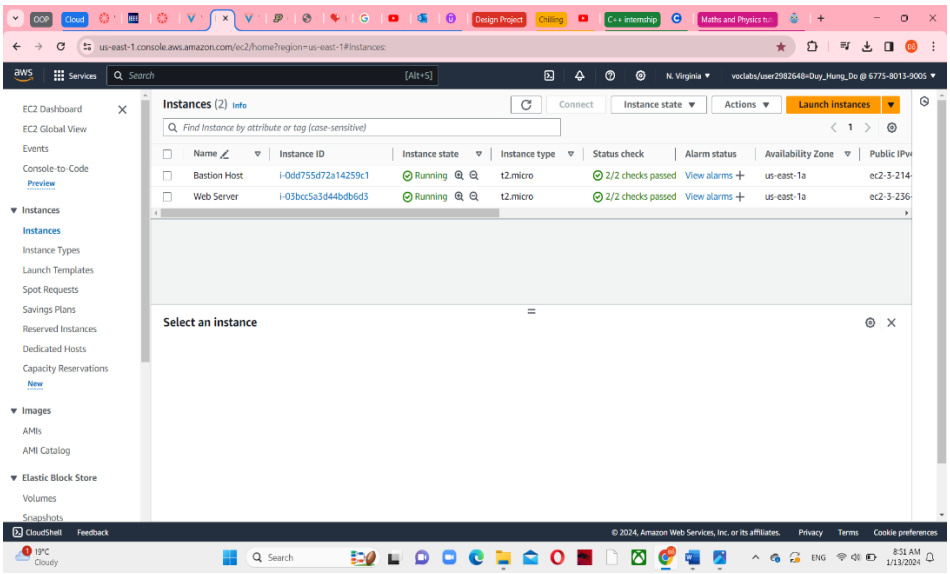
19, Choose View all instances in the bottom right, and then select the checkbox Web Server to view some details tab.



20, Wait for the instance to display the instance state is running and the status checks is 2/2 checks passed. You can reload this page to get the process faster.

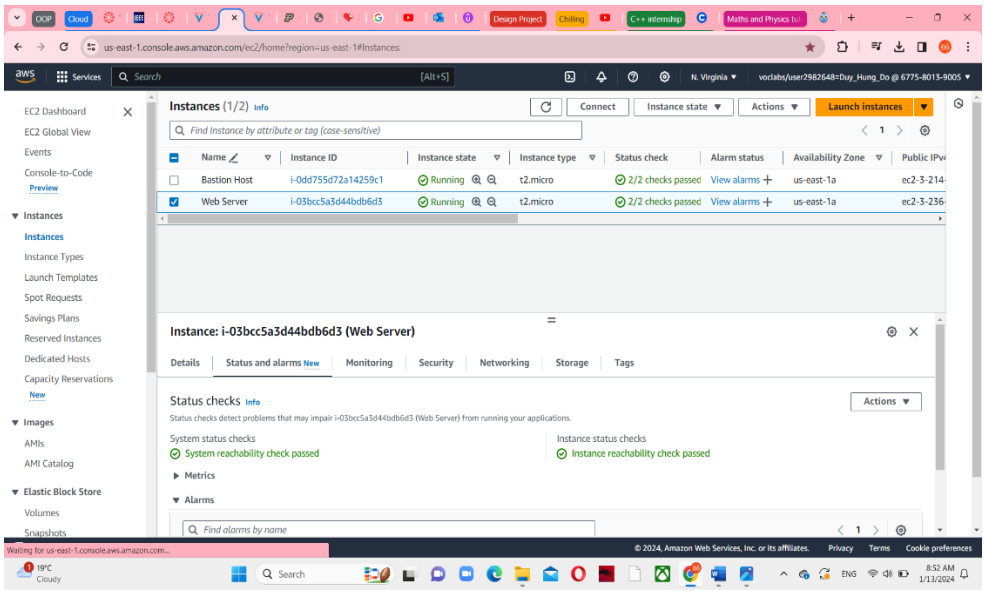




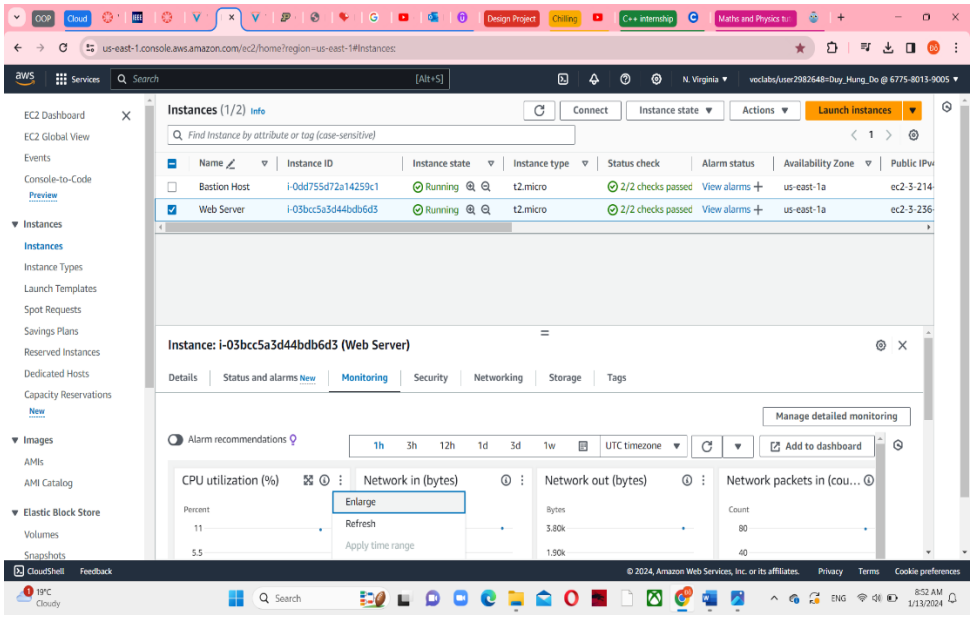


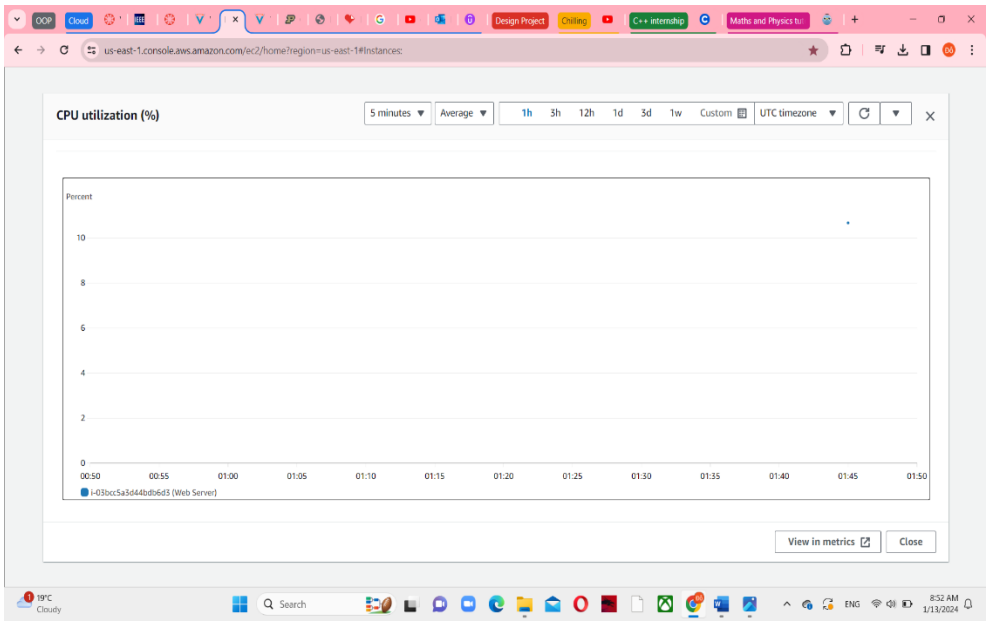
Task 2: Monitor Your Instance

21, In the Web Server details, choose Status and alarms tab, and then you can see both system reachability and instance reachability checks have passed.

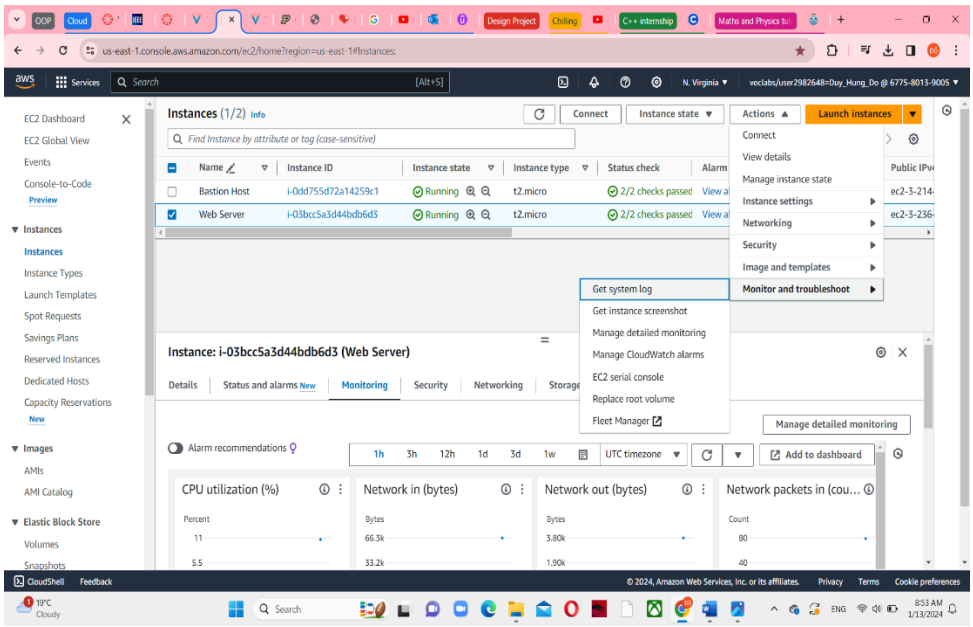


22, In Monitoring tab, you can see some metrics and graphs. And then you can choose the three dots icon in any graph and select Enlarge to see an expanded view of the chosen metric.

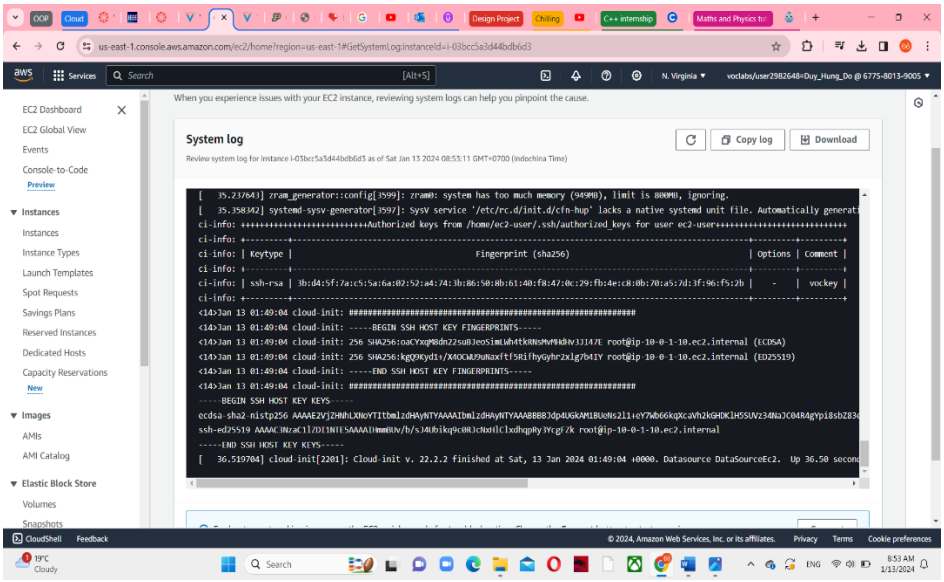




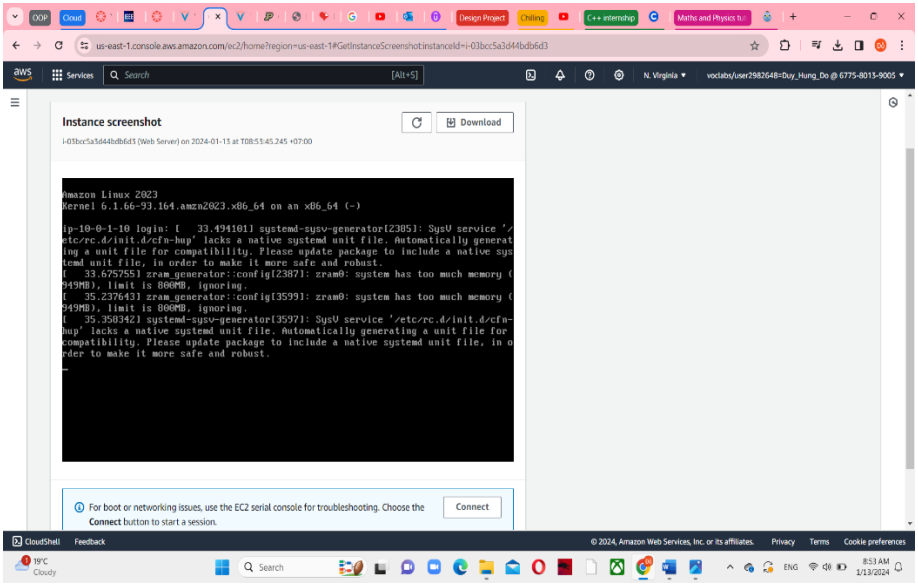
23, Return to EC2 console web, in the Action menu towards the top of the console, select Monitor and troubleshoot -> Get system log.



24, You can see the HTTP package was installed form the user data that you added the code. After viewing, choose Cancel to comeback the main website.

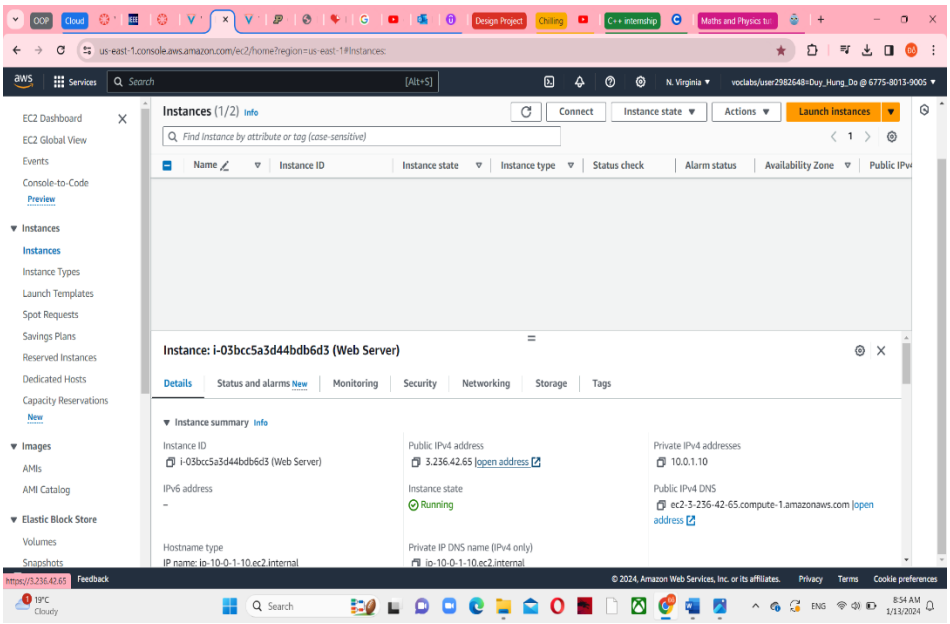


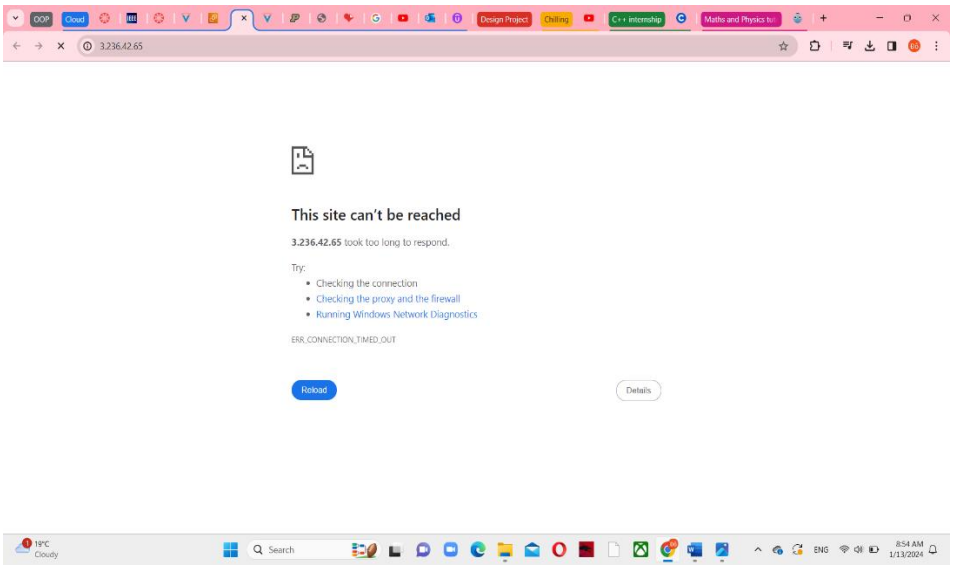
26, Ensure Web Server is still selected, choose the similar to Action menu in previous step, but at the end, choose Get instance screenshot. It shows what your Amazon EC2 instance console would look like if a screen were attached to it. After viewing, select Cancel.



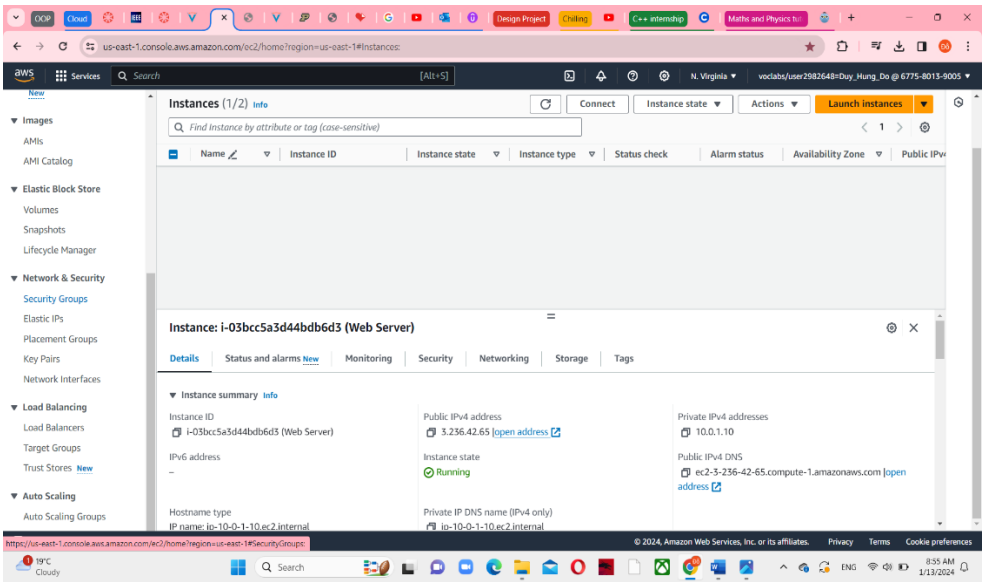
Task 3: Update the security group and access the web server

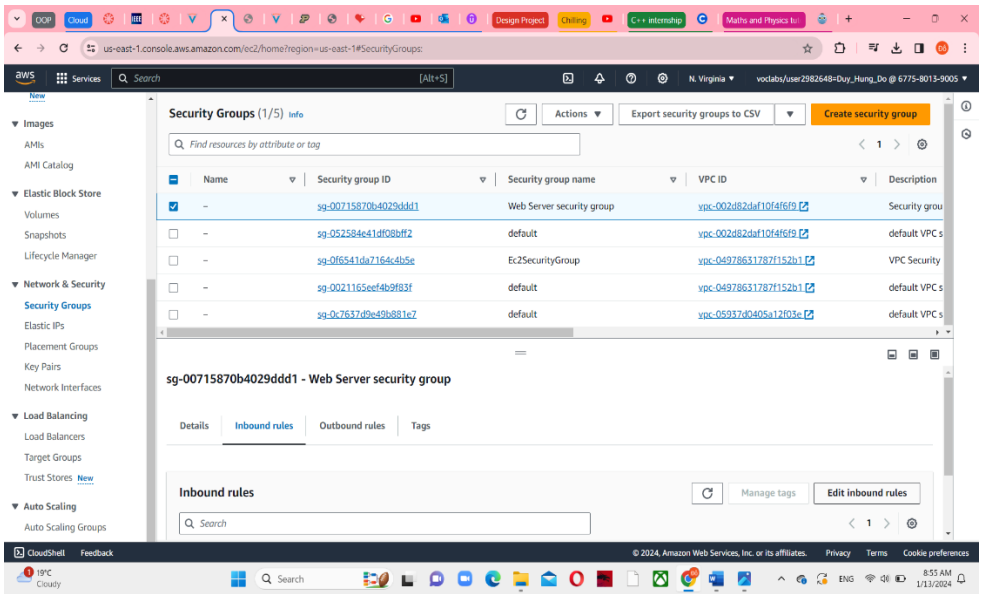
28, Always select the Web Server, choose Details tab and see the public IPv4 address, copy and paste on other tab. You can't access the web server because you haven't permitted the inbound traffic on port 80 – HTTP web requests.



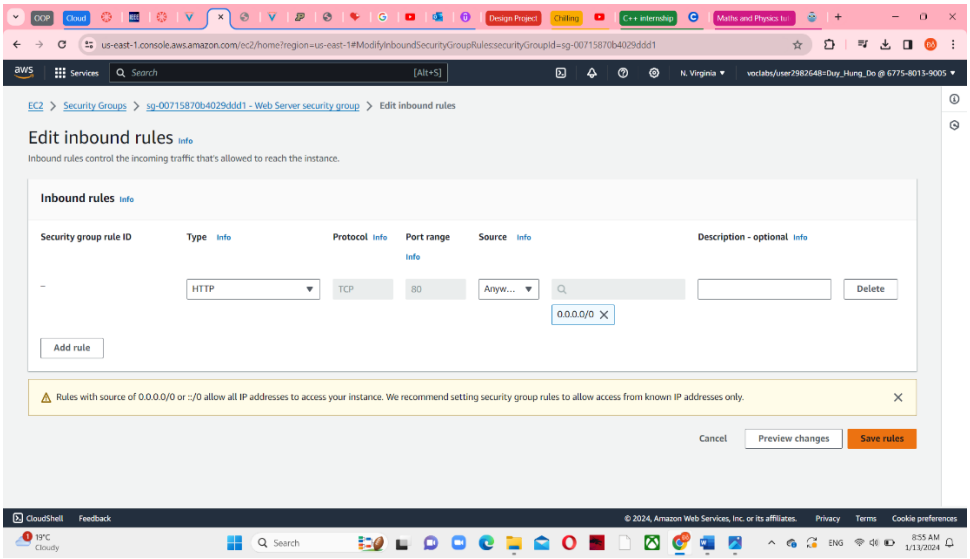


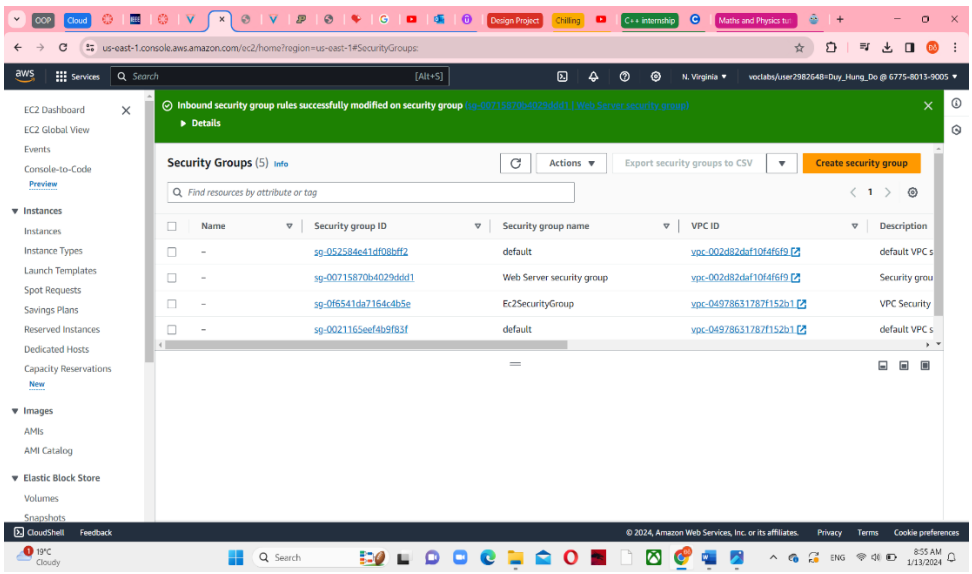
31, Return to the EC2 Console tab, click on the Security Groups in the left navigation pane, select Web Server security Group, you can see Inbound rules tab under -> click on this.



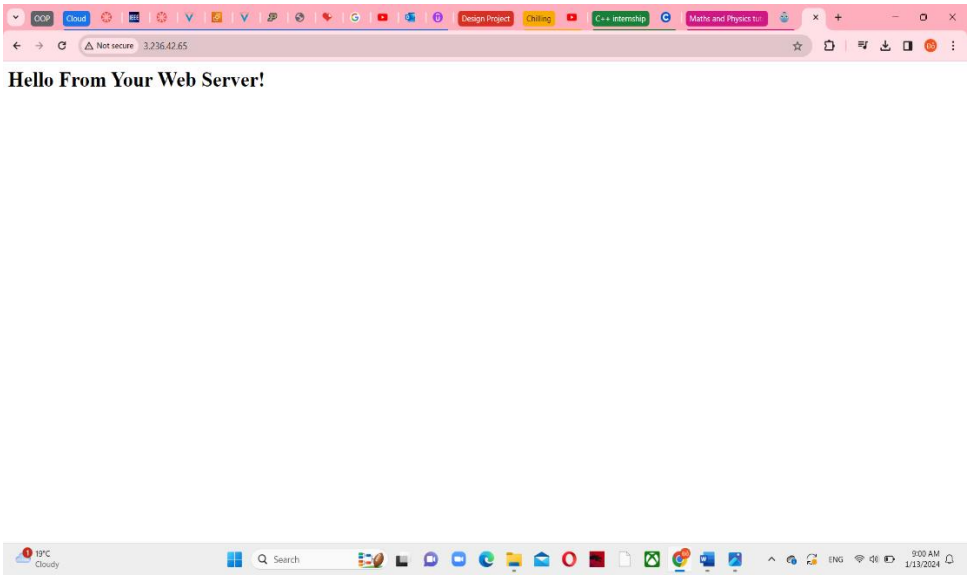


35, Choose Edit Inbound rules and add rule with the type of HTTP and source of Anywhere-IPv4. Save the rules when it has done.





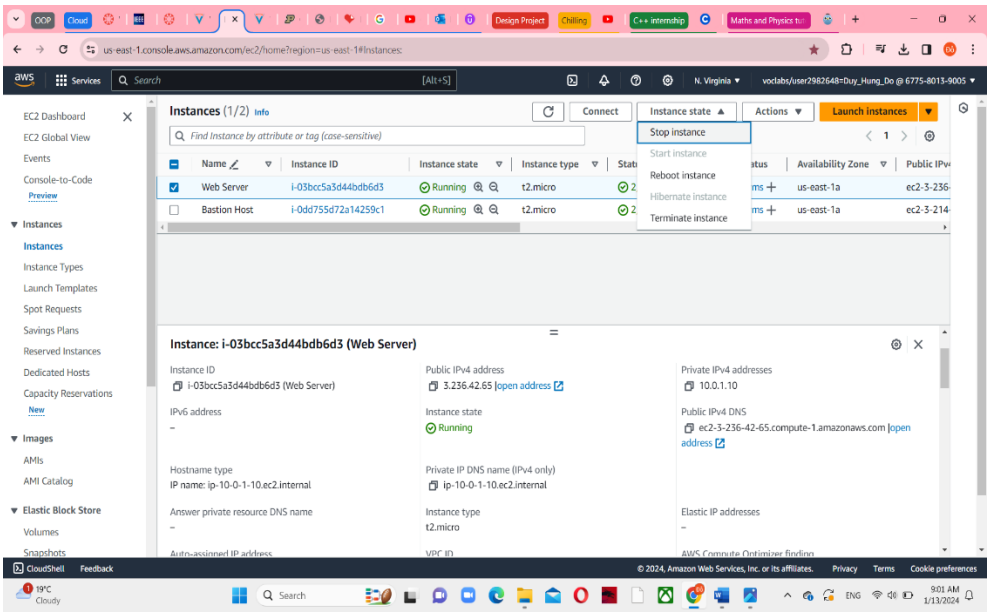
36, Return the web server tab and reload it.



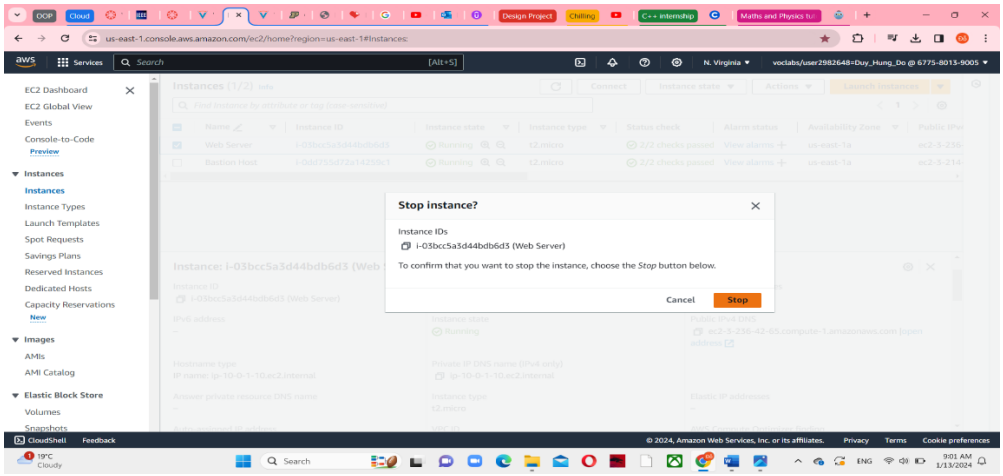
Task 4: Resize The Instance: Instance Type and EBS Volume

Step 1: Stop the Instance

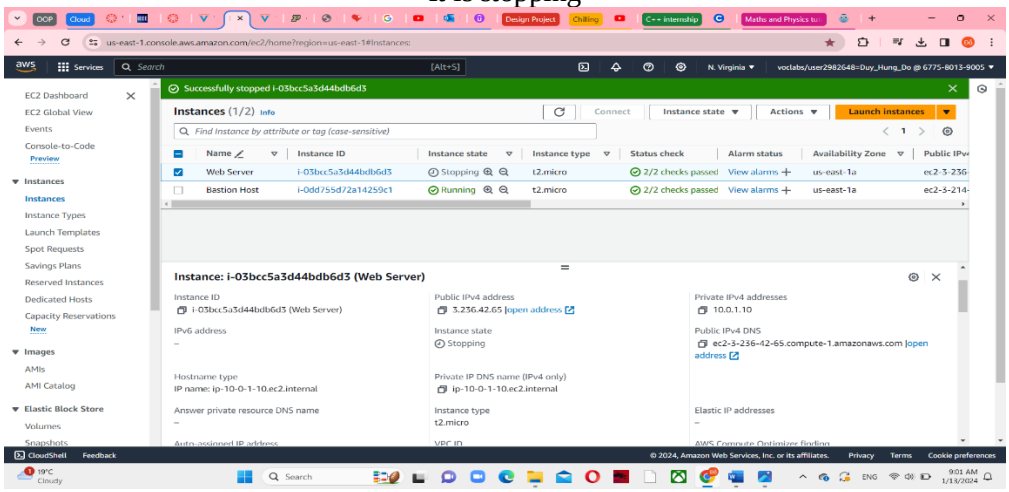
37, Return to Instances pane and still select Web Server instance. In the Instance state menu, select Stop instance

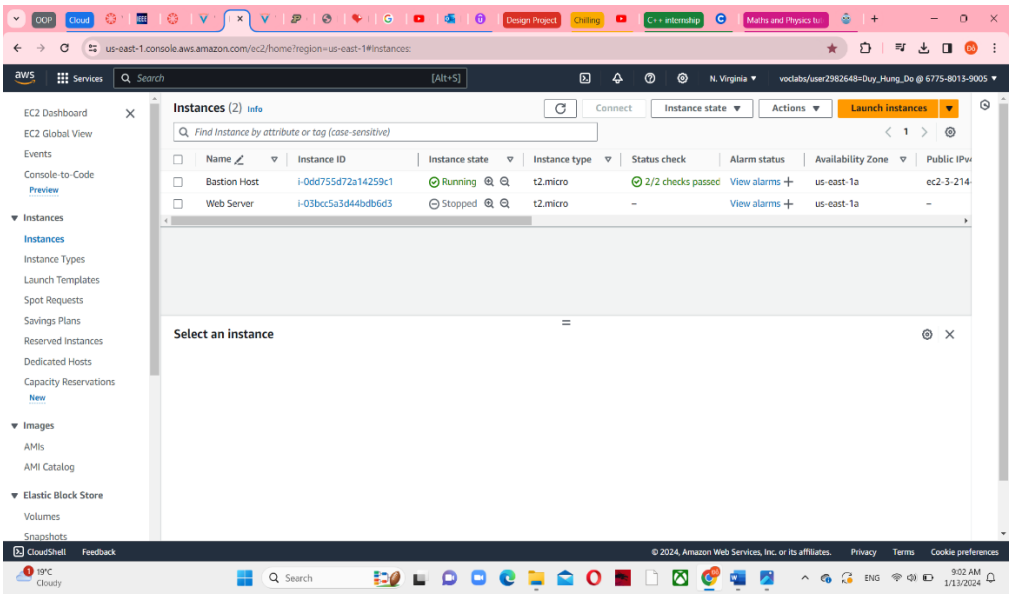


39, Choose Stop and wait for Instance state to display “Stopped”



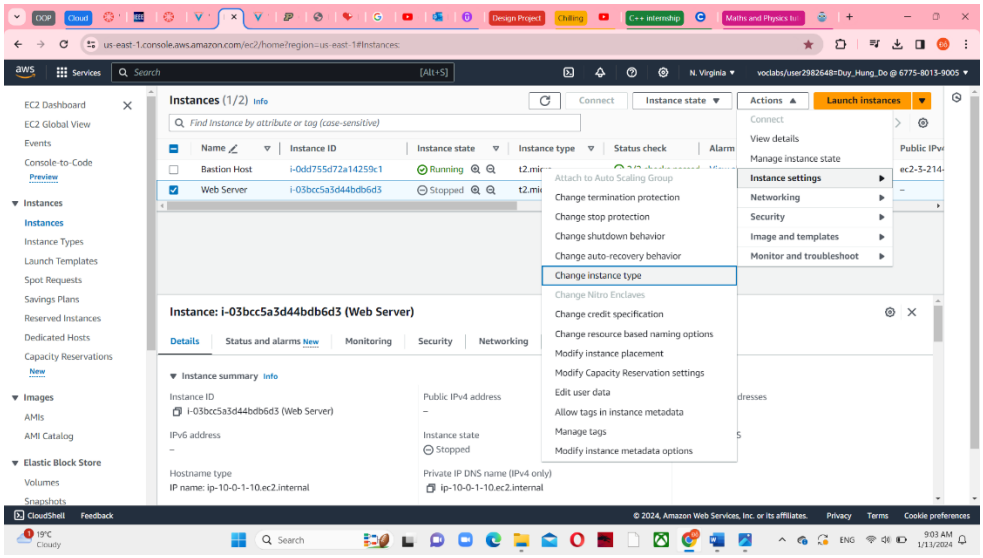
It is stopping

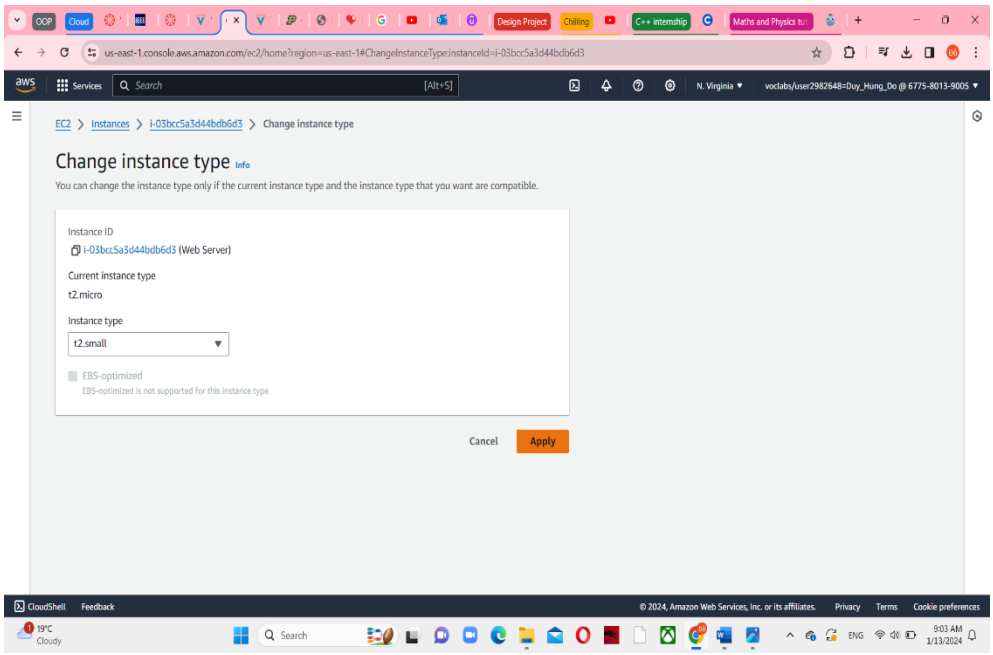


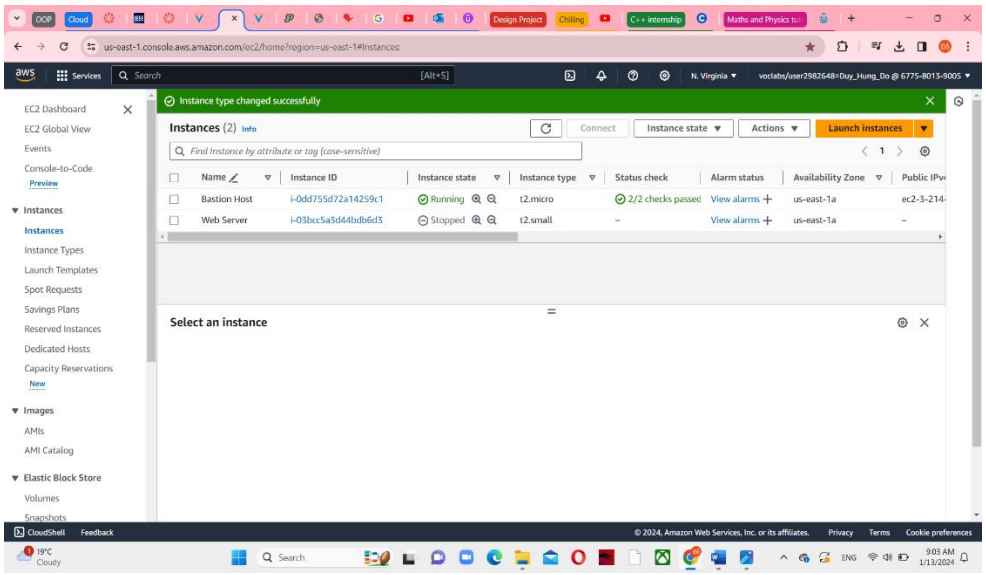


Step 2: Change the Instance Type and enable stop protection

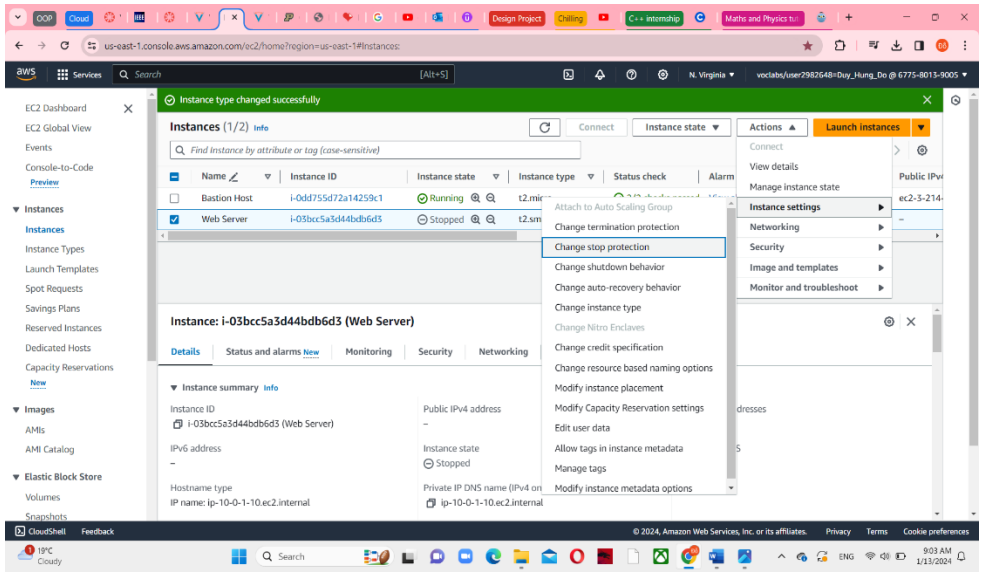
41, Choose Actions menu in Web Server instance, select Instance settings -> Change instance type to t2. small

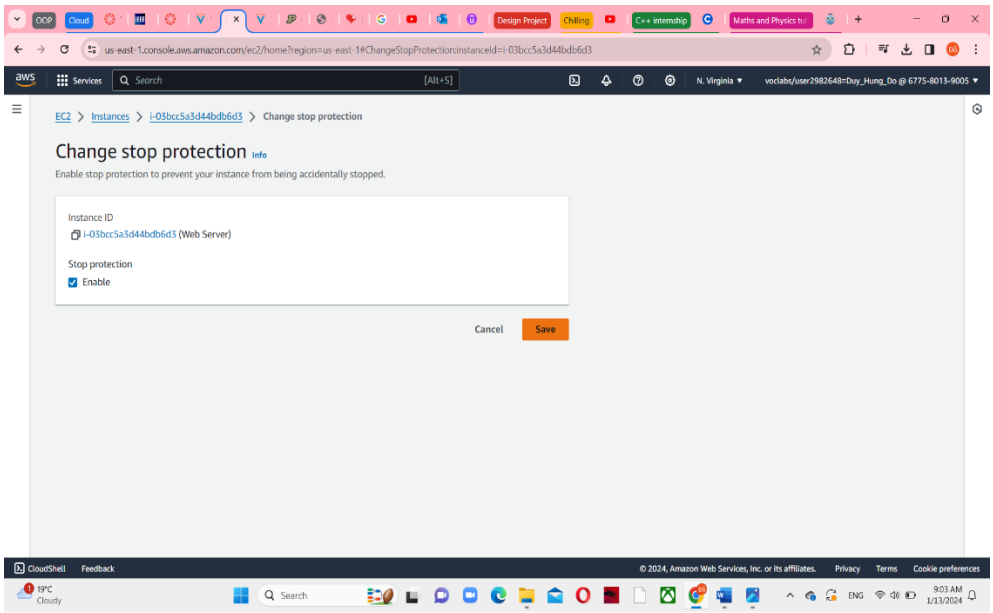


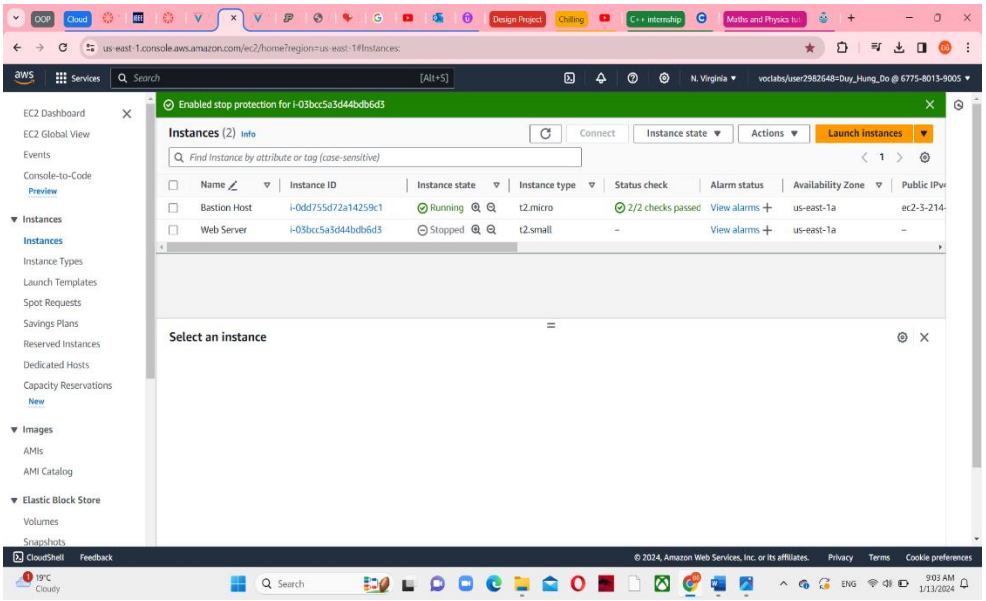




42, Continue with Action menu, select Instance settings -> Change stop protection and enable them.

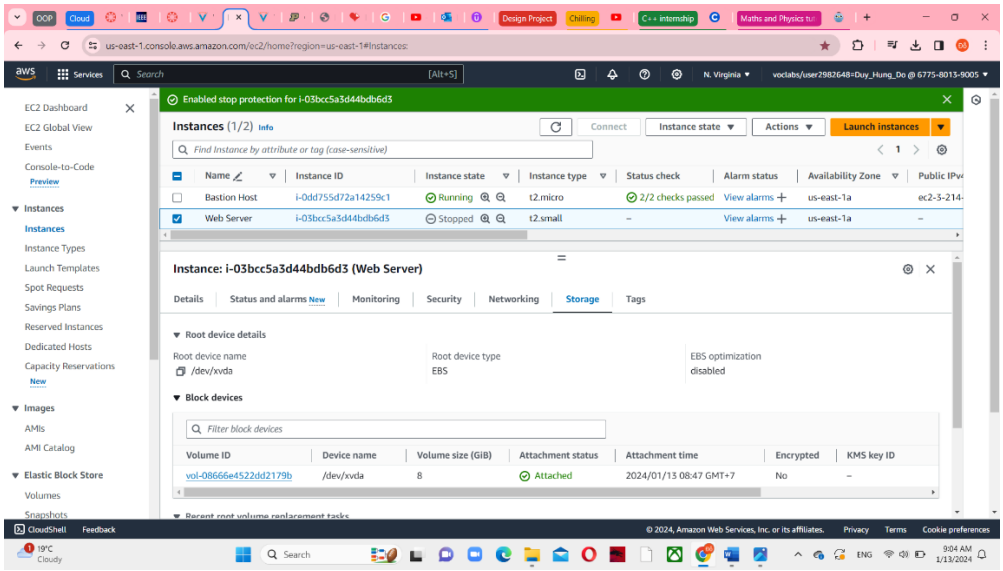




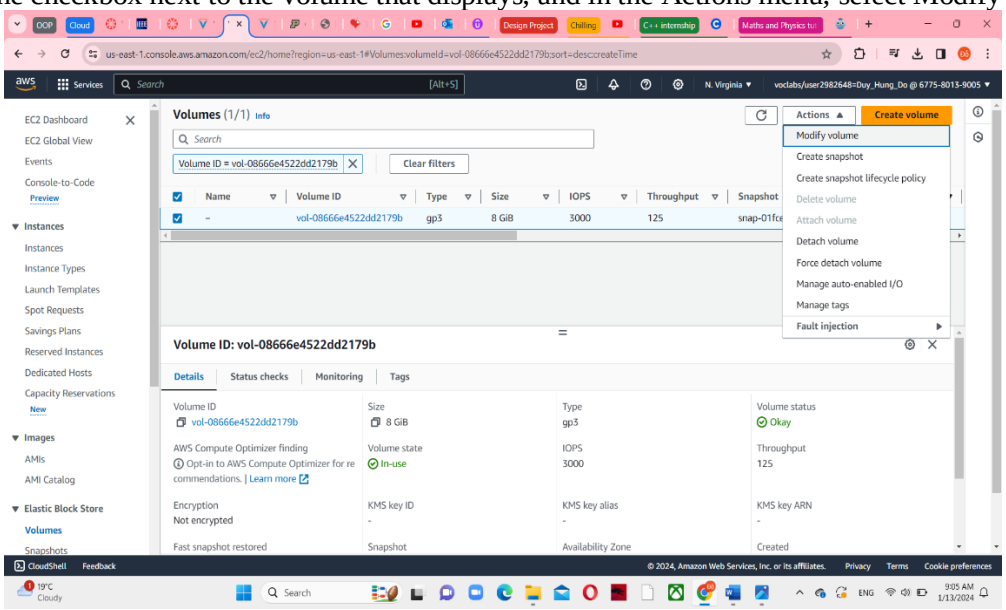


Step 3: Resize the EBS Volume

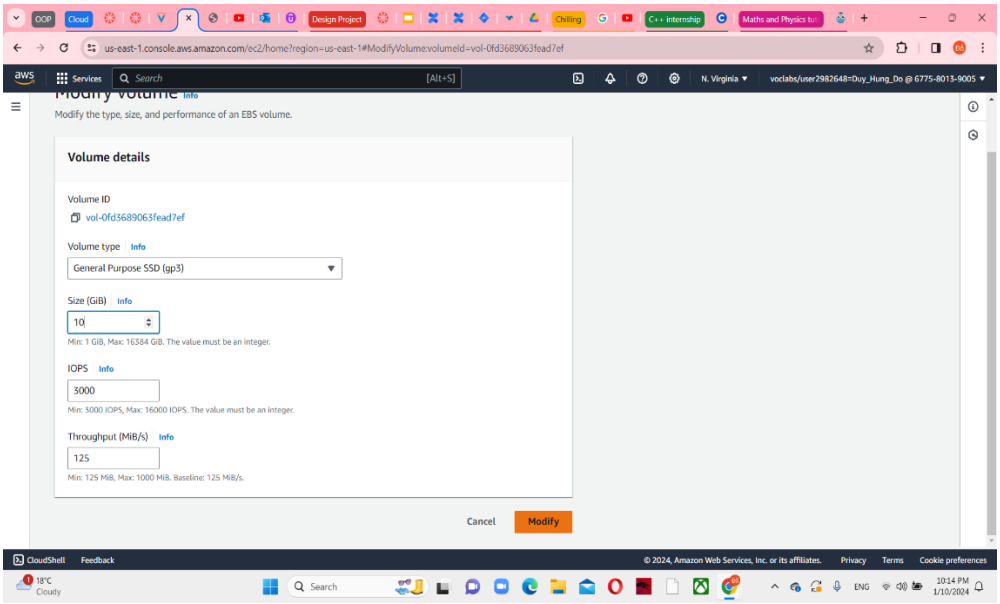
43, In the Web Server instance, choose the Storage tab, and click on the name of the Volume ID



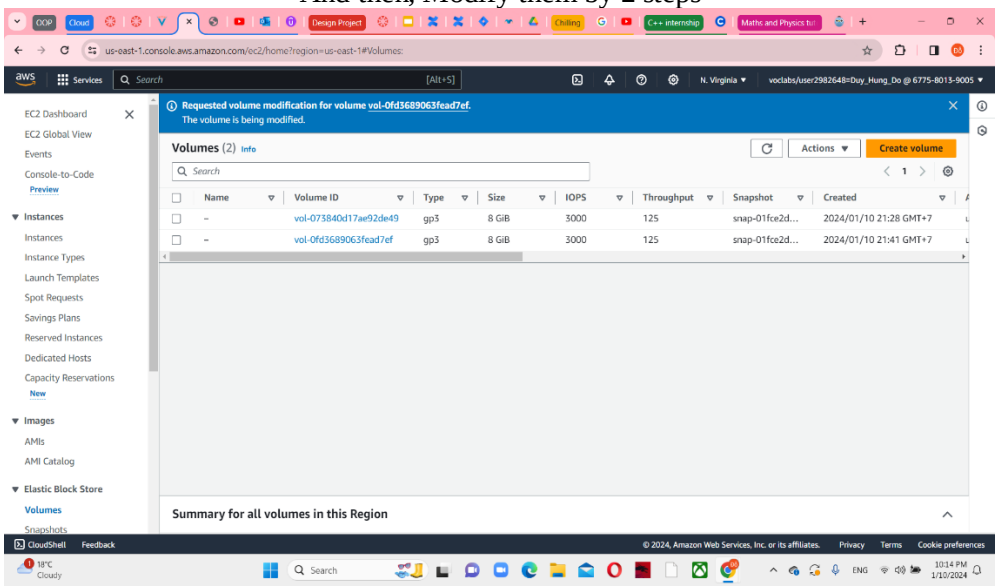
Select the checkbox next to the volume that displays, and in the Actions menu, select Modify volume



45, Change the size from 8 to 10 GB in this disk

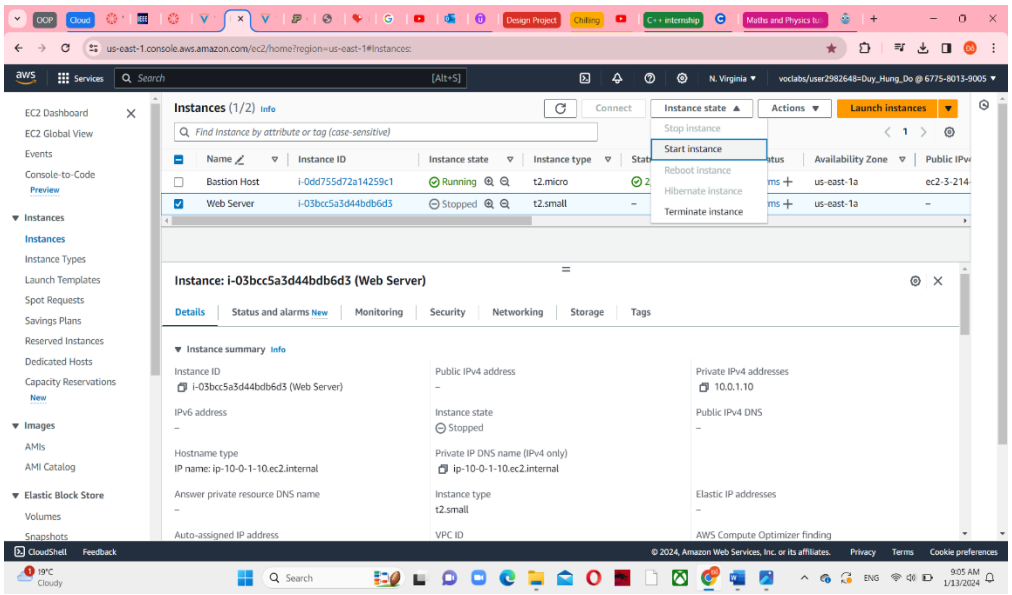


And then, Modify them by 2 steps

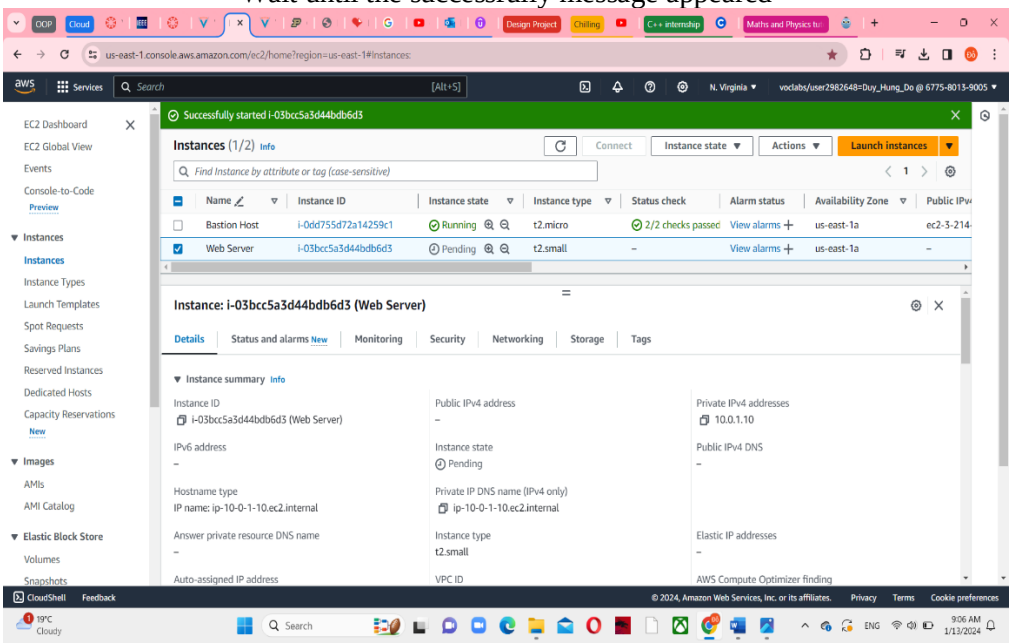


Step 4: Start the Resized instances

48, Return in the Web Server instance, select Start instance from Instance state menu.

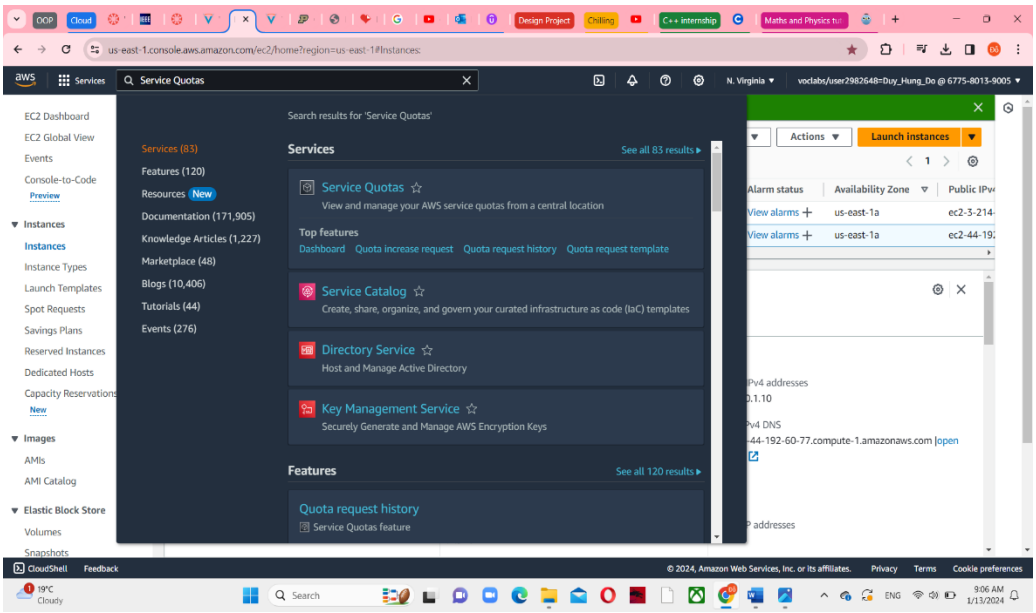


Wait until the successfully message appeared

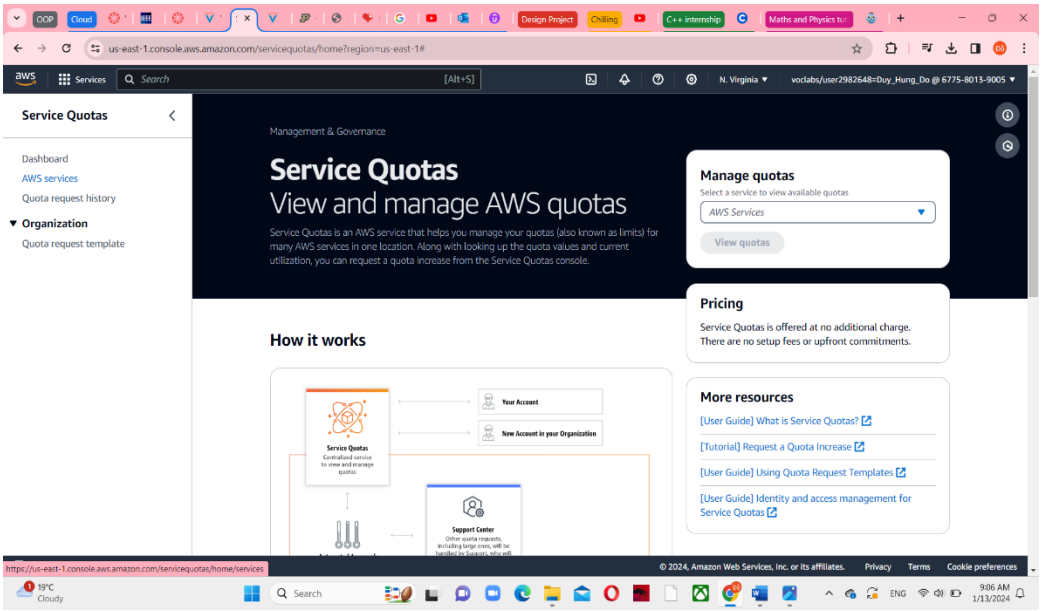


Task 5: Explore EC2 Limits

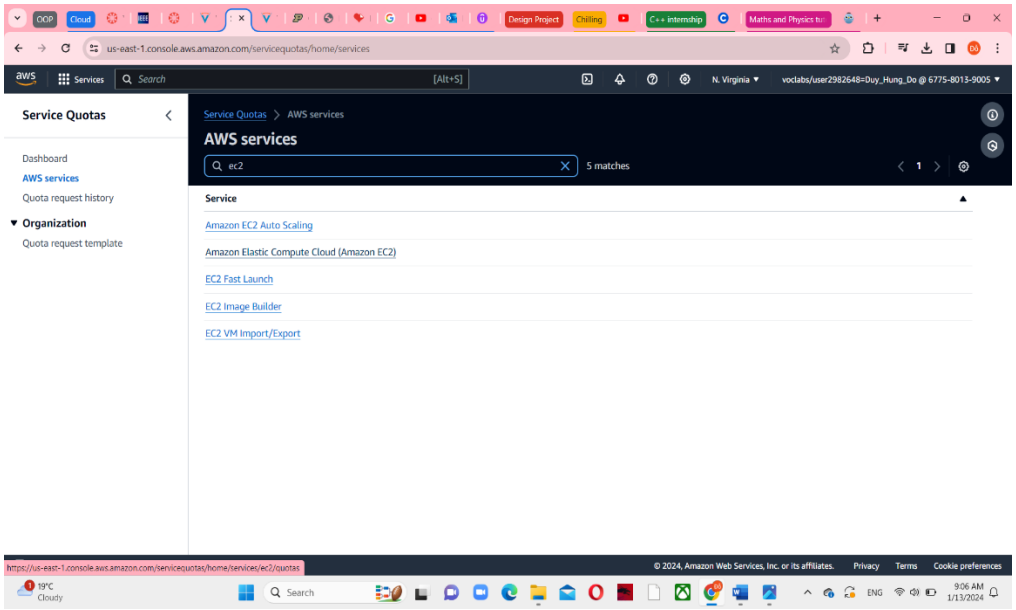
51, Search “Service Quotas” in the search box next to Services in the top left.



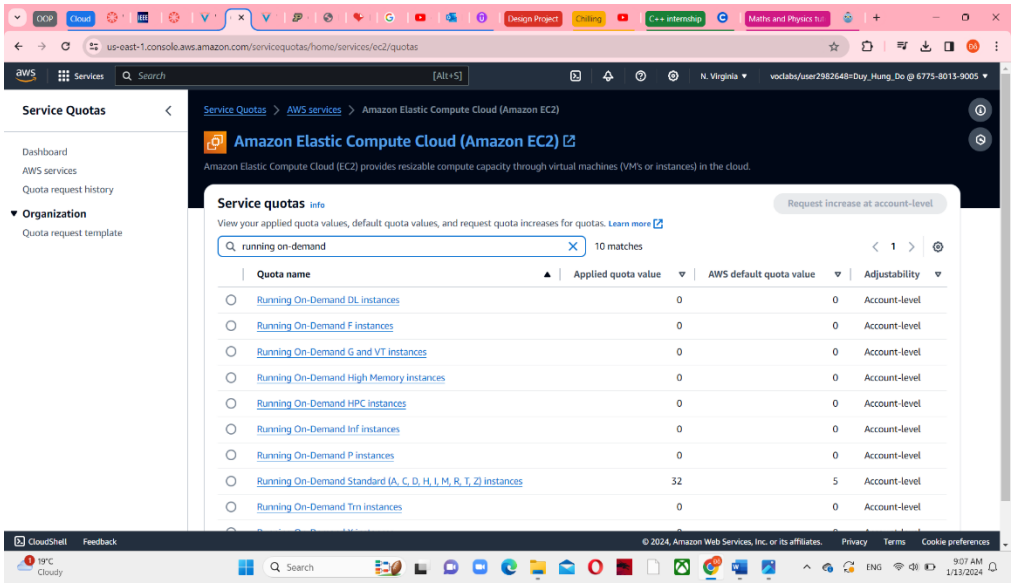
52, Choose AWS services from the left navigation menu



search for ec2 in Find services => choose Elastic Compute Cloud (Amazon EC2)

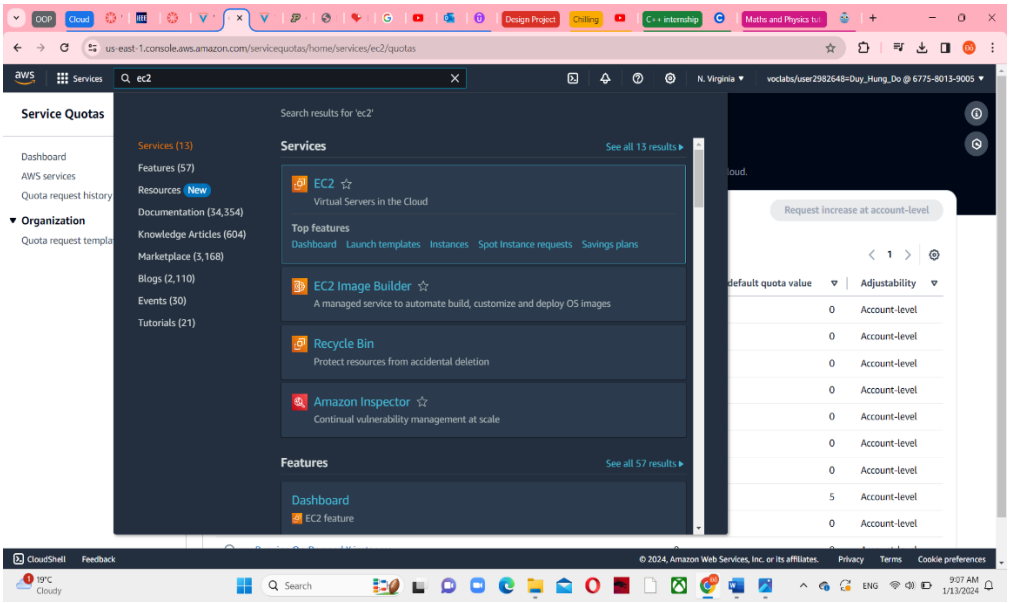


53, Search for running on-demand in Find quotas search bar

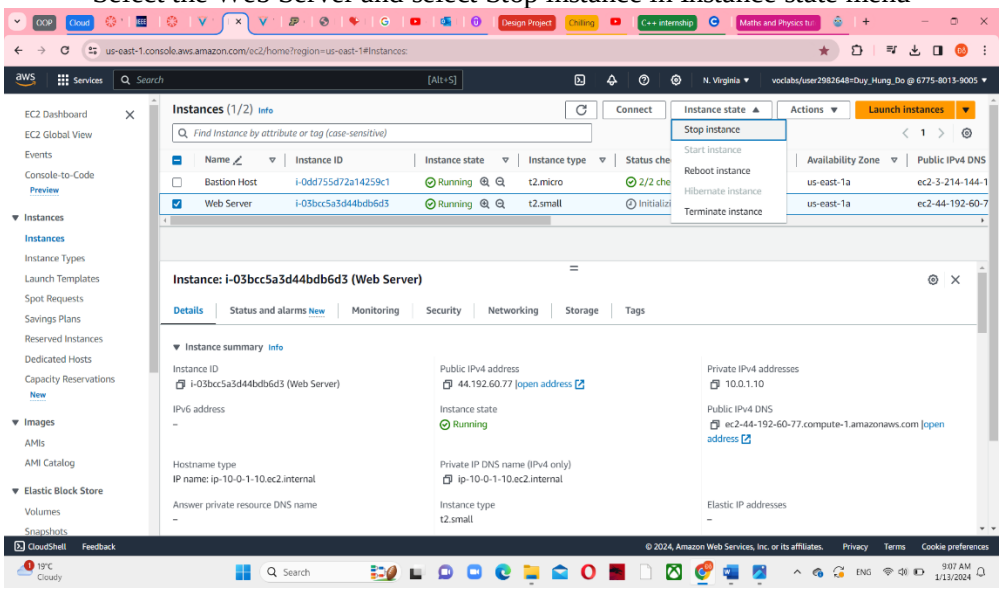


Task 6: Test Stop Protection

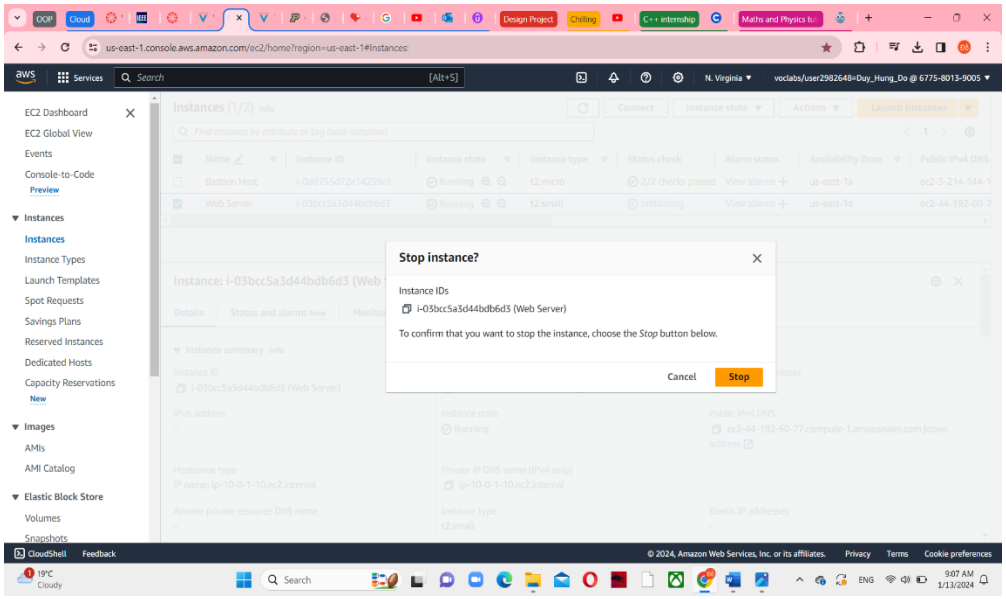
54, Return to EC2 Console web server, choose Instances in left navigation pane



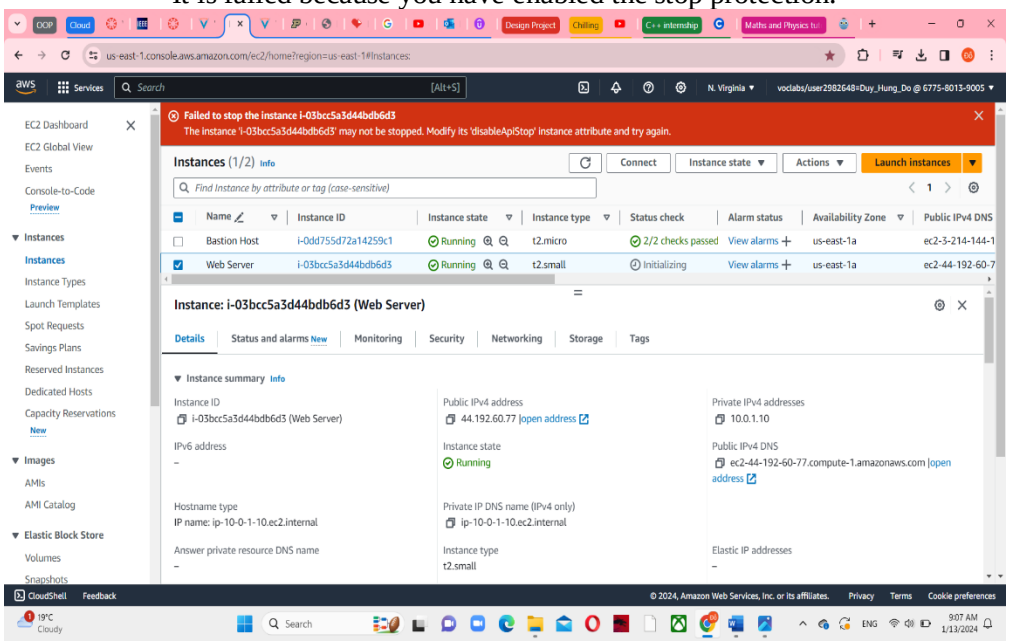
Select the Web Server and select Stop instance in Instance state menu



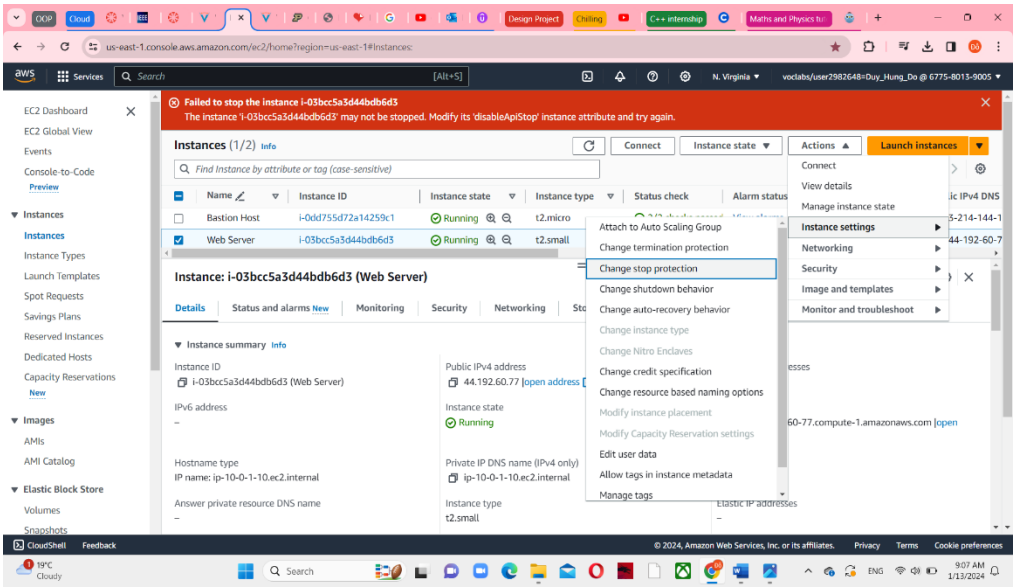
57, Choose Stop

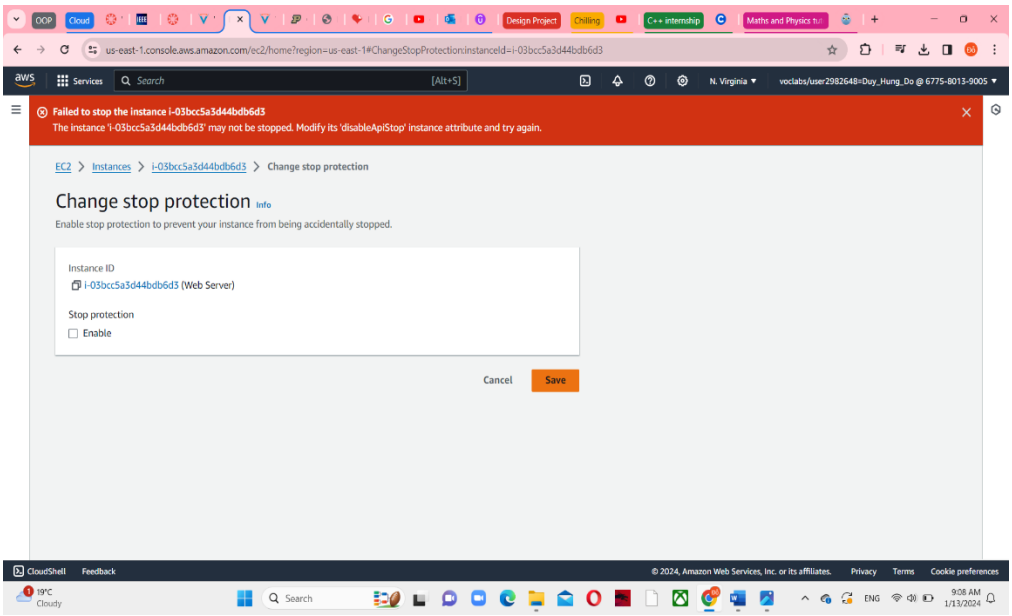


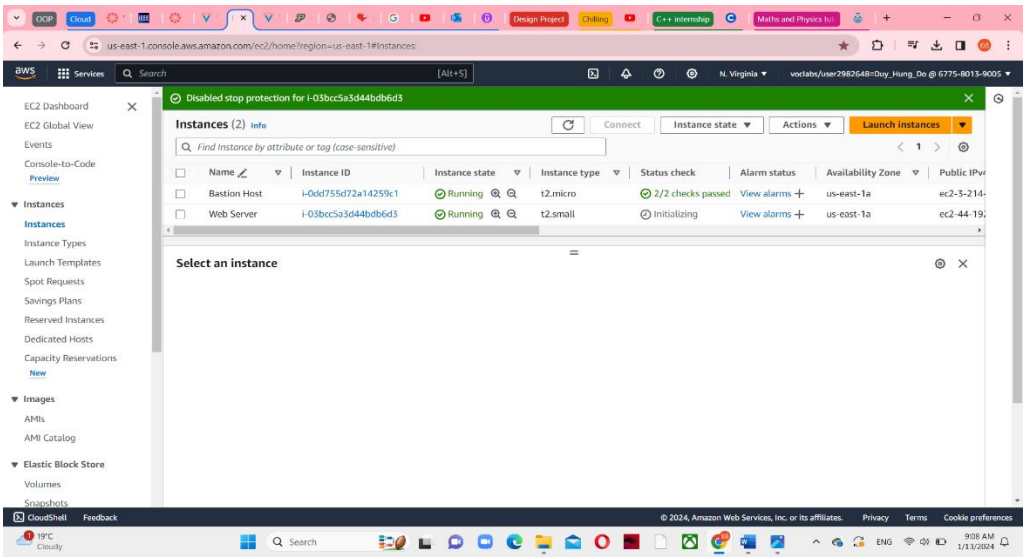
It is failed because you have enabled the stop protection.



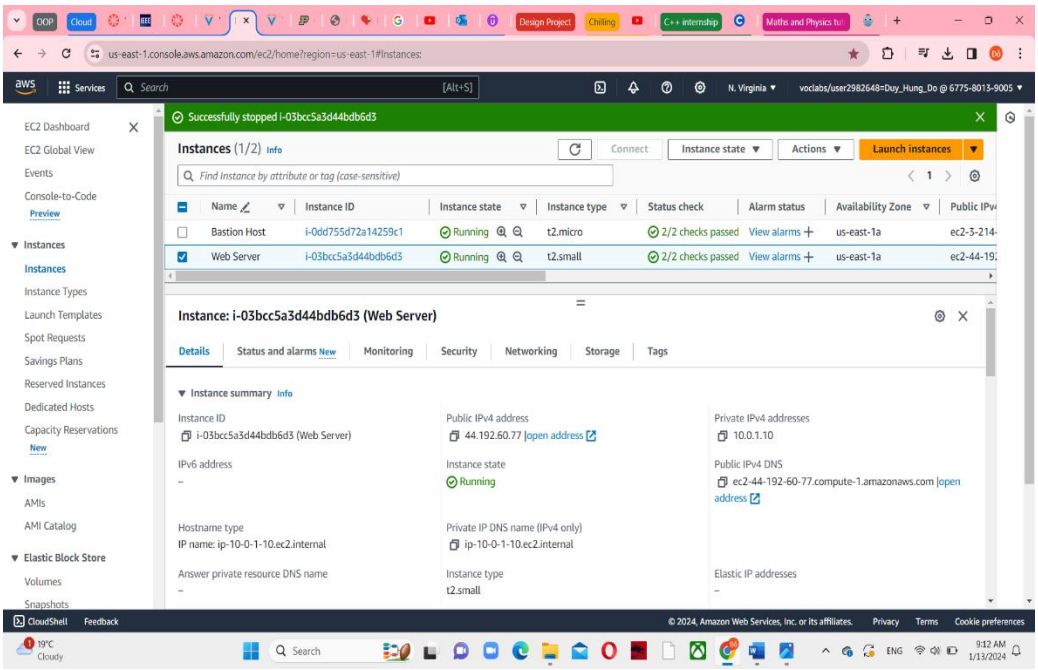
58, In the Action menu, select Instance settings -> Change stop protections


Failed to stop the instance i-03bcc5a3d44bdb6d3
The instance 'i-03bcc5a3d44bdb6d3' may not be stopped. Modify its 'disableApiStop' instance attribute and try again.
Instances (1/2) Info
Connect
Instance state
Actions
Launch instances
Bastion Host
Web Server
Instance: i-03bcc5a3d44bdb6d3 (Web Server)
Attach to Auto Scaling Group
Change termination protection
Change stop protection
Change shutdown behavior
Change auto-recovery behavior
Change instance type
Change Nitro Enclaves
Change credit specification
Change resource based naming options
Modify instance placement
Modify Capacity Reservation settings
Edit user data
Allow tags in instance metadata
Manage tags
Instance settings
Networking
Security
Image and templates
Monitor and troubleshoot


Failed to stop the instance i-03bcc5a3d44bdb6d3
The instance 'i-03bcc5a3d44bdb6d3' may not be stopped. Modify its 'disableApiStop' instance attribute and try again.
EC2 > Instances > i-03bcc5a3d44bdb6d3 > Change stop protection
Change stop protection Info
Enable stop protection to prevent your instance from being accidentally stopped.
Instance ID
i-03bcc5a3d44bdb6d3 (Web Server)
Stop protection
Enable
Cancel
Save

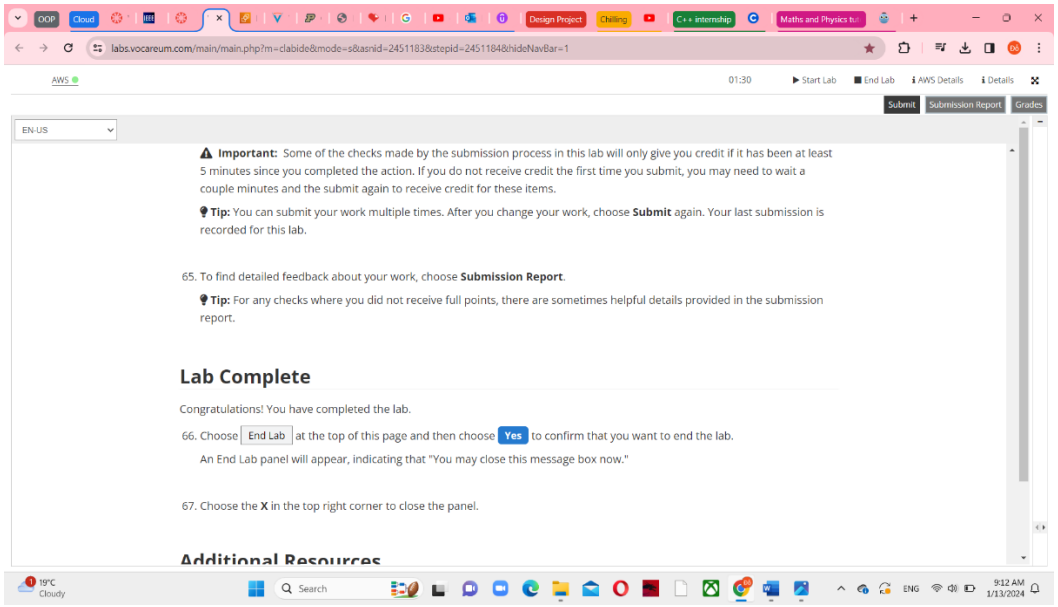


61, Select Stop instance again and choose Stop and you can see the message “Successfully stopped”

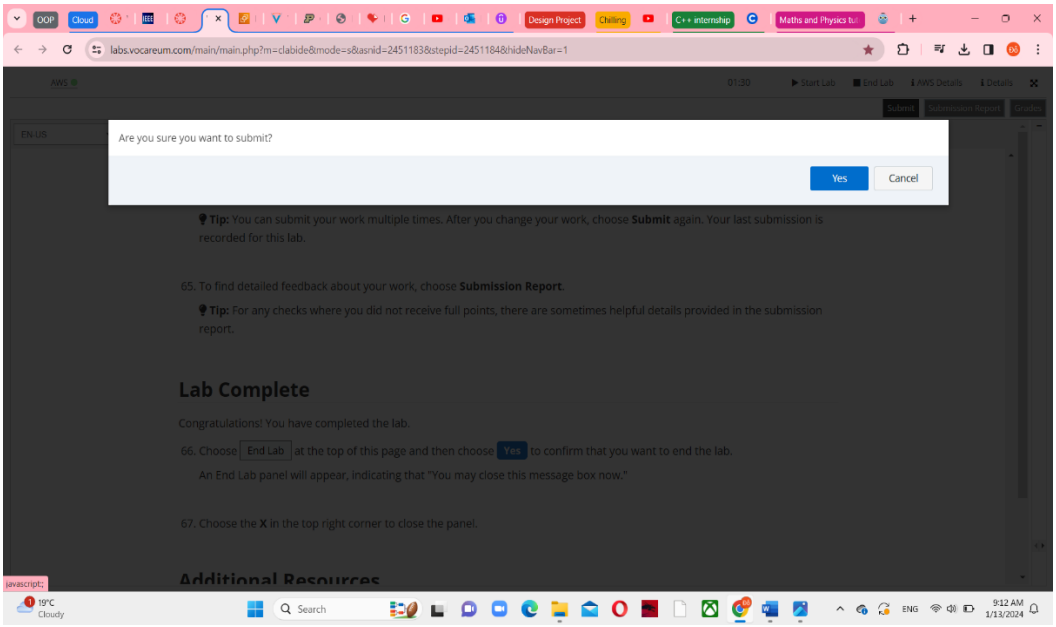


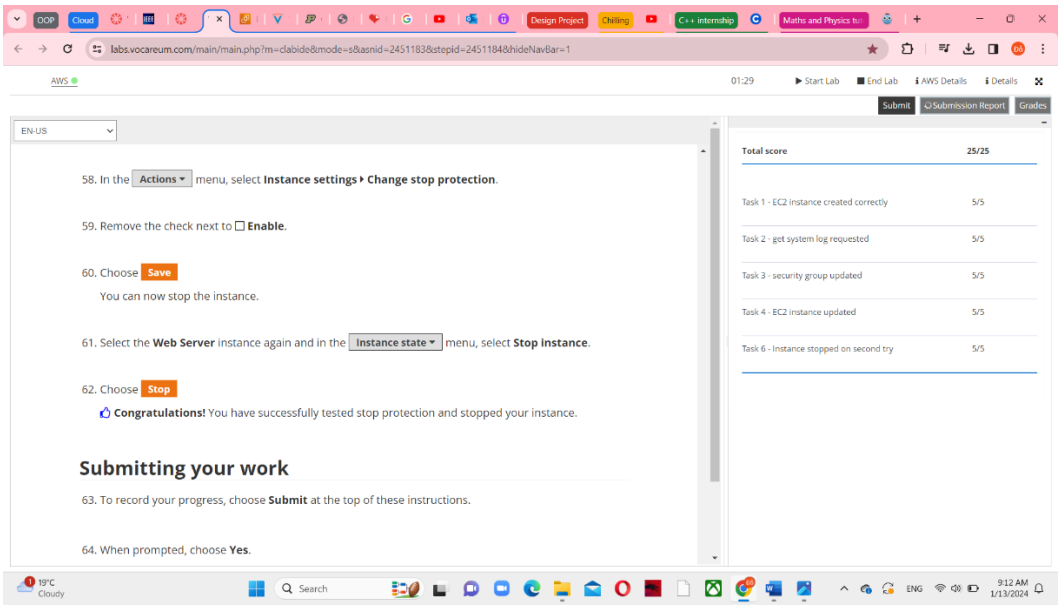
Task 7: Submitting the work

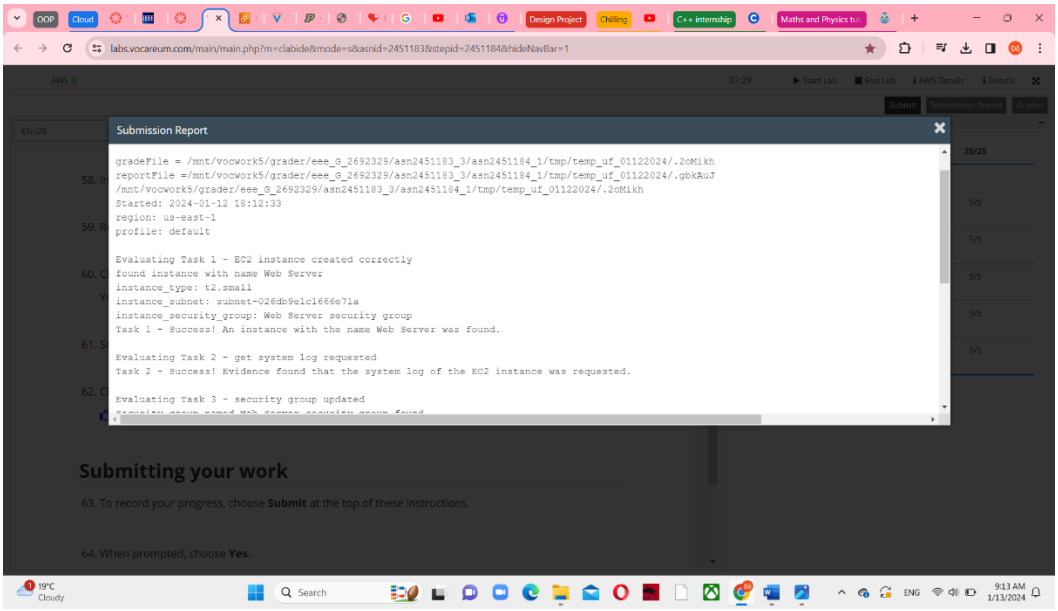
63, Return to vocareum page with the title, choose Submit at the top

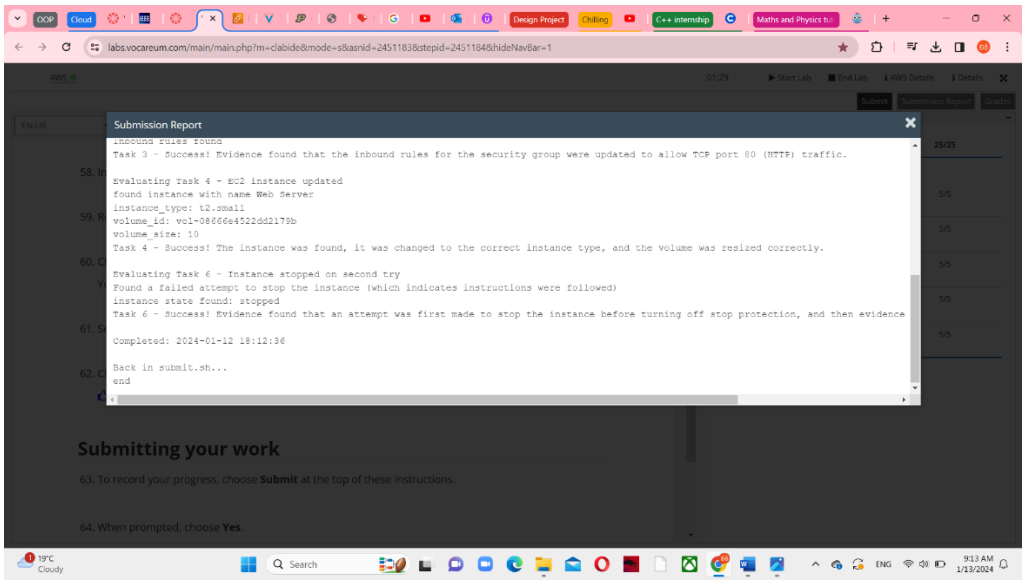


64, Choose Yes when promted, and after about 30s to 1m you can see Grades and Submission Report



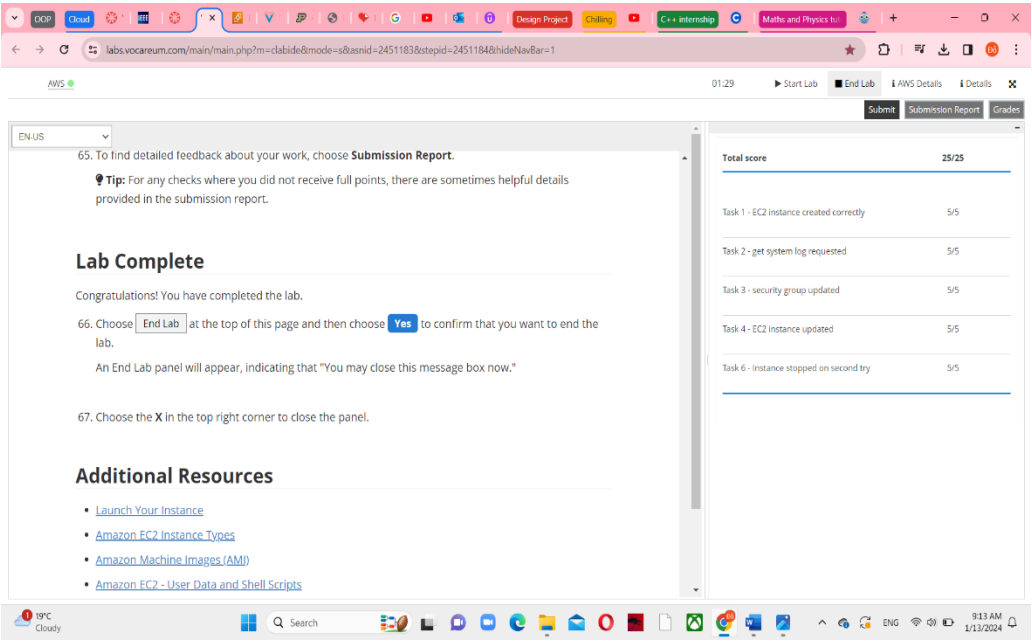

labs.vocareum.com/main/main.php?m=clabide&mode=s&asnid=2451183&stepid=2451184&hideNavBar=1
AWS
01:29
Start Lab
End Lab
AWS Details
Details
Submit
Submission Report
Grades
EN-US
58. In the Actions menu, select Instance settings ▸ Change stop protection.
59. Remove the check next to ☐ Enable.
60. Choose Save
You can now stop the instance.
61. Select the Web Server instance again and in the Instance state menu, select Stop instance.
62. Choose Stop
Congratulations! You have successfully tested stop protection and stopped your instance.
Submitting your work
63. To record your progress, choose Submit at the top of these instructions.
64. When prompted, choose Yes.
Total score 25/25
Task 1 - EC2 instance created correctly 5/5
Task 2 - get system log requested 5/5
Task 3 - security group updated 5/5
Task 4 - EC2 instance updated 5/5
Task 6 - Instance stopped on second try 5/5

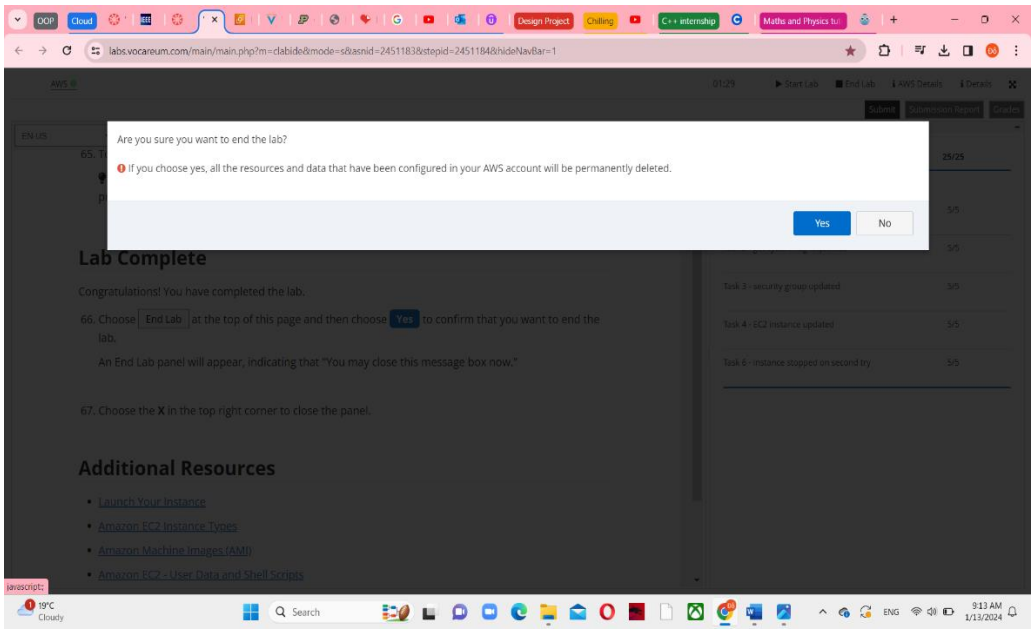

labs.vocareum.com/main/main.php?m=clabide&mode=s&asnid=2451183&stepid=2451184&hideNavBar=1
Submission Report
gradeFile = /mnt/vocwork5/grader/eee_G_2692329/asn2451183_3/asn2451184_1/tmp/temp_uf_01122024/.2oMikh
reportFile =/mnt/vocwork5/grader/eee_G_2692329/asn2451183_3/asn2451184_1/tmp/temp_uf_01122024/.gbkAuJ
/mnt/vocwork5/grader/eee_G_2692329/asn2451183_3/asn2451184_1/tmp/temp_uf_01122024/.2oMikh
Started: 2024-01-12 18:12:33
region: us-east-1
profile: default
Evaluating Task 1 - EC2 instance created correctly
found instance with name Web Server
instance_type: t2.small
instance_subnet: subnet-026db9e1c1666e71a
instance_security_group: Web Server security group
Task 1 - Success! An instance with the name Web Server was found.
Evaluating Task 2 - get system log requested
Task 2 - Success! Evidence found that the system log of the EC2 instance was requested.
Evaluating Task 3 - security group updated
Submitting your work
63. To record your progress, choose Submit at the top of these instructions.
64. When prompted, choose Yes.



Task 8: Lab Complete

66, Choose End Lab at the top right and choose Yes to confirm that you want to end lab. This will be done and automatically save your points in aws instructure,




labs.vocareum.com/main/main.php?m=clabide&mode=s&asnid=2451183&stepid=2451184&hideNavBar=1
Are you sure you want to end the lab?
If you choose yes, all the resources and data that have been configured in your AWS account will be permanently deleted.
Yes
No
Lab Complete
Congratulations! You have completed the lab.
66. Choose End Lab at the top of this page and then choose Yes to confirm that you want to end the lab.
An End Lab panel will appear, indicating that "You may close this message box now."
67. Choose the X in the top right corner to close the panel.
Additional Resources
Launch Your Instance
Amazon EC2 Instance Types
Amazon Machine Images (AMI)
Amazon EC2 - User Data and Shell Scripts