

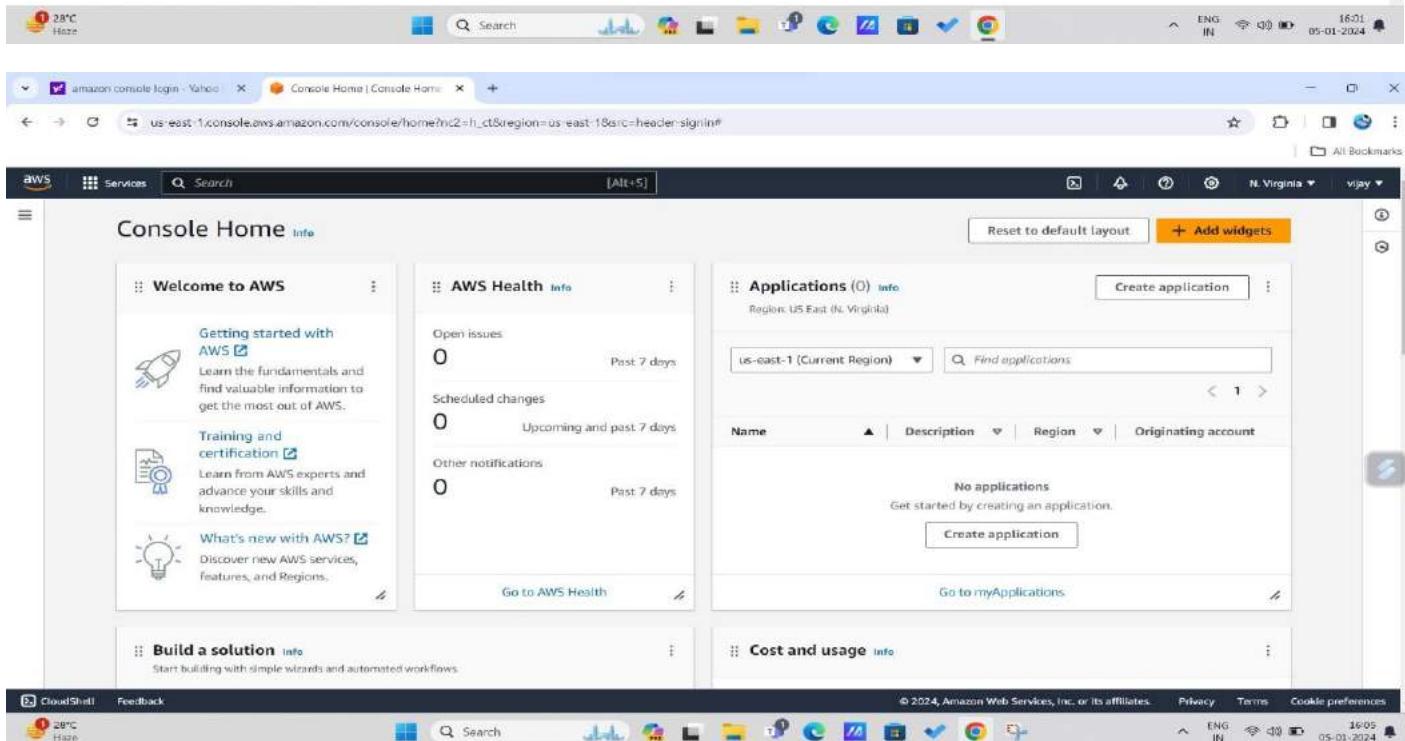
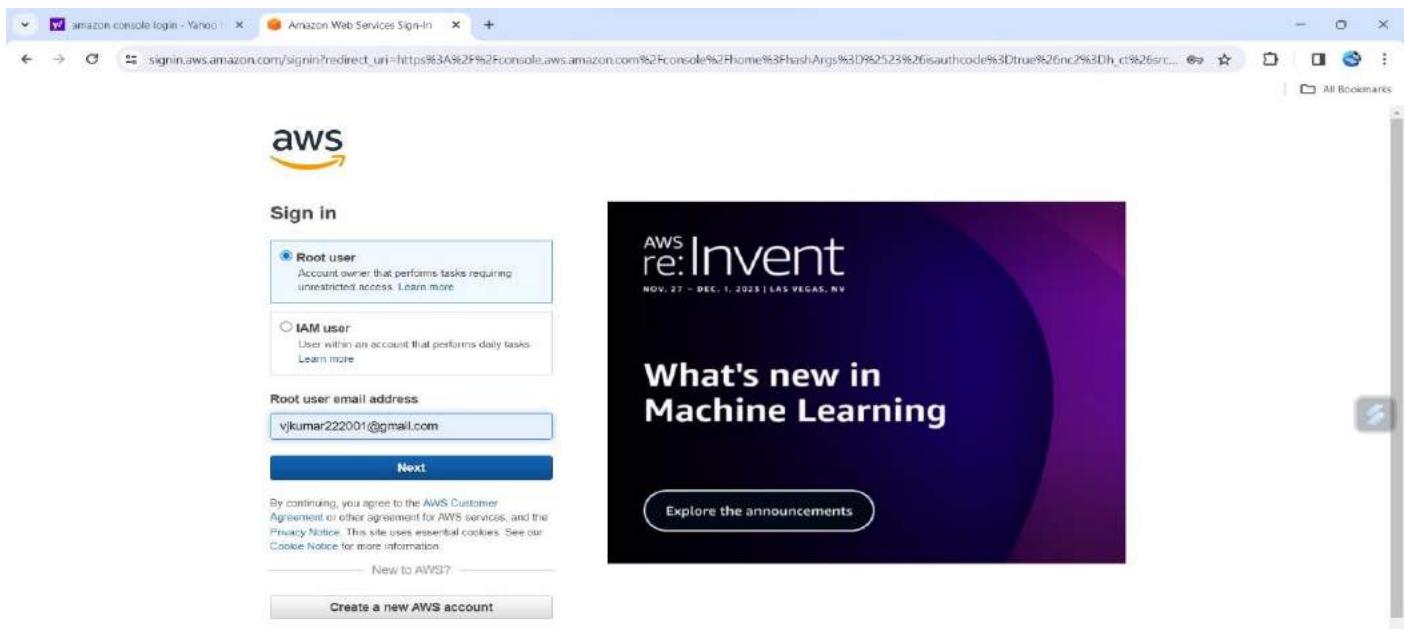
AWS & DevOps INTERNSHIP PROJECTS



PROJECTS-1

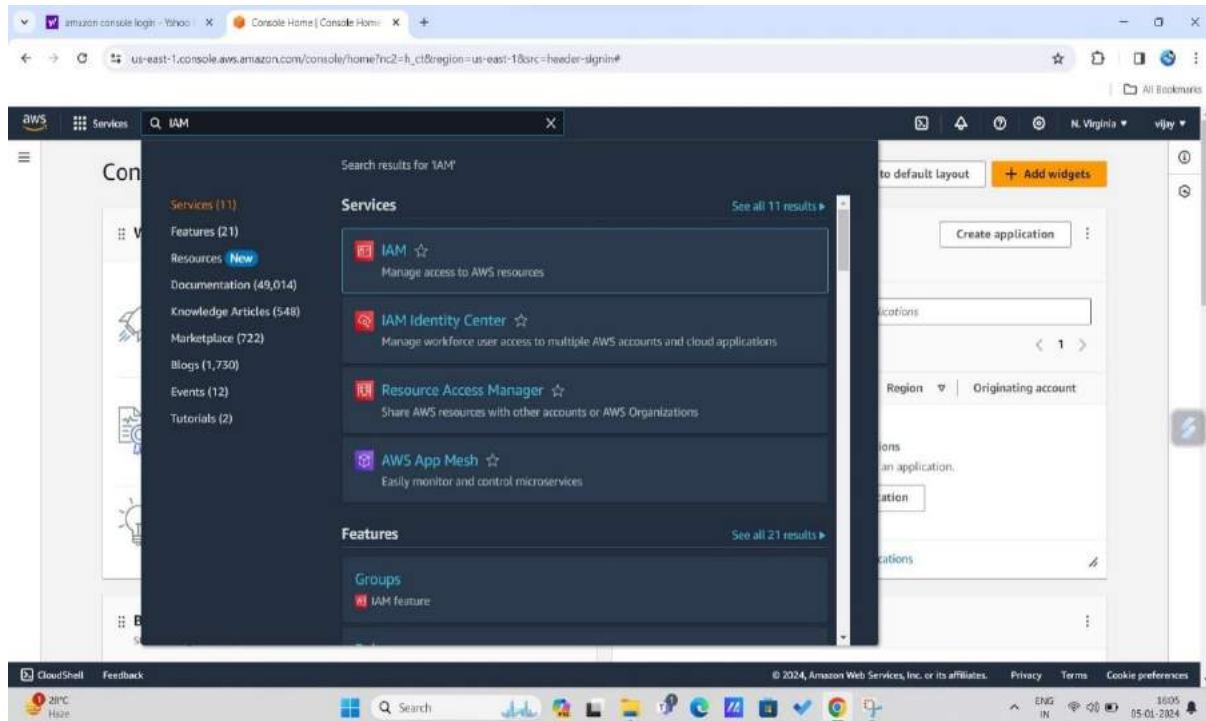
IAM HANDS ON

1. First, We need to log AWS management console.

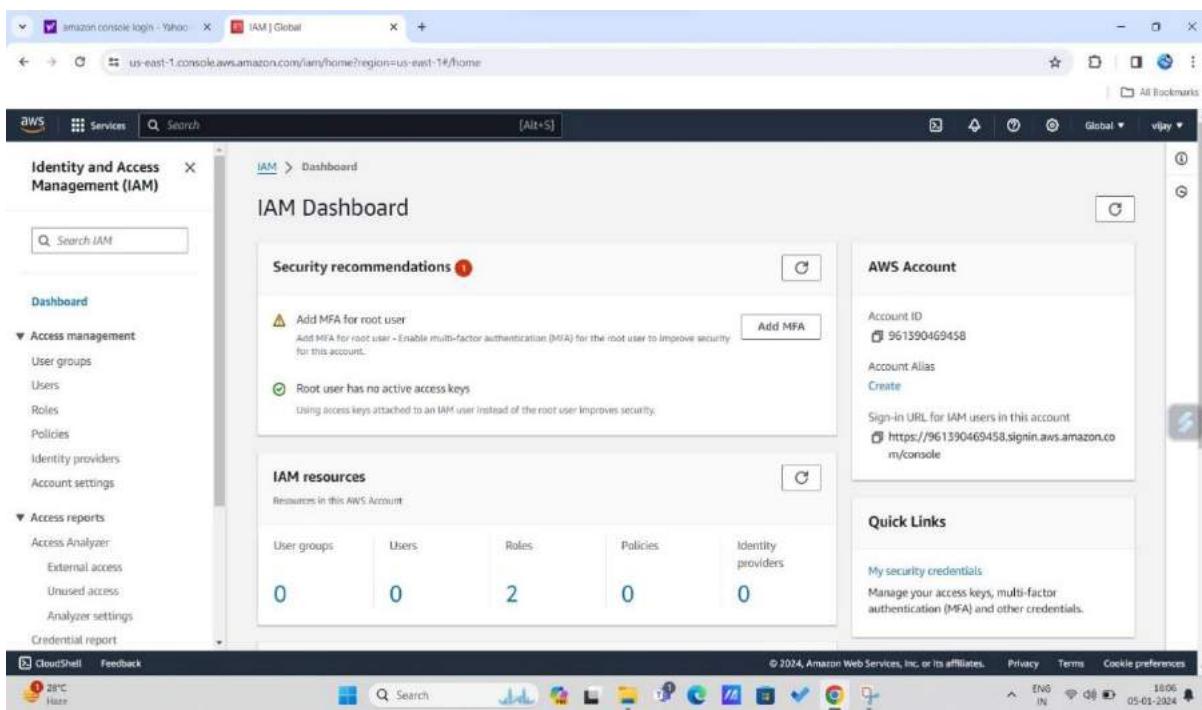


➤ Now we need to set up MFA (multi factor authentication)

1. Go to search bar, search IAM as shown in figure



2. Click on the add MFA.



3. By clicking on it opens as screen as shown below.

The screenshot shows the 'Select MFA device' step in the AWS IAM console. The URL is https://us-east-1.console.aws.amazon.com/iam/home?region=us-east-1#/security_credentials/mfa. The page title is 'Select MFA device'. It has two main sections: 'MFA device name' and 'MFA device'. In the 'MFA device name' section, a text input field contains 'Rakesh'. In the 'MFA device' section, there are three options: 'Authenticator app' (selected), 'Security Key', and 'SMS'. The status bar at the bottom shows 'CloudShell Feedback' and the date '05-01-2024'.

4. Now we need to enter MFA device name as your wish.

5. Select the authenticate app.

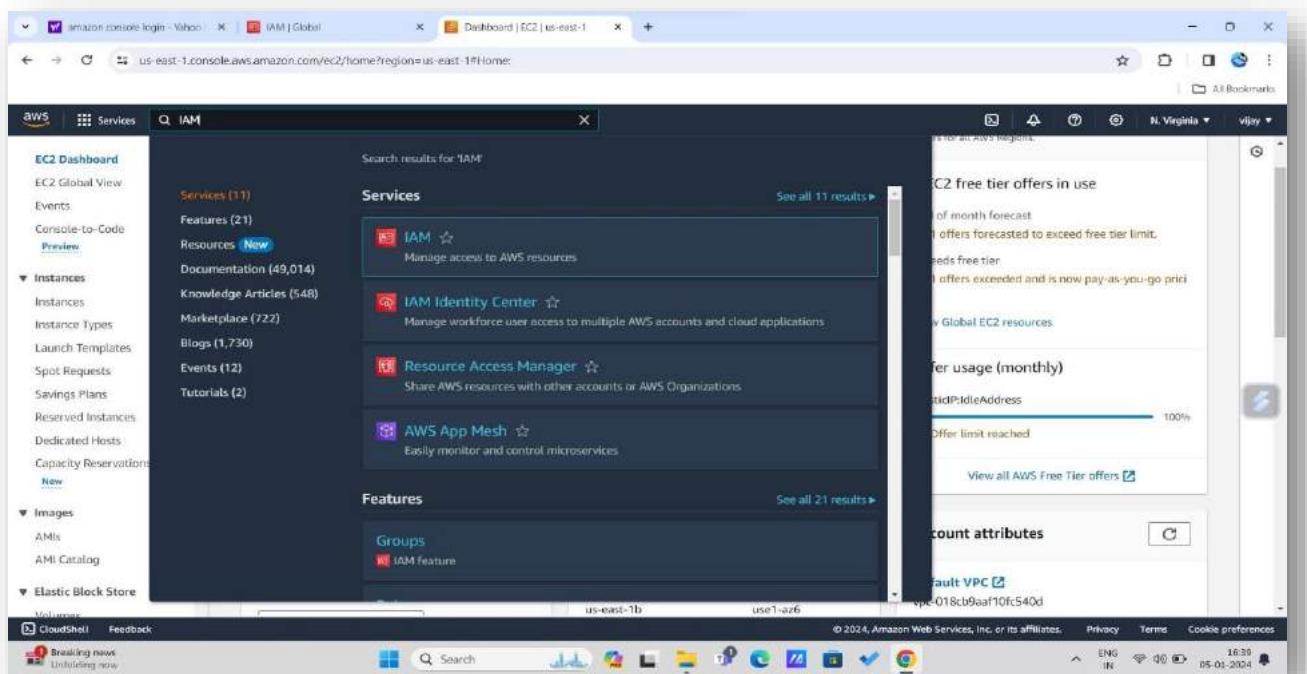
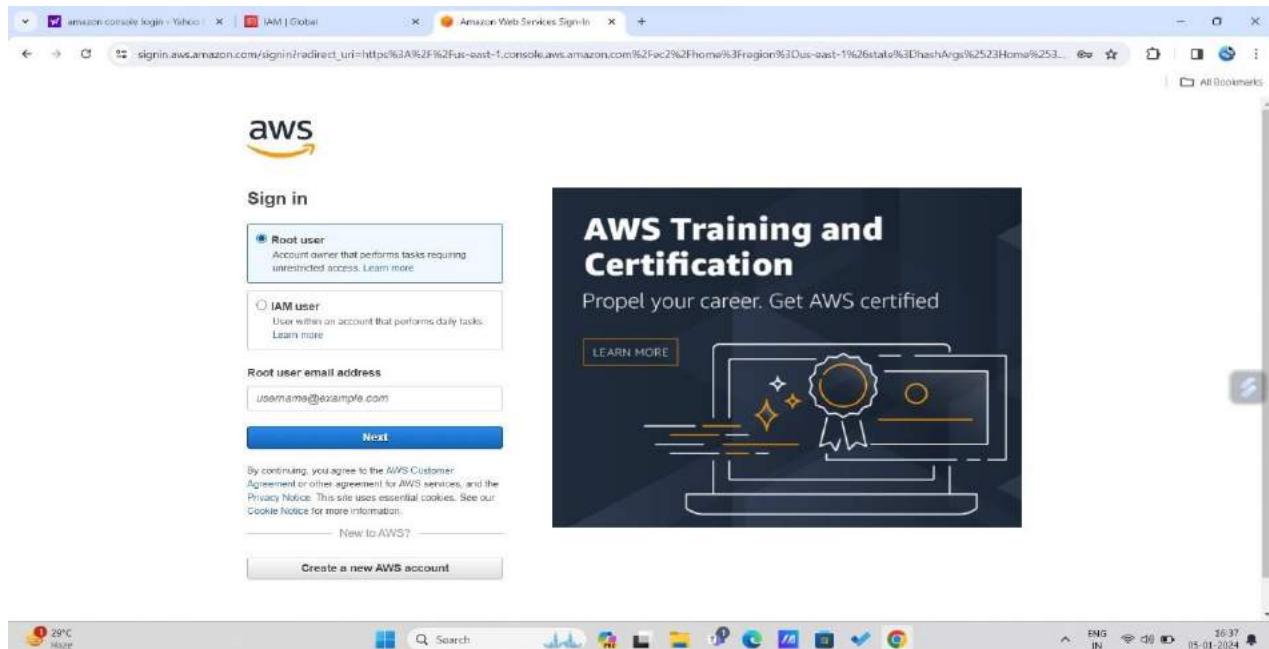
6. Now download the authentication app on mobile click on next and add code by help of QR scan and enter the MFA codes manually.

The screenshot shows the 'Add MFA' step 2 in the AWS IAM console. The URL is https://us-east-1.console.aws.amazon.com/iam/home?region=us-east-1#/security_credentials/mfa. The page title is 'Add MFA'. It has three numbered steps: 1. Install a compatible application such as Google Authenticator, Duo Mobile, or Authy app on your mobile device or computer. 2. Open your authenticator app, choose Show QR code on this page, then use the app to scan the code. Alternatively, you can type a secret key. Show secret key. 3. Fill in two consecutive codes from your MFA device. Below the steps are input fields for 'MFA code 1' and 'MFA code 2'. At the bottom are 'Cancel', 'Previous', and 'Add MFA' buttons. The status bar at the bottom shows 'CloudShell Feedback' and the date '05-01-2024'.

7. click on the add MFA.

8. Then it creates the device on our authentication app with device name that we choose.

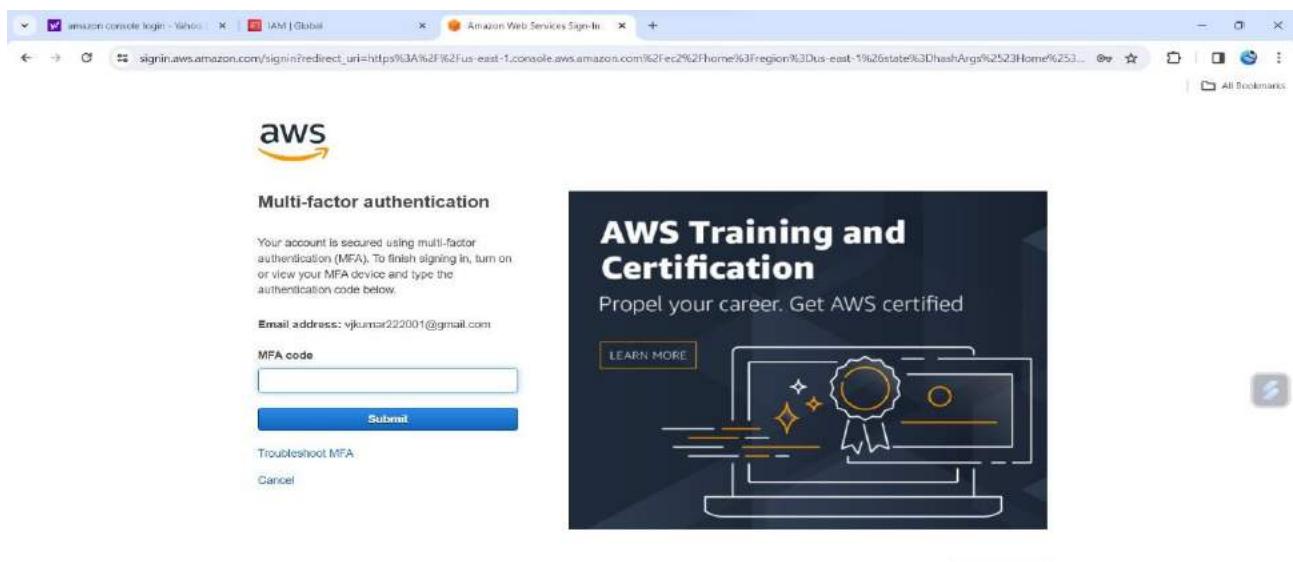
9. To see whether it is created or not we need to log out and log in then we can see MFA code authentication.

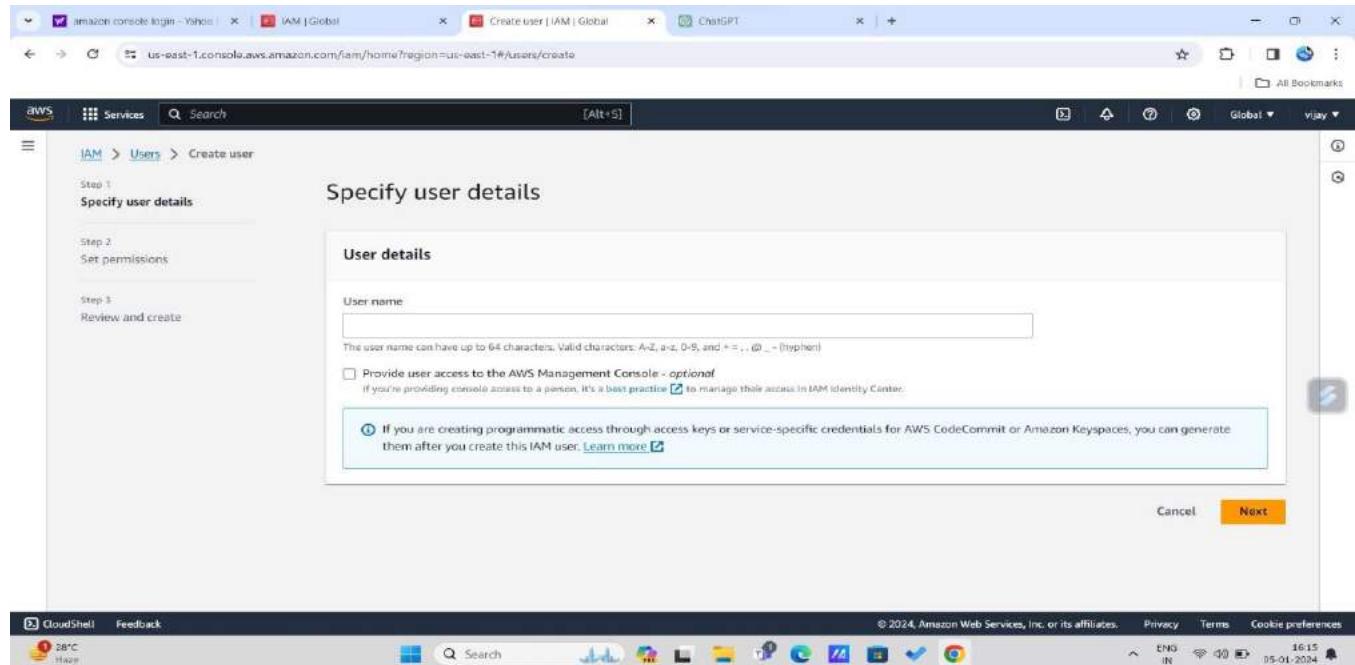


➤ Creating a user with console access and check default permissions

1. After opening the console with MFA, search IAM in search bar amazon console.

2. Open IAM, select user and click on create user.



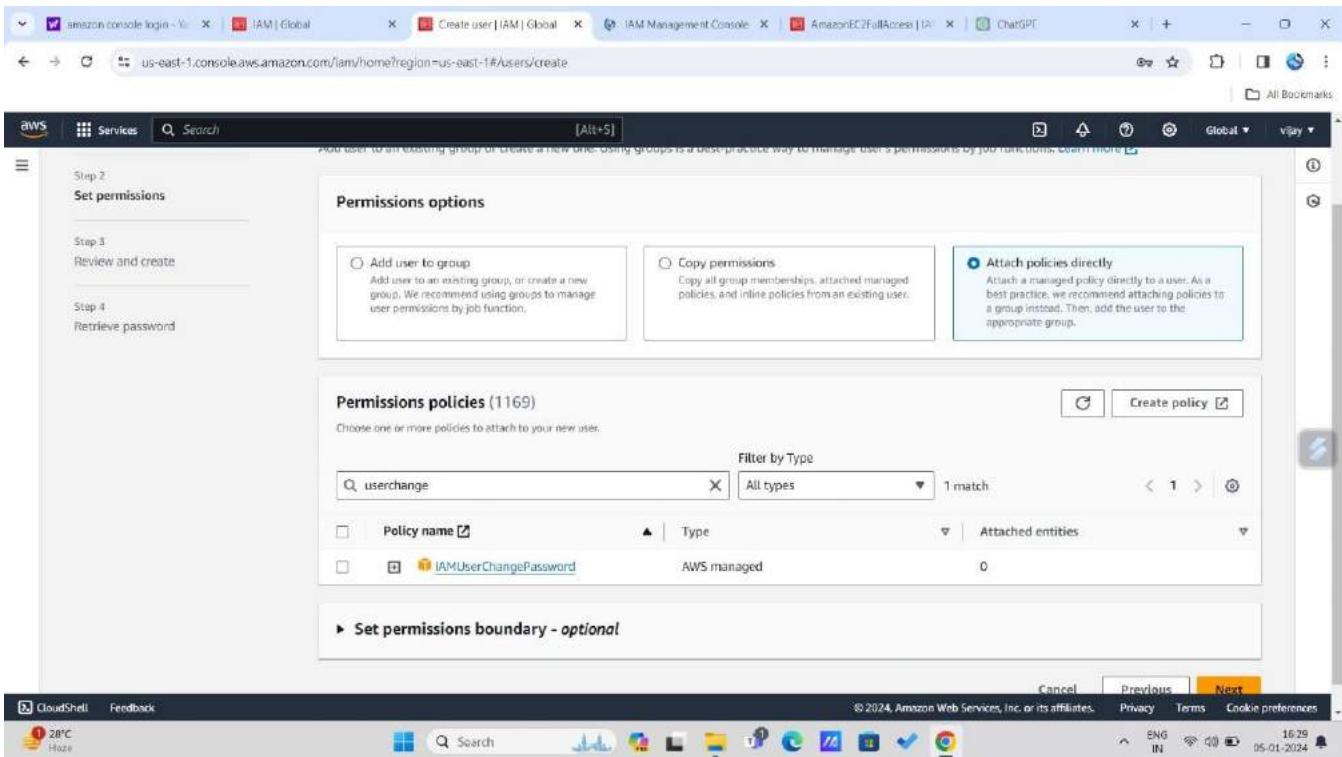


3. It open specify user details.

4. We need to enter user details and select the user access to AWS management console.

5. Choose the option I want to create IAM user and select console password as autogenerated password.

6. And click on next and set permissions and select the attach policies directly.



7. Select the IAM User change password. By selecting this user is created and also we can change password changing permissions for this user.

The screenshot shows the AWS Management Console with the URL <https://us-east-1.console.aws.amazon.com/iam/home?region=us-east-1#/users/create>. A green banner at the top says "User created successfully". The main content area is titled "Step 4: Retrieve password". It contains a "Console sign-in details" section with a "Console sign-in URL" field containing the value <https://961390469458.signin.aws.amazon.com/console>, which has a "Copied" message above it. There is also a "Console password" field with the value `rakesh_0305`. A "Email sign-in instructions" button is present. At the bottom are "Cancel", "Download .csv file", and "Return to users list" buttons.

8. Now sign out of console and sign in as IAM user that we have create and check it working or not. It shows error because we don't have any permission to use other services.
9. For that we need to add policy. We should log in to console with help of MFA or direct password.

10. Search IAM and click on policies.

The screenshot shows the AWS Management Console with the URL https://us-east-1.console.aws.amazon.com/iam/home?region=us-east-1#/users/details/rakesh_0305?section=permissions. The left sidebar shows "Identity and Access Management (IAM)" and "Access management" sections. The main content area is titled "Permissions". It displays the "Permissions policies (1/2)" section with a table showing two policies:

Policy name	Type	Attached via
<input checked="" type="checkbox"/> AmazonEC2FullAccess	AWS managed	Directly
<input type="checkbox"/> IAMUserChangePassword	AWS managed	Directly

At the bottom, there is a "Permissions boundary (not set)" section. The status bar at the bottom shows the URL https://us-east-1.console.aws.amazon.com/iam/home?region=us-east-1#/users/details/rakesh_0305/add-permissions.

11.select the AmazonEC2fullaccess and select on it to add permissions.

Providing the Administrative Access to user.

1.Click on add permissions and select attach policies directly and select administrative access and click on add permissions.

Screenshot of the AWS IAM 'Add permissions' step 2 review screen. The 'Permissions options' section shows three choices:

- Add user to group: Add user to an existing group, or create a new one. We recommend using groups to manage user permissions by job function.
- Copy permissions: Copy all group memberships, attached managed policies, inline policies, and any existing permissions boundaries from an existing user.
- Attach policies directly: Attach a managed policy directly to a user. As a best practice, we recommend attaching policies to a group instead. Then, add the user to the appropriate group.

The 'Permissions policies (1/1167)' section lists available policies:

Policy name	Type	Attached entities
AccessAnalyzerServiceRolePolicy	AWS managed	0
<input checked="" type="checkbox"/> AdministratorAccess	AWS managed - job function	0
AdministratorAccess-Amplify	AWS managed	0
AdministratorAccess-AWSElasticBra...	AWS managed	0

Screenshot of the AWS IAM user details page for 'rakesh_0305'. The 'Permissions' tab is selected, showing the following information:

1 policy added

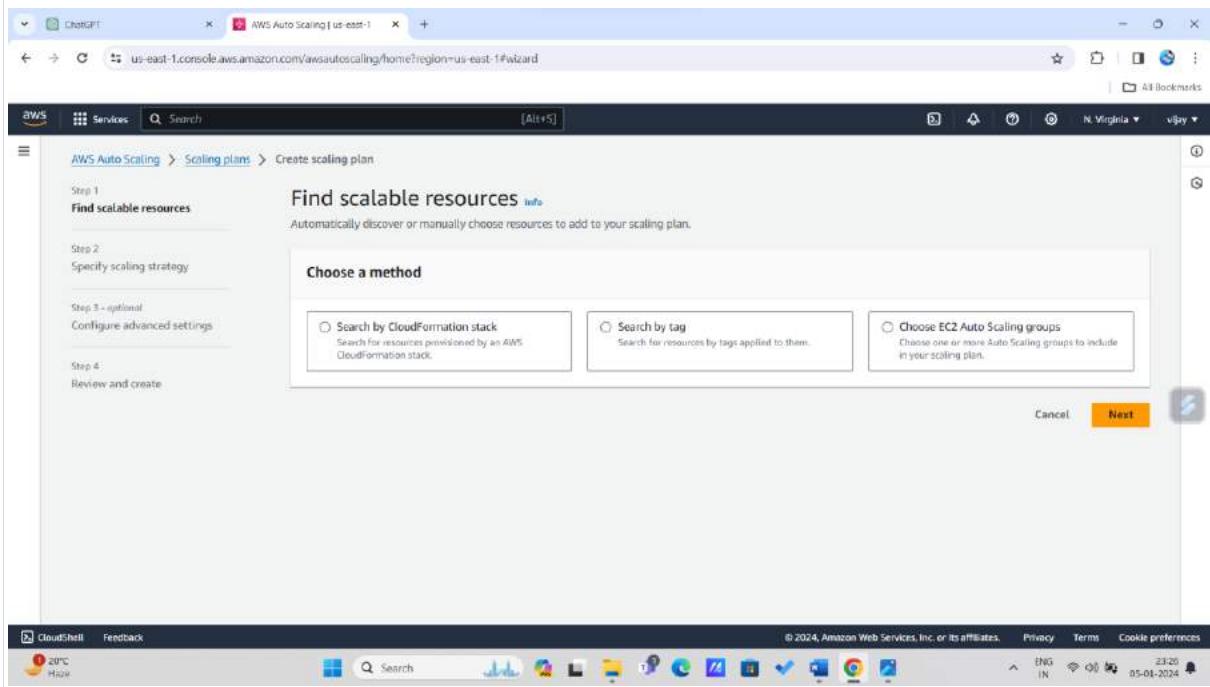
Created: January 05, 2024, 16:30 (UTC+05:30)

Last console sign-in: Never

Permissions policies (3):

Policy name	Type	Attached via
<input type="checkbox"/> AdministratorAccess	AWS managed - job function	Directly
<input type="checkbox"/> AmazonEC2FullAccess	AWS managed	Directly
<input type="checkbox"/> IAMUserChangePassword	AWS managed	Directly

2. Now log out console and log in check.



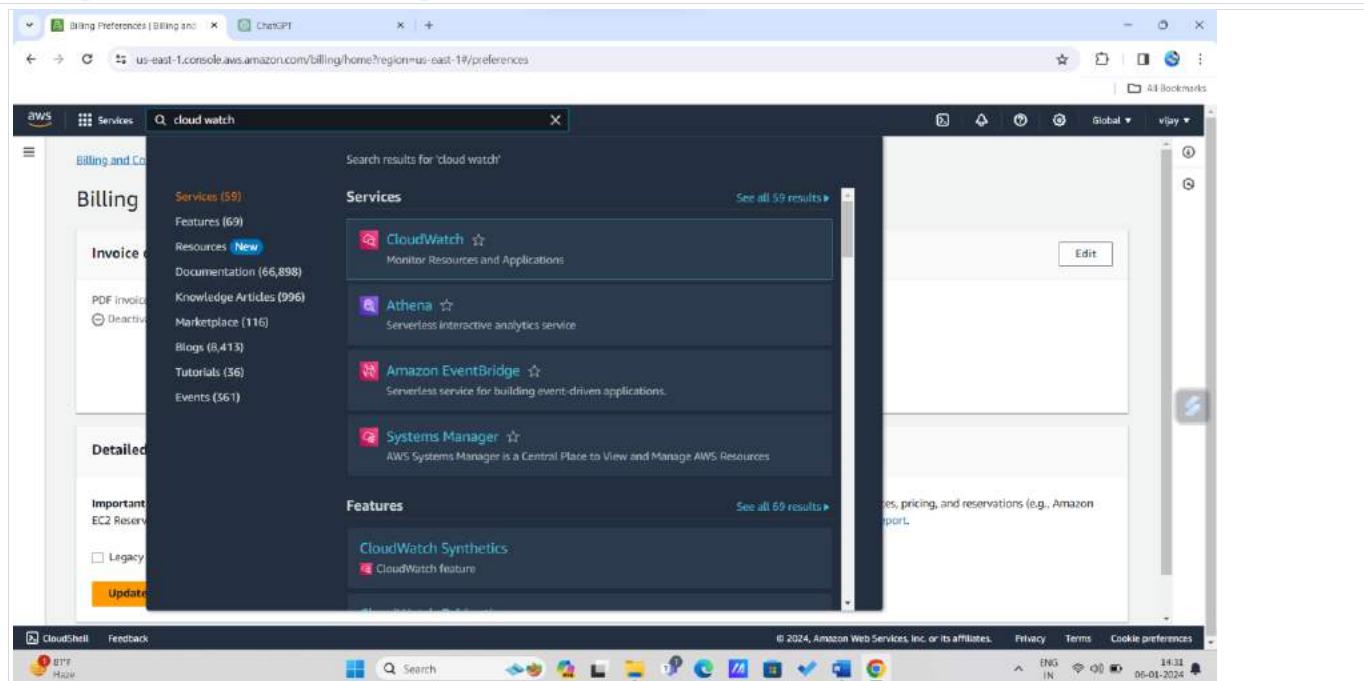
3. Hence, we created,
Console access with MFA
EC2 full access
Administrator access with policies.

PROJECT-2

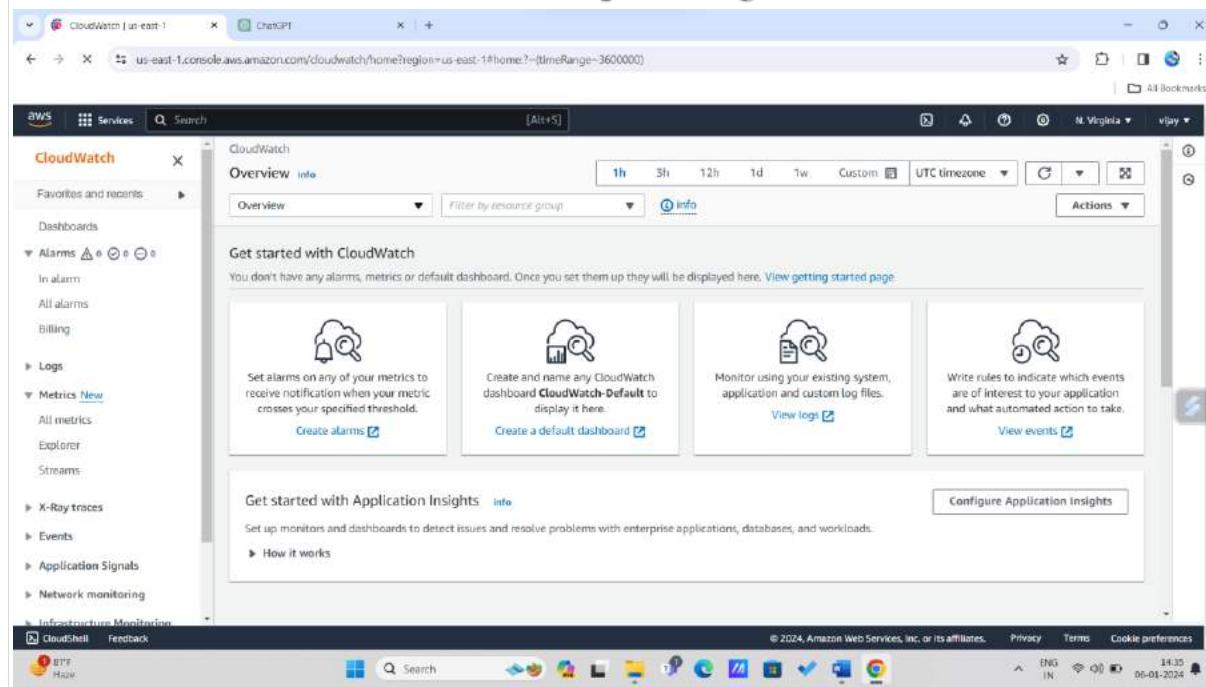
Billing Alarm in AWS

Creating a billing alarm for your account

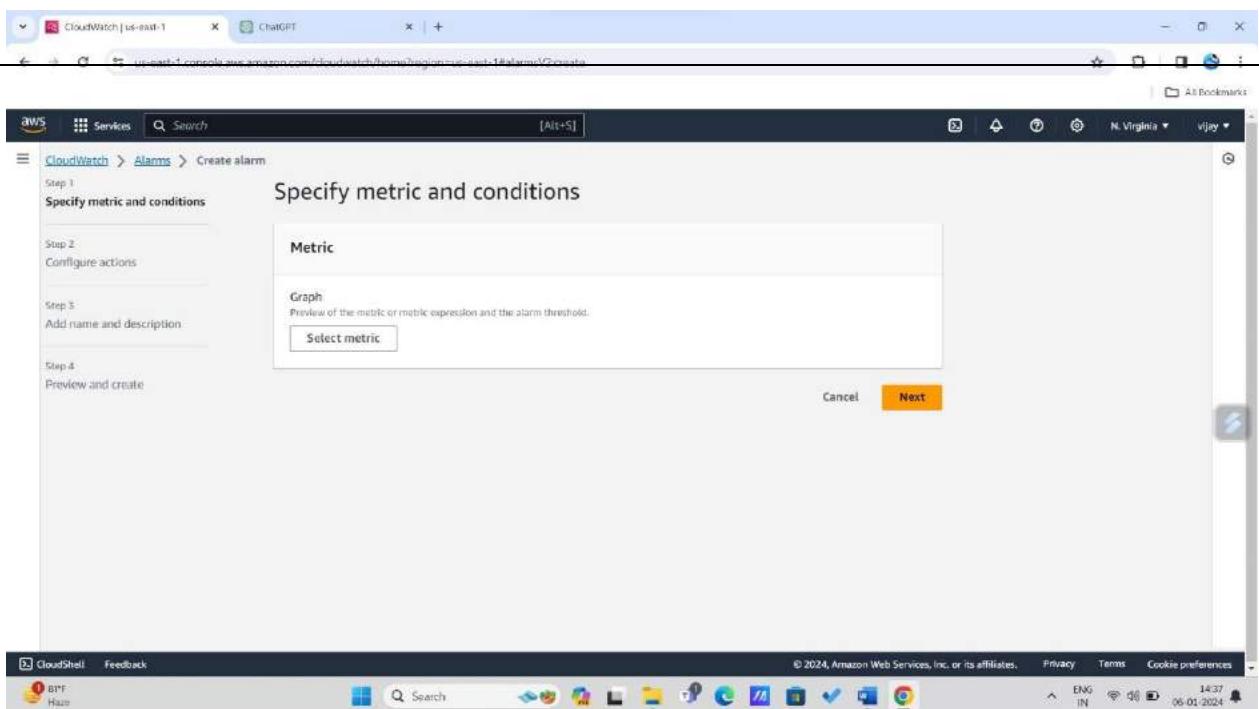
1.Sign in to AWS management console and search cloud watch.



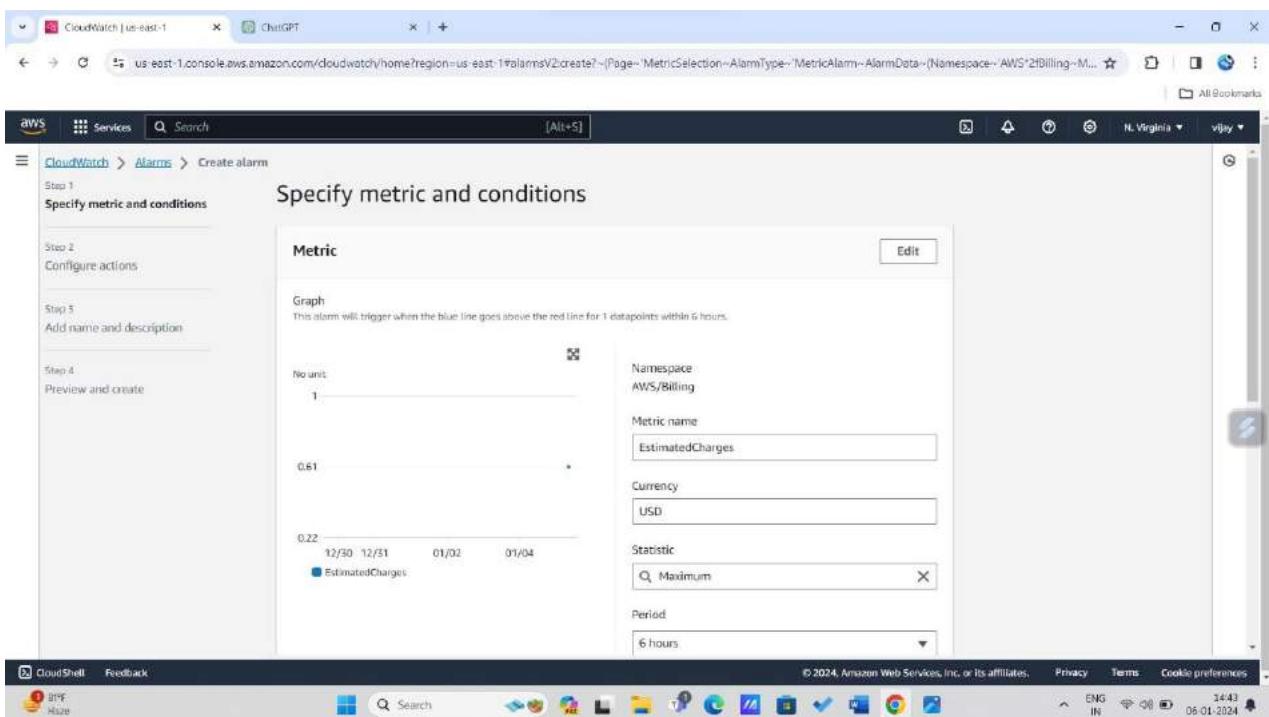
2. Select the Cloud watch then it opens as given below.



3. Click on alarm on left side of screen then it shows the select metric click on next.



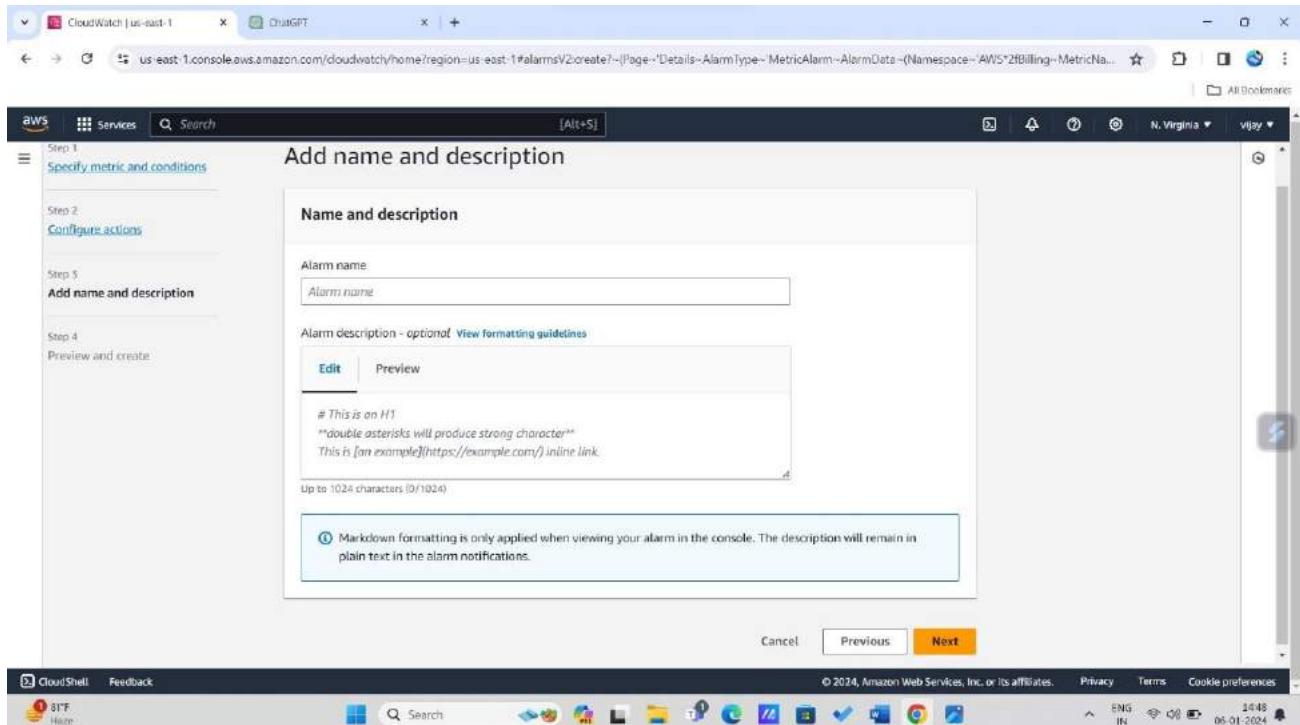
4. It open specify metric and conditions in which estimated charges is named for metric name.



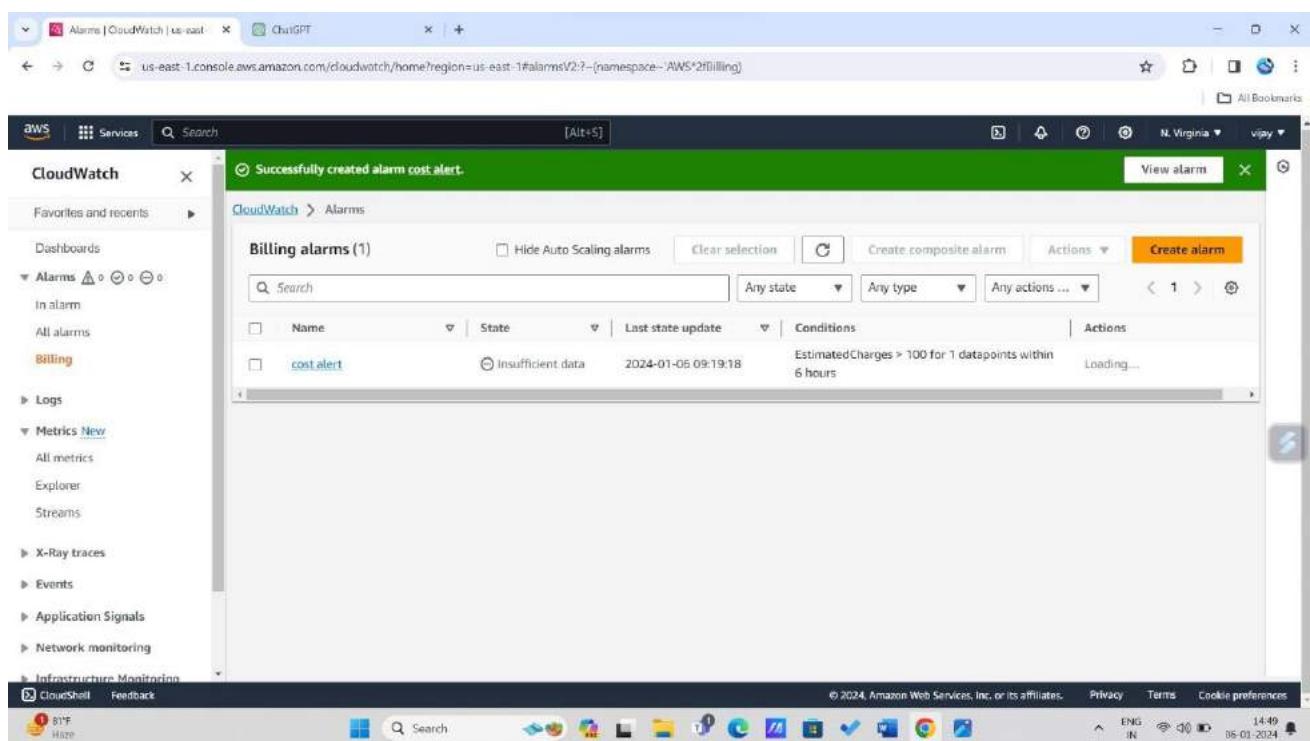
5. In conditions select the static whenever estimated charge is greater also enter threshold value, click on next.

6. In notification service, select in alarm and select create new topic and give it a name and valid mail id for notification and click on next.

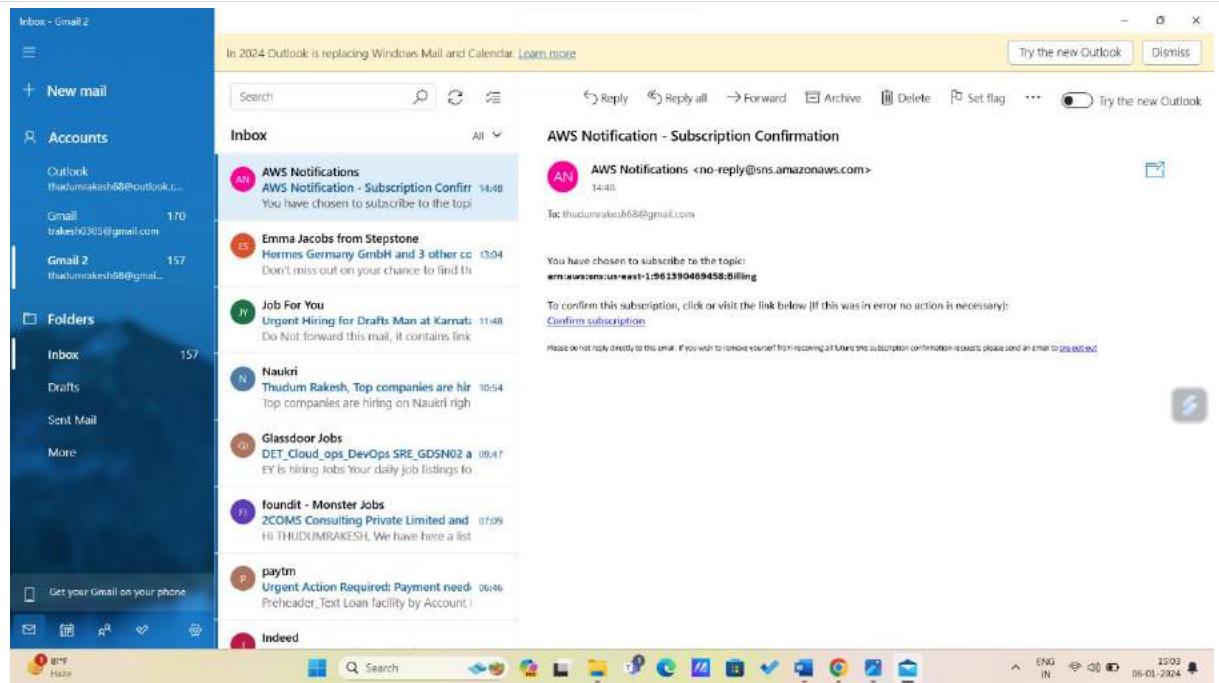
7. Then it opens a add name and description page, give it alarm name and click on next.



8. Click on created alarm, hence it created.



9. We also get confirmation for mail that we have entered for notification purpose.



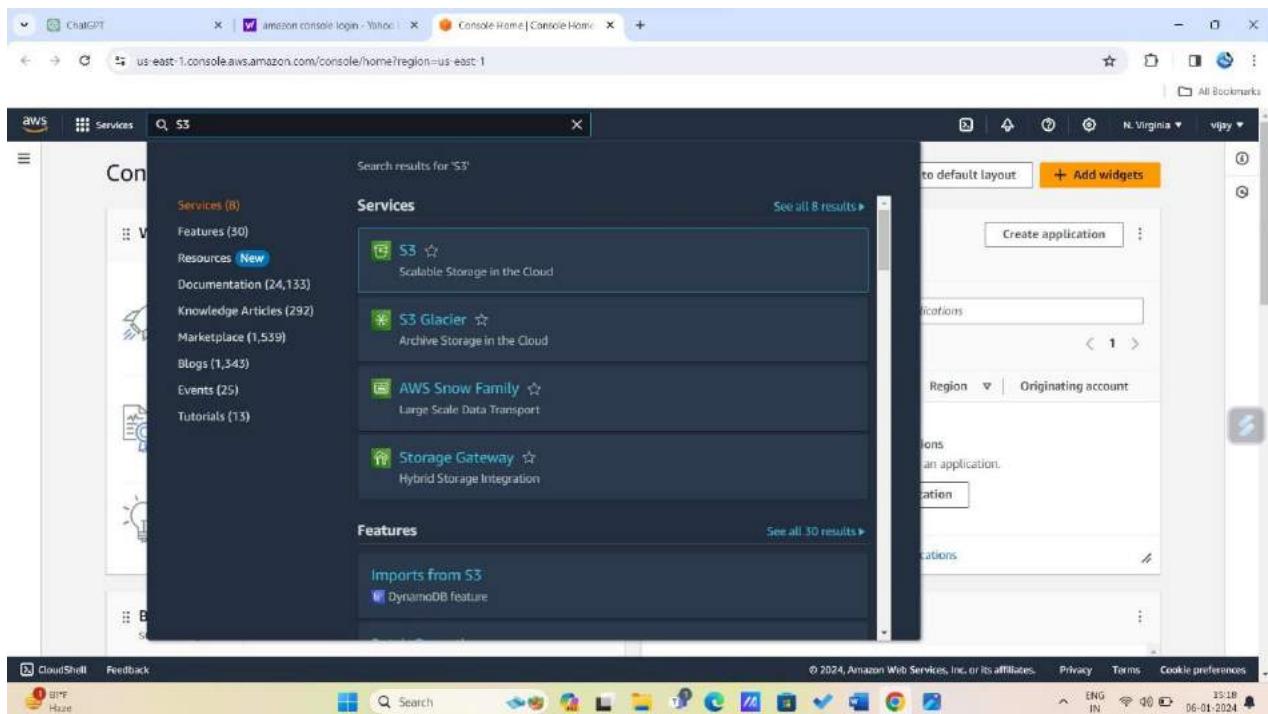
PROJECT-3

S3 BUCKET

➤ Trying to access the file in S3 with URL which shows error.

1. Open amazon console and search S3 in search bar as shown.

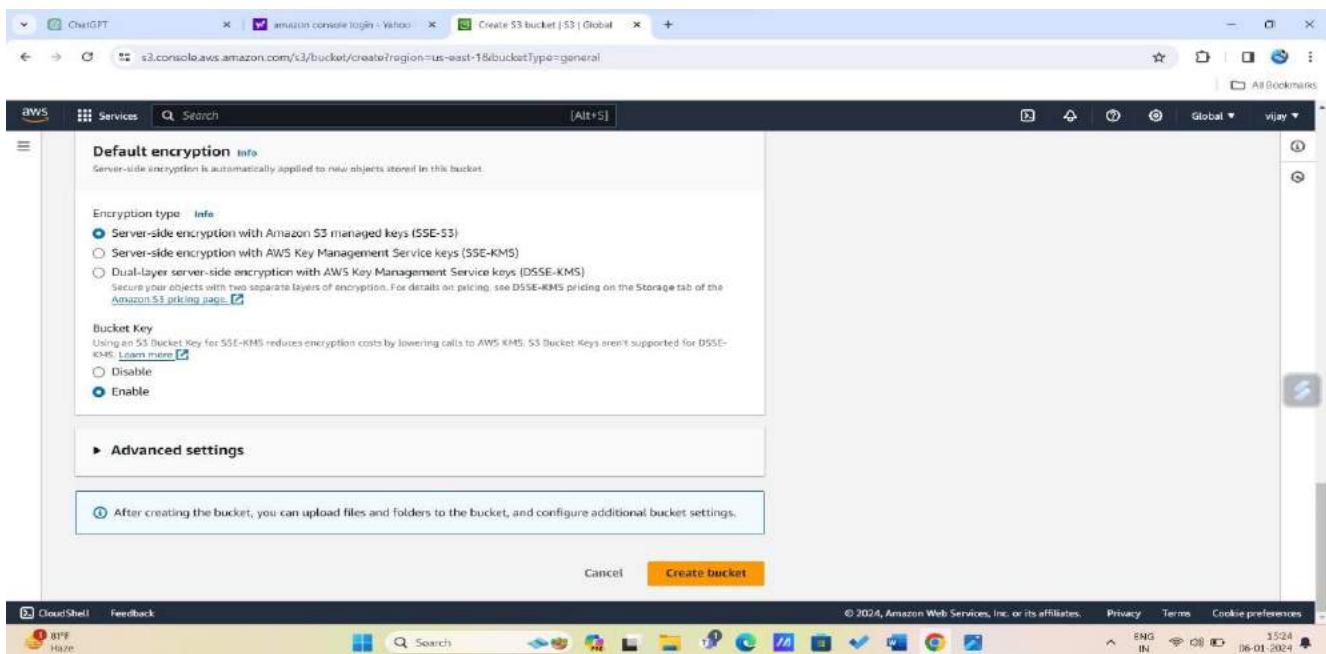
2. Click on S3 and click on create bucket



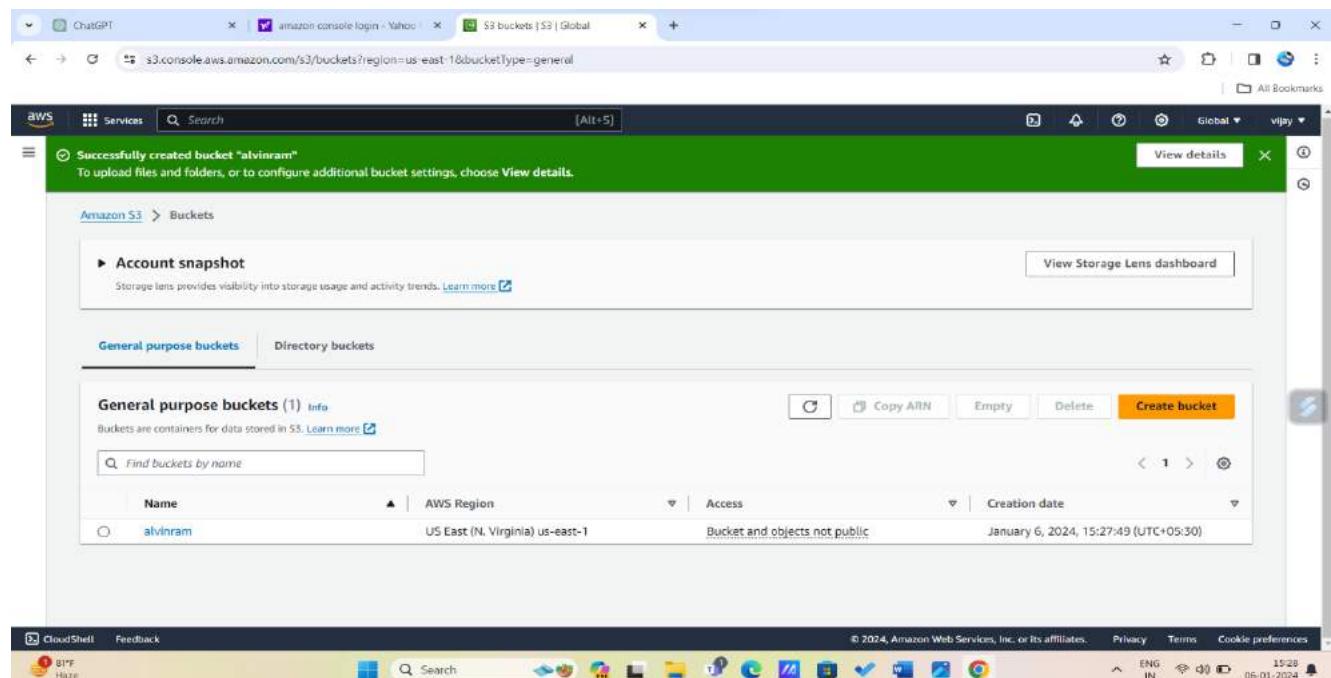
The screenshot shows the Amazon S3 homepage. On the left, there's a section titled "How it works" with a thumbnail image of a presentation slide titled "Introduction to Amazon S3". On the right, there's a "Create a bucket" button and a "Pricing" section. The pricing section states: "With S3, there are no minimum fees. You only pay for what you use. Prices are based on the location of your S3 bucket." It also includes links to "Estimate your monthly bill using the AWS Simple Monthly Calculator" and "View pricing details". The bottom of the screen shows a Windows taskbar with various icons.

The screenshot shows the "Create bucket" configuration page. Under "General configuration", the "AWS Region" is set to "US East (N. Virginia) us-east-1". The "Bucket type" section has two options: "General purpose" (selected) and "Directory - New". The "Bucket name" field contains "mynewsbucket". Below the form, there's a note about bucket naming rules and a "Copy settings from existing bucket - optional" section. At the bottom, there's a "Choose bucket" button and a "Create bucket" button. The bottom of the screen shows a Windows taskbar with various icons.

3. Select the AWS region and bucket type and give bucket name unique. And disable the ACLS, block all public access and click on create bucket.



4. Select the bucket and click on view details its show all Info of bucket and upload in bucket. And it shows the all files in it and click on upload.



Upload objects - S3 bucket alv... thudumakesh/food:: demo

s3.console.aws.amazon.com/s3/upload/alvinram?region=us-east-1

AWS Services Search [Alt+S]

SS REST API Documentation

Drag and drop files and folders you want to upload here, or choose Add files or Add folder.

Files and folders (55 Total, 3.2 MB)

All files and folders in this table will be uploaded.

	Name	Folder	Type	Size
<input type="checkbox"/>	jquery.easing.1.3.js	food--master/assets...	text/javascript	7.9 KB
<input type="checkbox"/>	bootstrap.min.js	food--master/assets...	text/javascript	34.8 KB
<input type="checkbox"/>	jquery-1.11.2.min.js	food--master/assets...	text/javascript	93.7 KB
<input type="checkbox"/>	modernizr-2.8.3-res...	food--master/assets...	text/javascript	19.6 KB
<input type="checkbox"/>	wow.min.js	food--master/assets...	text/javascript	8.2 KB
<input type="checkbox"/>	ft.png	food--master/assets...	image/png	225.6 KB
<input type="checkbox"/>	ftbg.jpg	food--master/assets...	image/jpeg	137.9 KB
<input type="checkbox"/>	google.png	food--master/assets...	image/png	4.6 KB
<input type="checkbox"/>	iphone.png	food--master/assets...	image/png	13.2 KB
<input type="checkbox"/>	logo.png	food--master/assets...	image/png	3.2 KB

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28°C Haze ENG IN 18:03 06-01-2024

Uploading

Total remaining: 47 files: 2.7 MB (3.64%)
Estimated time remaining: a minute
Transfer rate: 38.8 KB/s

Cancel

Files and folders (55 Total, 3.2 MB)

Name	Folder	Type	Size	Status	Error
jquery.easing.1.3.js	food--master/assets/js/jqu...	text/javascript	7.9 KB	✔ Succeeded	-
bootstrap.min.js	food--master/assets/js/ve...	text/javascript	34.8 KB	✔ Succeeded	-
jquery-1.11.2.min.js	food--master/assets/js/ve...	text/javascript	93.7 KB	✔ Succeeded	-
modernizr-2.8.3-respons...	food--master/assets/js/wo...	text/javascript	19.6 KB	✔ Succeeded	-
wow.min.js	food--master/assets/js/wo...	text/javascript	8.2 KB	✔ Succeeded	-
ft.png	food--master/assets/images...	image/png	225.6 KB	✔ Succeeded	-
fb9.jpg	food--master/assets/images...	image/jpeg	137.9 KB	✔ Succeeded	-
google.png	food--master/assets/images...	image/png	4.6 KB	✔ Succeeded	-
iphone.png	food--master/assets/images...	image/png	13.2 KB	✔ Succeeded	-
logo.png	food--master/assets/images...	image/png	3.2 KB	⌚ Pending	-

A screenshot of a Microsoft Edge browser window. The address bar shows the URL "alvinram.s3.amazonaws.com/food-master/". The main content area displays an XML document with the following text:

```
<?xml version="1.0"?>
<Food>
    <FoodItem id="1">
        <Name>Apple Pie</Name>
        <Description>A classic American dessert made with a lattice crust and filled with a spiced fruit filling, often served with whipped cream or ice cream.</Description>
        <Price>12.99</Price>
        <StockLevel>10</StockLevel>
    </FoodItem>
    <FoodItem id="2">
        <Name>Pasta Carbonara</Name>
        <Description>A traditional Italian pasta dish made with spaghetti, eggs, cheese, and pancetta or guanciale, often served with a drizzle of oil and a磨碎的 cheese like parmesan or pecorino romano.</Description>
        <Price>8.99</Price>
        <StockLevel>20</StockLevel>
    </FoodItem>
    <FoodItem id="3">
        <Name>Chicken Alfredo</Name>
        <Description>An Italian pasta dish made with spaghetti and a rich, creamy sauce made from butter, cheese, and garlic, often served with a side of breadsticks or garlic bread.</Description>
        <Price>9.99</Price>
        <StockLevel>15</StockLevel>
    </FoodItem>
    <FoodItem id="4">
        <Name>Beef Wellington</Name>
        <Description>A classic British dish consisting of a filet mignon wrapped in puff pastry and served with a mushroom and tarragon sauce, often accompanied by a baked potato or mashed potatoes.</Description>
        <Price>19.99</Price>
        <StockLevel>5</StockLevel>
    </FoodItem>
    <FoodItem id="5">
        <Name>Veggie Platter</Name>
        <Description>A healthy meal consisting of a variety of raw vegetables, such as carrots, bell peppers, cucumbers, and snap peas, served with a dip like hummus or ranch dressing.</Description>
        <Price>7.99</Price>
        <StockLevel>30</StockLevel>
    </FoodItem>
    <FoodItem id="6">
        <Name>Salmon Teriyaki</Name>
        <Description>A Japanese dish made with salmon fillets marinated in a sweet and savory teriyaki sauce, often served with rice and steamed vegetables like broccoli and carrots.</Description>
        <Price>14.99</Price>
        <StockLevel>10</StockLevel>
    </FoodItem>
    <FoodItem id="7">
        <Name>Pork Chops with Gravy</Name>
        <Description>A hearty meal consisting of pork chops sautéed with onions and garlic, served with a thick, flavorful gravy and a side of mashed potatoes or green beans.</Description>
        <Price>11.99</Price>
        <StockLevel>15</StockLevel>
    </FoodItem>
    <FoodItem id="8">
        <Name>Pasta Primavera</Name>
        <Description>A light and colorful pasta dish made with various fresh vegetables like zucchini, bell peppers, and tomatoes, combined with a light cream or tomato-based sauce and served with a side of garlic bread or a salad.</Description>
        <Price>8.49</Price>
        <StockLevel>25</StockLevel>
    </FoodItem>
    <FoodItem id="9">
        <Name>Steak Frites</Name>
        <Description>A classic French dish consisting of a grilled beef steak served with a side of french fries and a small salad, often accompanied by a glass of red wine or beer.</Description>
        <Price>16.99</Price>
        <StockLevel>8</StockLevel>
    </FoodItem>
    <FoodItem id="10">
        <Name>Chicken Parmesan</Name>
        <Description>An Italian-American dish made with breaded chicken cutlets fried until golden brown, then topped with a layer of marinara sauce and melted cheese, often served with a side of pasta like spaghetti or macaroni and cheese.</Description>
        <Price>13.99</Price>
        <StockLevel>12</StockLevel>
    </FoodItem>
    <FoodItem id="11">
        <Name>Mushroom Risotto</Name>
        <Description>An Italian rice dish made with Arborio rice, sautéed mushrooms, and a rich, creamy sauce, often served with a side of grated cheese like parmesan or mozzarella.</Description>
        <Price>9.49</Price>
        <StockLevel>18</StockLevel>
    </FoodItem>
    <FoodItem id="12">
        <Name>Pasta Carbonara</Name>
        <Description>A traditional Italian pasta dish made with spaghetti, eggs, cheese, and pancetta or guanciale, often served with a drizzle of oil and a磨碎的 cheese like parmesan or pecorino romano.</Description>
        <Price>8.99</Price>
        <StockLevel>20</StockLevel>
    </FoodItem>
    <FoodItem id="13">
        <Name>Beef Wellington</Name>
        <Description>A classic British dish consisting of a filet mignon wrapped in puff pastry and served with a mushroom and tarragon sauce, often accompanied by a baked potato or mashed potatoes.</Description>
        <Price>19.99</Price>
        <StockLevel>5</StockLevel>
    </FoodItem>
    <FoodItem id="14">
        <Name>Veggie Platter</Name>
        <Description>A healthy meal consisting of a variety of raw vegetables, such as carrots, bell peppers, cucumbers, and snap peas, served with a dip like hummus or ranch dressing.</Description>
        <Price>7.99</Price>
        <StockLevel>30</StockLevel>
    </FoodItem>
    <FoodItem id="15">
        <Name>Salmon Teriyaki</Name>
        <Description>A Japanese dish made with salmon fillets marinated in a sweet and savory teriyaki sauce, often served with rice and steamed vegetables like broccoli and carrots.</Description>
        <Price>14.99</Price>
        <StockLevel>10</StockLevel>
    </FoodItem>
    <FoodItem id="16">
        <Name>Pork Chops with Gravy</Name>
        <Description>A hearty meal consisting of pork chops sautéed with onions and garlic, served with a thick, flavorful gravy and a side of mashed potatoes or green beans.</Description>
        <Price>11.99</Price>
        <StockLevel>15</StockLevel>
    </FoodItem>
    <FoodItem id="17">
        <Name>Pasta Primavera</Name>
        <Description>A light and colorful pasta dish made with various fresh vegetables like zucchini, bell peppers, and tomatoes, combined with a light cream or tomato-based sauce and served with a side of garlic bread or a salad.</Description>
        <Price>8.49</Price>
        <StockLevel>25</StockLevel>
    </FoodItem>
    <FoodItem id="18">
        <Name>Steak Frites</Name>
        <Description>A classic French dish consisting of a grilled beef steak served with a side of french fries and a small salad, often accompanied by a glass of red wine or beer.</Description>
        <Price>16.99</Price>
        <StockLevel>8</StockLevel>
    </FoodItem>
    <FoodItem id="19">
        <Name>Chicken Parmesan</Name>
        <Description>An Italian-American dish made with breaded chicken cutlets fried until golden brown, then topped with a layer of marinara sauce and melted cheese, often served with a side of pasta like spaghetti or macaroni and cheese.</Description>
        <Price>13.99</Price>
        <StockLevel>12</StockLevel>
    </FoodItem>
    <FoodItem id="20">
        <Name>Mushroom Risotto</Name>
        <Description>An Italian rice dish made with Arborio rice, sautéed mushrooms, and a rich, creamy sauce, often served with a side of grated cheese like parmesan or mozzarella.</Description>
        <Price>9.49</Price>
        <StockLevel>18</StockLevel>
    </FoodItem>
</Food>
```

5. Also it shows status and error while uploading.

The screenshot shows the AWS S3 Object Overview page for an object named 'index.html'. The object was uploaded by 'vjkumar22001' from the 'US East (N. Virginia) us-east-1' region on January 6, 2024, at 18:05:00 UTC+05:30. The object is 25.0 KB in size and has a type of 'html'. The key is 'food--master/index.html'. The S3 URI is 's3://alvinram/food--master/index.html', and the ARN is 'arn:aws:s3:::alvinram/food--master/index.html'. The Entity tag (Etag) is '968c6069c57943ec27b1a9ec86772d17'. The Object URL is 'https://alvinram.s3.amazonaws.com/food--master/index.html'.

6. Copy the object URL and browse it.

7. It shows error because we blocked all public access for object.

8. Making object public we need to unblock all public access and ACLs as public.

The screenshot shows the AWS S3 Bucket Permissions Overview page for the 'alvinram' bucket. Under 'Access', it says 'Objects can be public'. In the 'Block public access (bucket settings)' section, it shows 'Block all public access' is set to 'Off'. Below that, there is a 'Bucket policy' section which states 'No policy to display.'

9. Also select the all files in folder which we uploaded and click on actions select the make public using ACLs. And click on make public.

Screenshot of AWS S3 console showing the 'Objects' page for the 'alvinram' bucket. The 'Upload' button is highlighted.

Objects (5) Info

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 Inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Name	Type	Last modified	Size	Storage class
assets/	Folder	January 6, 2024, (UTC+05:30)	-	-
codefile.txt	txt	January 6, 2024, (UTC+05:30)	13.0 B	Standard
favicon.ico	ico	January 6, 2024, (UTC+05:30)	766.0 B	Standard
index.html	html	January 6, 2024, (UTC+05:30)	25.0 KB	Standard
Readme1.txt	txt	January 6, 2024, (UTC+05:30)	1.5 KB	Standard

Actions

- Share with a presigned URL
- Calculate total size
- Copy
- Move
- Initiate restore
- Query with S3 Select
- Edit actions
- Rename object
- Edit storage class
- Edit server-side encryption
- Edit metadata
- Edit tags
- Make public using ACL

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Screenshot of the 'Edit public read access' dialog. It shows a list of objects and a 'Make public' button.

The make public action enables public read access in the object access control list (ACL) settings. [Learn more](#)

- When public read access is enabled and not blocked by Block Public Access settings, anyone in the world can access the specified objects.
- This action applies to all objects within the specified folders. Objects added to these folders while the action is in progress might be affected.

Specified objects

Name	Type	Last modified	Size
assets/	Folder	-	-
codefile.txt	txt	January 6, 2024, 18:04:57 (UTC+05:30)	13.0 B
favicon.ico	ico	January 6, 2024, 18:04:59 (UTC+05:30)	766.0 B
index.html	html	January 6, 2024, 18:05:00 (UTC+05:30)	25.0 KB
Readme1.txt	txt	January 6, 2024, 18:05:01 (UTC+05:30)	1.5 KB

Cancel Make public

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Screenshot of the 'Edit public read access' confirmation dialog. It shows a summary of successful edits and failed attempts.

Successfully edited public access

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

Summary

Source	Success	Failure
s3://alvinram/food--master/	Successfully edited public access 55 objects, 3.2 MB	Failed to edit public access 0 objects

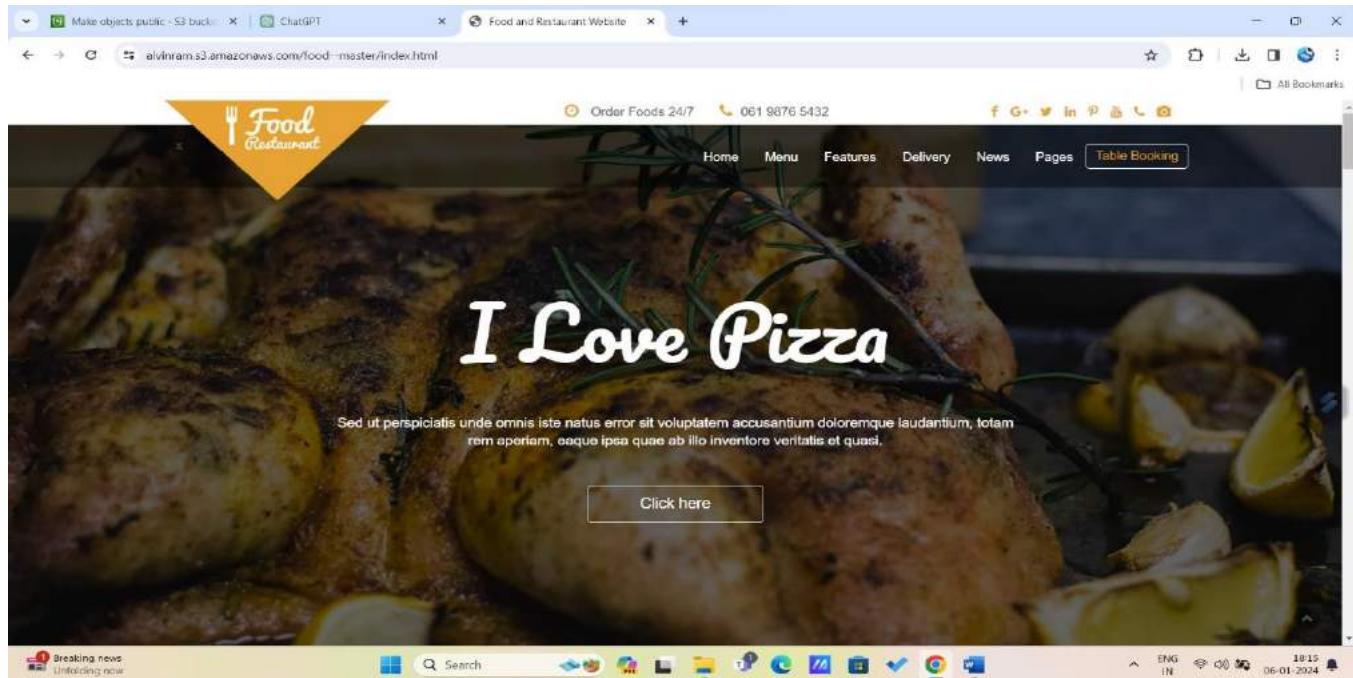
Failed to edit public access Configuration

Failed to edit public access (0)

Name	Folder	Type	Last modified	Size	Error
No objects failed to edit					

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10. Then again copy object URL and browse it we can a page open its content or hosting a application if we need to host a static application we need to enable static web host.



ENABLE THE VERSIONING

1. Open the S3, open the list of buckets, click on buckets.

Name	AWS Region	Access	Creation date
alvinram	US East (N. Virginia) us-east-1	Objects can be public	January 6, 2024, 15:27:49 (UTC+05:30)

2.Click on properties and there we can see bucket versioning which is disabled , and click on edit

The screenshots show the AWS S3 Bucket Properties page for the 'alvinram' bucket. The first screenshot shows the 'Bucket overview' section with 'Bucket Versioning' set to 'Disabled'. The second screenshot shows the 'Edit Bucket Versioning' dialog where 'Enable' is selected. The third screenshot shows a success message indicating that versioning has been successfully edited.

Screenshot 1: Bucket overview

AWS Region: US East (N. Virginia) us-east-1
Amazon Resource Name (ARN): arn:aws:s3:::alvinram
Creation date: January 6, 2024, 15:27:49 (UTC+05:30)

Bucket Versioning
Versioning is a means of keeping multiple variants of an object in the same bucket. You can use versioning to preserve, retrieve, and restore every version of every object stored in your Amazon S3 bucket. With versioning, you can easily recover from both unintended user actions and application failures. [Learn more](#)

Screenshot 2: Edit Bucket Versioning

Bucket Versioning
Versioning is a means of keeping multiple variants of an object in the same bucket. You can use versioning to preserve, retrieve, and restore every version of every object stored in your Amazon S3 bucket. With versioning, you can easily recover from both unintended user actions and application failures. [Learn more](#)

Enable
After enabling Bucket Versioning, you might need to update your lifecycle rules to manage previous versions of objects.

Screenshot 3: Success message

Successfully edited Bucket Versioning
To transition, archive, or delete older object versions, configure lifecycle rules for this bucket.

Bucket overview
AWS Region: US East (N. Virginia) us-east-1
Amazon Resource Name (ARN): arn:aws:s3:::alvinram
Creation date: January 6, 2024, 15:27:49 (UTC+05:30)

Bucket Versioning
Versioning is a means of keeping multiple variants of an object in the same bucket. You can use versioning to preserve, retrieve, and restore every version of every object stored in your Amazon S3 bucket. With versioning, you can easily recover from both unintended user actions and application failures. [Learn more](#)

3.Click on enable and save changes.

Now deleting a index.html or any file and backup it with versioning

The screenshot shows the AWS S3 console interface. A modal dialog box is open, prompting the user to confirm the deletion of an object named 'index.html'. The dialog includes a message about delete markers, a search bar for finding objects by name, a table of specified objects with columns for Name, Type, Last modified, and Size, and a text input field for confirming the deletion with the word 'delete'. At the bottom right of the dialog is a prominent orange 'Delete objects' button.

11weewdwdedc

The screenshot shows the AWS S3 console after the deletion of the 'index.html' file. A green success banner at the top indicates 'Successfully deleted objects'. Below this, a 'Summary' section provides details: 'Source' is 's3://alvinram/food--master/'; 'Successfully deleted' shows '1 object, 25.0 KB'; and 'Failed to delete' shows '0 objects'. A 'Failed to delete' tab is selected, showing a table with no entries: 'No objects failed to delete.' The bottom of the screen shows the Windows taskbar with various pinned icons.

1. We have go back to list of folder there we don't see any index.html which I have delete. There we can see a show version option which we need to enable it.

Objects (4) Info

Name	Type	Last modified	Size	Storage class
assets/	Folder	-	-	-
codefile.txt	txt	January 6, 2024, 18:04:57 (UTC+05:30)	13.0 B	Standard
favicon.ico	ico	January 6, 2024, 18:04:59 (UTC+05:30)	766.0 B	Standard
Readme1.txt	txt	January 6, 2024, 18:05:01 (UTC+05:30)	1.5 KB	Standard

Objects (6) Info

Name	Type	Version ID	Last modified	Size	Storage class
assets/	Folder	-	-	-	-
codefile.txt	txt	null	January 6, 2024, 18:04:57 (UTC+05:30)	13.0 B	Standard
favicon.ico	ico	null	January 6, 2024, 18:04:59 (UTC+05:30)	766.0 B	Standard
index.html	Delete marker	IJ7YV2fx0H SkSwVnHoB 1K60mmhE bfN1	January 6, 2024, 18:45:47 (UTC+05:30)	0 B	-
index.html	html	null	January 6, 2024, 18:05:00 (UTC+05:30)	25.0 KB	Standard
Readme1.txt	txt	null	January 6, 2024, 18:05:01 (UTC+05:30)	1.5 KB	Standard

2. From they we can download into local storage and upload into bucket.

Objects (4) Info

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Name	Type	Last modified	Size	Storage class
assets/	Folder	-	-	-
codefile.txt	txt	January 6, 2024, 18:04:57 (UTC+05:30)	13.0 B	Standard
favicon.ico	ico	January 6, 2024, 18:04:59 (UTC+05:30)	766.0 B	Standard
Readme1.txt	txt	January 6, 2024, 18:05:01 (UTC+05:30)	1.5 KB	Standard

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Objects (6) Info

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Name	Type	Version ID	Last modified	Size	Storage class
assets/	Folder	-	-	-	-
codefile.txt	txt	null	January 6, 2024, 18:04:57 (UTC+05:30)	13.0 B	Standard
favicon.ico	ico	null	January 6, 2024, 18:04:59 (UTC+05:30)	766.0 B	Standard
index.html	Delete marker	U7YV2fx0HSkSwVnHo81rK60mmhEbFNT	January 6, 2024, 18:45:47 (UTC+05:30)	0 B	-
index.html	html	null	January 6, 2024, 18:05:00 (UTC+05:30)	25.0 KB	Standard
Readme1.txt	txt	null	January 6, 2024, 18:05:01 (UTC+05:30)	1.5 KB	Standard

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3. Go to objects and search index.html we cannot find it, we need to upload it again from local storage to bucket.

Upload objects - S3 bucket alvinram

s3.console.aws.amazon.com/s3/upload/alvinram?region=us-east-1&prefix=food--master/

Amazon S3 > Buckets > alvinram > food--master/ > Upload

Upload

Add the files and folders you want to upload to S3. To upload a file larger than 160GB, use the AWS CLI, AWS SDK or Amazon S3 REST API. Learn more

Drag and drop files and folders you want to upload here, or choose Add files or Add folder.

Files and folders (1 Total, 25.0 KB)

Name	Type	Size
index.html	text/html	25.0 KB

Destination [Info](#)

Destination: s3://alvinram/food--master/

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Upload objects - S3 bucket alvinram

s3.console.aws.amazon.com/s3/upload/alvinram?region=us-east-1&prefix=food--master/

aws Services Search [Alt+S]

Upload succeeded

View details below.

Upload: status

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

Summary

Destination	Succeeded	Failed
s3://alvinram/food--master/	1 file, 25.0 KB (100.00%)	0 files, 0 B (0%)

Files and folders (1 Total, 25.0 KB)

Name
index.html

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alvinram - S3 bucket | S3 | Global ChatGPT Food and Restaurant Website

s3.console.aws.amazon.com/s3/buckets/alvinram?region=us-east-1&prefix=food--master/

aws Services Search [Alt+S]

Objects

Objects (5) [Info](#)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

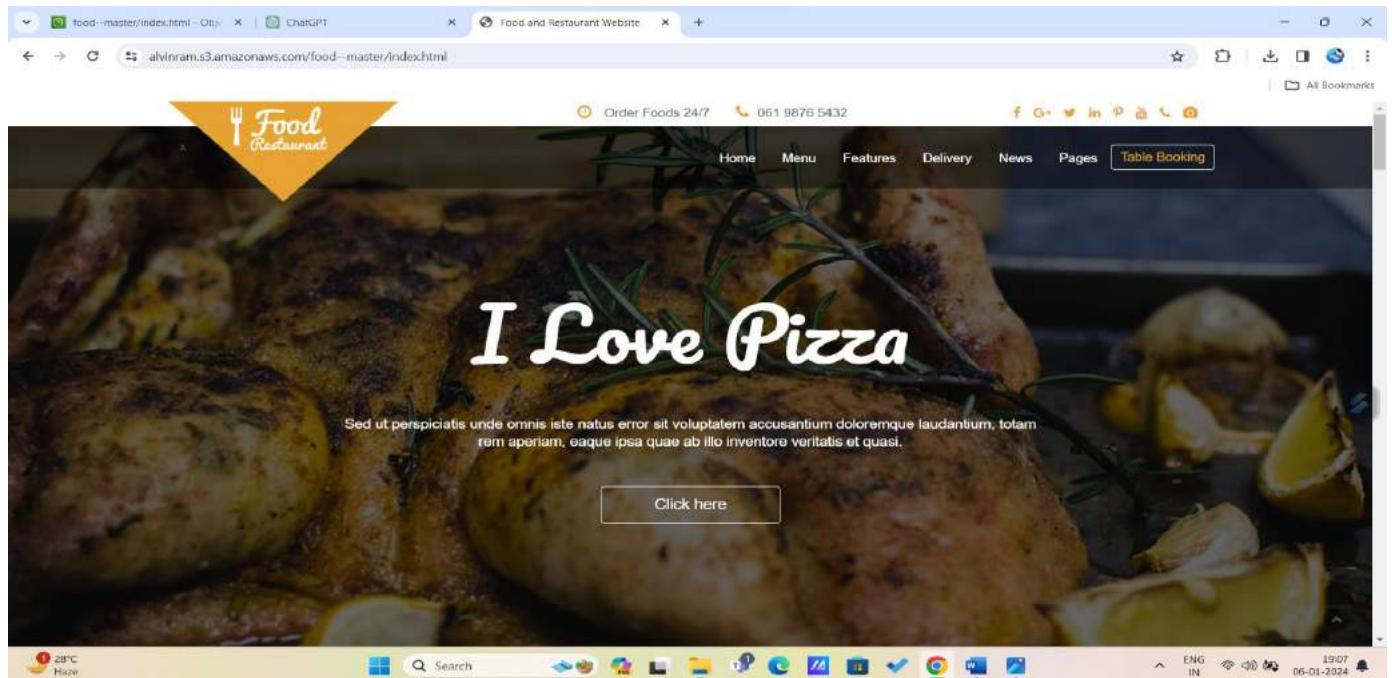
[Actions](#) [Create folder](#) [Upload](#)

[Find objects by prefix](#) [Show versions](#)

Name	Type	Last modified	Size	Storage class
assets/	Folder	-	-	-
codestyle.txt	txt	January 6, 2024, 18:04:57 (UTC+05:30)	13.0 B	Standard
favicon.ico	ico	January 6, 2024, 18:04:59 (UTC+05:30)	766.0 B	Standard
index.html	html	January 6, 2024, 18:59:53 (UTC+05:30)	25.0 KB	Standard
Readme1.txt	txt	January 6, 2024, 18:05:01 (UTC+05:30)	1.5 KB	Standard

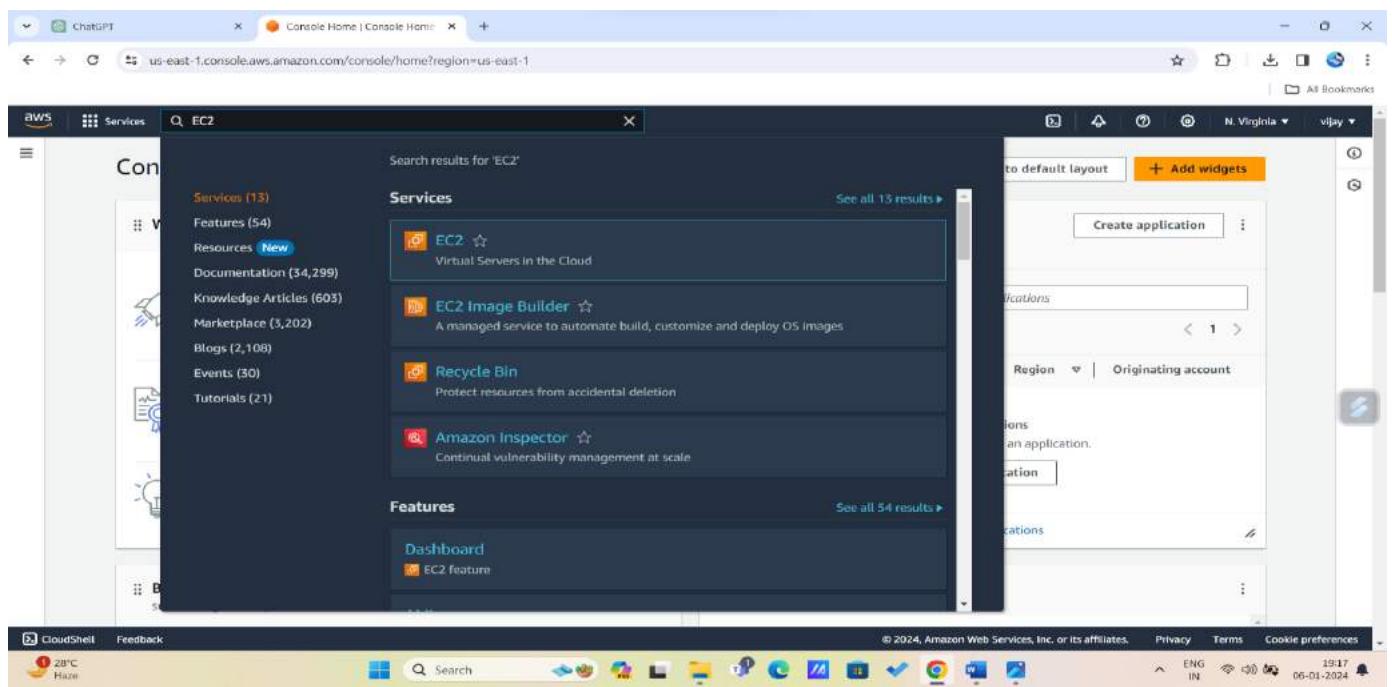
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4. Again we have to select index.html and make it public ACLs, copy the URL and browse it and we can see content.

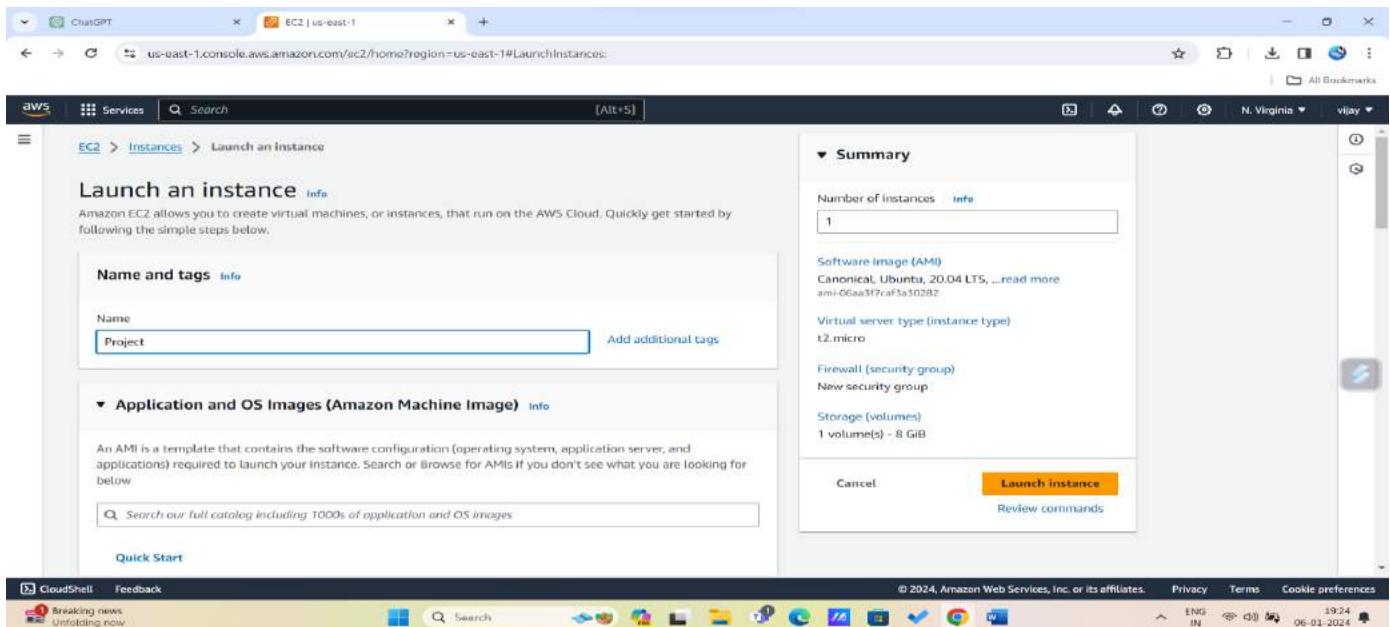


PROJECT-4 EC2 INSTANCE

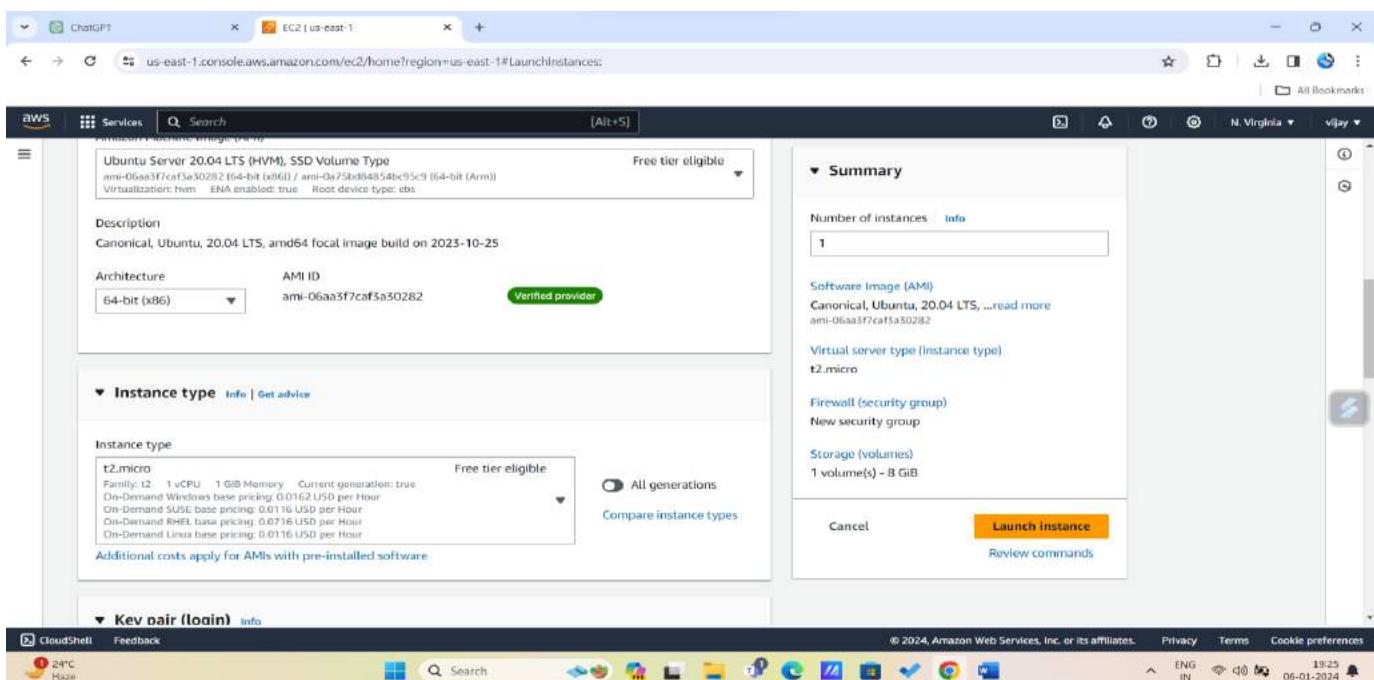
1. Open amazon console and search EC2 in search bar as shown in fig. click on it



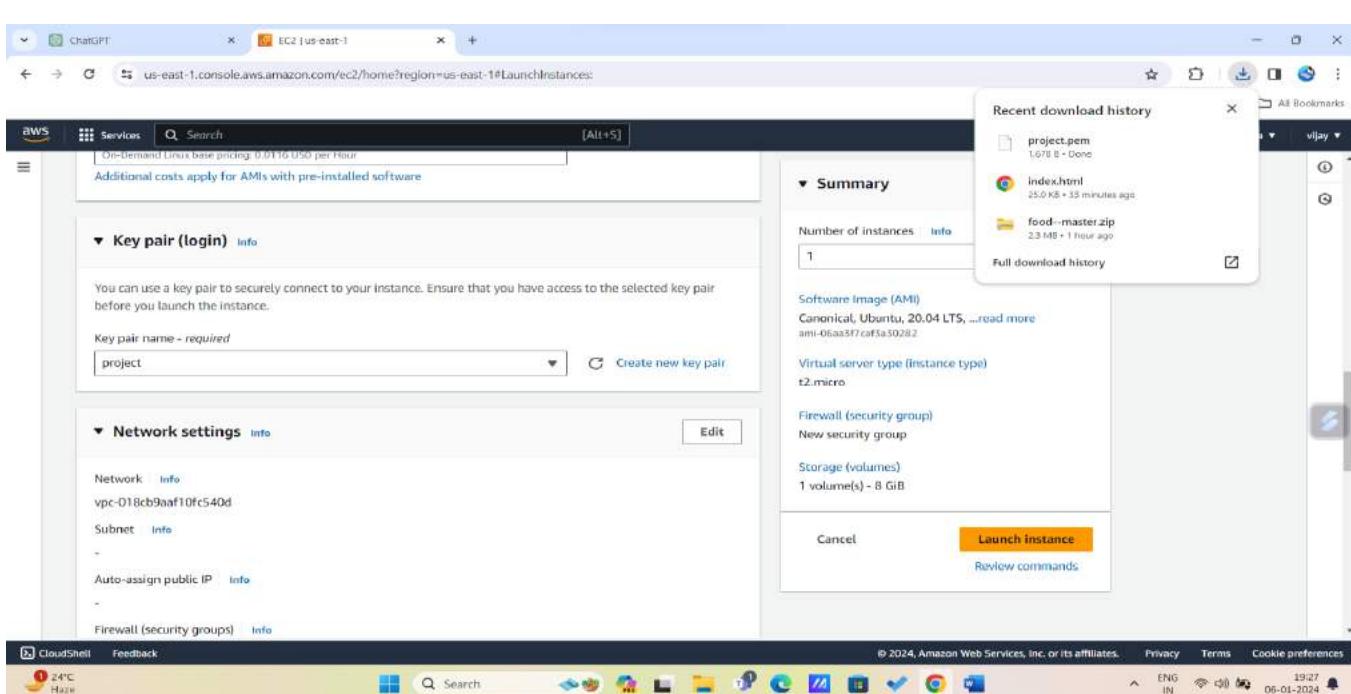
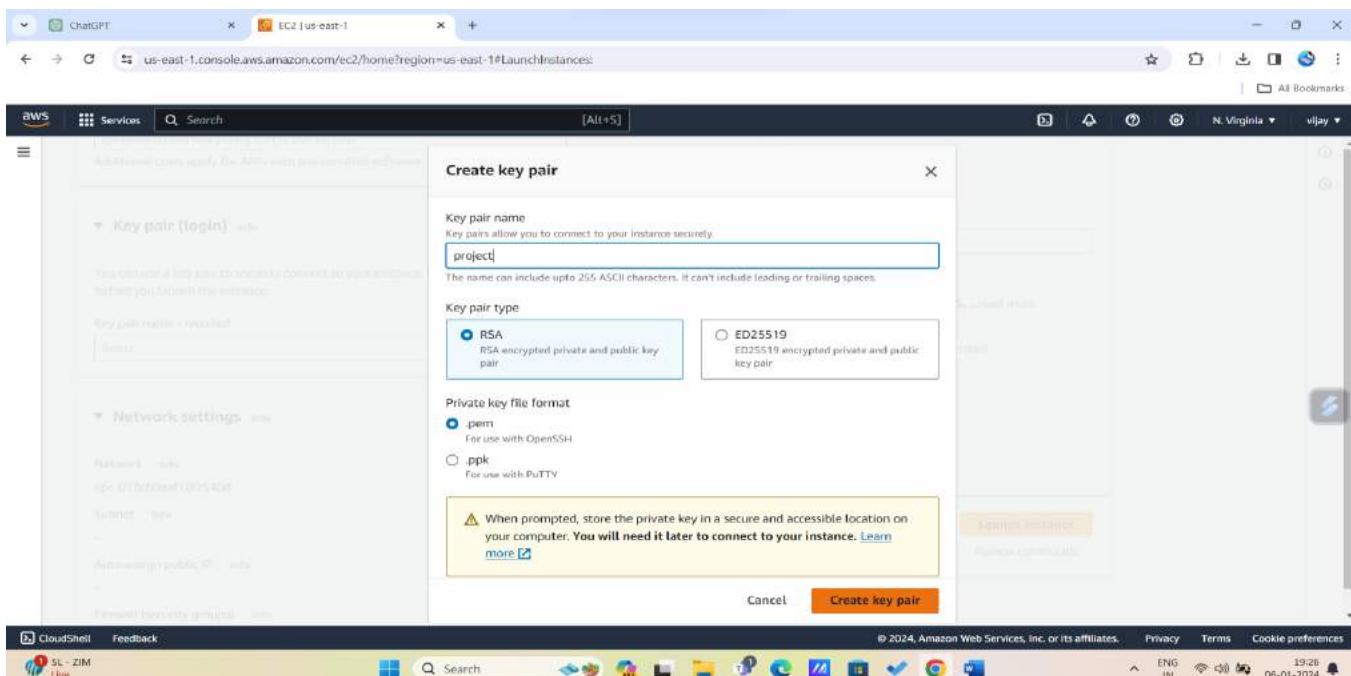
2.Click on launch instance enter the name



3.Select AMI ubuntu free tier and t2. micro.



4.Create key pair and name key pair, click on create key pair and it gets download in local PC



5. Now select the networking (default or custom VPC)

6. Add security ports so we can add access from outside ,so I am adding all traffic(depending up on the work we can allocate port)

7. Click on launch instances

The screenshot shows the AWS EC2 Launch Wizard interface. On the left, there's a sidebar with 'Inbound Security Group Rules' containing two rules: 'Security group rule 1' (TCP port 22) and 'Security group rule 2' (All traffic). On the right, the 'Summary' section shows 'Number of instances' as 1, 'Software Image (AMI)' as Canonical, Ubuntu, 20.04 LTS, and 'Virtual server type (instance type)' as t2.micro. A prominent orange 'Launch instance' button is at the bottom right.

Inbound Security Group Rules

- Security group rule 1 (TCP; 22, 0.0.0.0/0)
 - Type: ssh, Protocol: TCP, Port range: 22
 - Source type: Anywhere, Description: e.g. SSH for admin desktop
- Security group rule 2 (All, All, 0.0.0.0/0)
 - Type: All traffic, Protocol: All, Port range: All
 - Source type: Anywhere, Description: e.g. SSH for admin desktop

Summary

Number of instances: 1

Software Image (AMI): Canonical, Ubuntu, 20.04 LTS, ...read more
ami-06aa3f7caf5a5d282

Virtual server type (instance type): t2.micro

Firewall (security group): New security group

Storage (volumes): 1 volume(s) - 8 GiB

Cancel **Launch instance** Review commands

Success
Successfully initiated launch of instance (i-0be5c00e534908548)

Next Steps

What would you like to do next with this instance, for example "create alarm" or "create backup"?

Create billing and free tier usage alerts
Once your instance is running, log into it from your local computer.
Connect to your instance
Configure the connection between an EC2 instance and a database to allow traffic flow between them.
Connect an RDS database
Create a new RDS database
Create EBS snapshot policy
Create a policy that automates the creation, retention, and deletion of EBS snapshots

To get access in our local machine using SSH command.

1. After checking 2/2 check and instance state select the instance and click on connect it opens a info from there copy SSH command and paste it in GITBASH.

The screenshot shows the AWS EC2 Instances page. A single instance named "Project" is listed, with the instance ID i-0be5c00e334908548. The instance is running, t2.micro type, with 2/2 checks passed. It is located in us-east-1a with a public IPv4 DNS ec2-34-202-236-1.compute-1.amazonaws.com.

Instance: i-0be5c00e334908548 (Project)

Details	Status and alarms New	Monitoring	Security	Networking	Storage	Tags
Instance ID i-0be5c00e334908548 (Project)	Public IPv4 address 34.202.236.188 [open address]	Private IPv4 addresses 10.0.15.144				
IPv6 address -	Instance state Running	Public IPv4 DNS ec2-34-202-236-188.compute-1.amazonaws.com [open address]				
Hostname type	Private IP DNS name (IPv4 only)					

Connect to instance

Connect to your instance i-0be5c00e334908548 (Project) using any of these options

- EC2 Instance Connect
- Session Manager
- SSH client**
- EC2 serial console

Instance ID: i-0be5c00e334908548 (Project)

- Open an SSH client.
- Locate your private key file. The key used to launch this instance is project.pem
- Run this command, if necessary, to ensure your key is not publicly viewable.
chmod 400 "project.pem"
- Connect to your instance using its Public DNS:
ssh -i "project.pem" ubuntu@ec2-34-202-236-188.compute-1.amazonaws.com

Note: In most cases, the guessed username is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

2. Download the GITBASH in your PC and check whether the PEM file is downloaded or not with command cd download/ and ls. And paste the SSH command.

```
ubuntu@ip-10-0-15-144:~$ thudum rakesh@RAKESH-R4L23RR5 MINGW64 ~/downloads
$ ls
Coverletter.pdf  Resume-Thudum-Rakesh.pdf  desktop.ini      food--master/
Document1.pdf    Resume.pdf                 'dynamic (1).pem'  food--master.zip  index.html
$ ssh -i "project.pem" ubuntu@ec2-34-202-236-188.compute-1.amazonaws.com
Welcome to Ubuntu 20.04.6 LTS (GNU/Linux 5.15.0-1048-aws x86_64)

 * Documentation: https://help.ubuntu.com
 * Management:   https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Sat Jan  6 14:17:36 UTC 2024

System load:  0.08      Processes:          97
Usage of /:   21.1% of 7.57GB   Users Logged in:  0
Memory usage: 21%
Swap usage:   0%

Expanded security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-10-0-15-144:~$ |
```



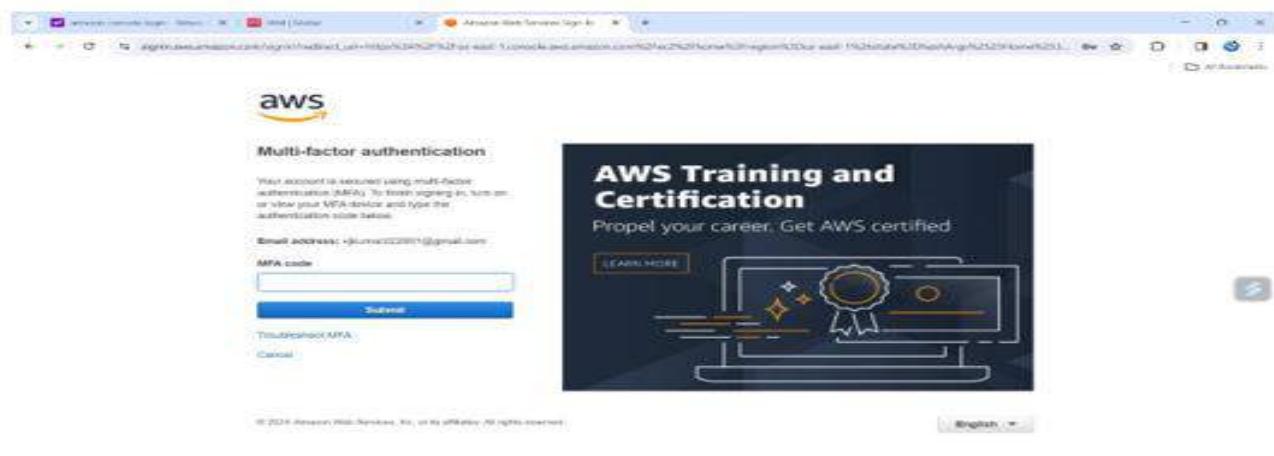
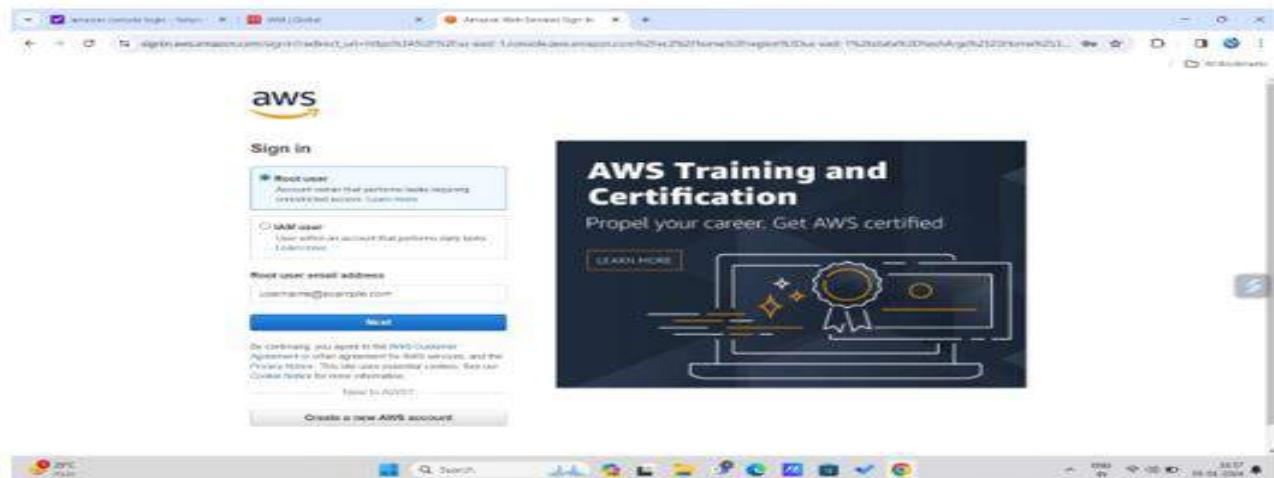
3.we got the access for our instance or VM in our local computer.

PROJECT-5

SECURITY GROUP

Create a new security group

1. Go amazon console login into your account with password or MFA as shown below.



A screenshot of a web browser showing the AWS EC2 Security Groups page. The URL is https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#SecurityGroups. The left sidebar shows navigation options like EC2 Dashboard, EC2 Global View, Events, and Instances. The main area displays a table of security groups with columns: Name, Security group ID, Security group name, VPC ID, and Description. Three entries are listed: default (sg-084924e2892169126), launch-wizard-1 (sg-0961da1c543479b63), and default (sg-0858c0b5754bfbb1e). A 'Create security group' button is at the top right.

EC2 > Security Groups > Create security group

Create security group Info

A security group acts as a virtual firewall for your instance to control inbound and outbound traffic. To create a new security group, complete the fields below.

Basic details

Security group name Info
my new SG-1
Name cannot be edited after creation.

Description Info
PROJECT

VPC Info
vpc-000f93f10f012e146 (MY VPC -1)

Inbound rules Info

Type Info Protocol Info Port range Info Source Info Description - optional Info

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2. Open the console and search security groups in search bar Then it shows the security group as below.

Security group (sg-0a01e05a30112d60b) was created successfully

EC2 > Security Groups > sg-0a01e05a30112d60b - my new SG-1

sg-0a01e05a30112d60b - my new SG-1

Details

Security group name	Security group ID	Description
my new SG-1	sg-0a01e05a30112d60b	PROJECT
Owner	Inbound rules count	Outbound rules count
961390469458	2 Permission entries	1 Permission entry

VPC ID: vpc-000f93f10f012e146

Inbound rules (2)

Manage tags Edit inbound rules

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3. Click on security groups and open it and click on create S.G.

4. Then it opens the page Create security group fill the all basic details and select the VPC. Scroll down we see inbound rules and enter the inbound rules 80 and 22 with is http and ssh port and add source IPv4. And click on create on security group.

The screenshot shows the AWS EC2 Security Groups Details page. The security group name is 'my new SG-1'. It has two inbound rules: one for SSH (TCP port 22) and one for HTTP (TCP port 80). The VPC ID is 'vpc-000f93f10f012e146'.

Name	Security group rule...	IP version	Type	Protocol	Port range
sgr-085ad1106ea28d1...	IPv4	SSH	TCP	22	
sgr-0be3ec556434666...	IPv4	HTTP	TCP	80	

The screenshot shows the AWS EC2 Instances page. There are two instances listed: 'Project' (running, t2.micro) and 'project - 4' (terminated, t2.micro). The instance 'Project' has its security group changed to 'my new SG-1'.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status
Project	i-0be5c00e334...	Running	t2.micro	2/2 checks passed	View alarms +
project - 4	i-04d5be82e51...	Terminated	t2.micro	-	View alarms +

5. We can see the inbound that we added as shown in figure.

6. Now go instances select the instance which we need to connect the S.G click on the actions security groups and click on change S.G.

Amazon EC2 evaluates all the rules of the selected security groups to control inbound and outbound traffic to and from your instance. You can use this window to add and remove security groups.

Instance details

Instance ID: i-0be5c00e334908548 (Project) Network interface ID: eni-0d7b92a8ddd897fc7

Associated security groups

Add one or more security groups to the network interface. You can also remove security groups.

Security group name: my new SG-1 Security group ID: sg-0a01e05a30112d60b

Save

7. Then it open another page which we need to add S.G shown in figure and click save

Instances | EC2 | us-east-1

Find Instance by attribute or tag (case-sensitive)

Elastic IP	IPv6 IPs	Monitoring	Security group name	Key name	Launch time	Platform
-	-	disabled	my new SG-1	project	2024/01/08 15:32 GMT+5:30	Linux/UNIX
-	-	disabled	-	project	2024/01/08 15:31 GMT+5:30	Linux/UNIX

Instance: i-0be5c00e334908548 (Project)

Details Status and alarms New Monitoring Security Networking Storage Tags

Instance summary Info

Instance ID: i-0be5c00e334908548 (Project)	Public IPv4 address: 50.19.172.172 [open address]	Private IPv4 addresses: 10.0.15.144
IPv6 address: -	Instance state: Running	Public IPv4 DNS: ec2-50-19-172-172.compute-1.amazonaws.com [open address]
Hostname type:	Private IP DNS name (IPv4 only):	

8. we can see it successfully added to instance.

TRY TO ACCESS EC2 NOW BY SSH

1. Now copy the SSH command and paste in terminal before that check PEM file is there or not and we access to it as below.

```
MINGW64/c/Users/thudum/rakesh/downloads
thudum rakesh@RAKESH-R4L2JRR5 MINGW64 ~/downloads
$ ls
2024_01_08_15_34_40_exportSecurityGroupsToCsv.csv  Document1.pdf  Resume.pdf  'dynamic (1).pem'  index.html
CoverLetter.pdf                                    Resume-Thudum-Rakesh.pdf  desktop.ini  food--master/  project.pem

thudum rakesh@RAKESH-R4L2JRR5 MINGW64 ~/downloads
$ ssh -i "project.pem" ubuntu@ec2-50-19-172-172.compute-1.amazonaws.com
Welcome to Ubuntu 20.04.6 LTS (GNU/Linux 5.15.0-1048-aws x86_64)

 * Documentation: https://help.ubuntu.com
 * Management: https://landscape.canonical.com
 * Support: https://ubuntu.com/advantage

System information as of Mon Jan  8 10:30:57 UTC 2024

System load: 0.08      Processes: 97
Usage of /: 22.8% of 7.57GB   Users logged in: 0
Memory usage: 22%          IPv4 address for eth0: 10.0.15.144
Swap usage: 0%          

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

Last login: Sat Jan  6 14:17:38 2024 from 203.217.145.229
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-10-0-15-144:~$ client_loop: send disconnect: connection reset by peer
```

PROJECT-6 VOLUMES AND SNAPSHOTS

CREATE ONE 5GB VOLUME AND ATTACH IT WITH THE RUNNING EC2 INSTANCE.

1. Login to amazon console and scroll down on left side screen there we can see EBS click on it and it shows volumes option. Click on volumes.
2. After clicking on the create volume it opens a page as figure. And enter the size of GB you need and click on create.

ChatGPT Instances | EC2 | us-east-1

Instances (2) info

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
volumes and s...	i-09c76a106d6...	Terminated	t2.micro	-	View alarms	us-east-1a	-
volumes	i-04da5feh93d1...	Running	t2.micro	Initializing	View alarms	us-east-1a	ec2-3-208-31-175

Select an instance

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ChatGPT Volumes | EC2 | us-east-1

Volumes (1/1) info

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created
-	vol-023c6fa857e3238f7	gp2	8 GiB	100	-	snap-01a6528...	2024/01/09 15:25 GMT+5:30

Volume ID: vol-023c6fa857e3238f7

CloudShell Feedback

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ChatGPT Create volume | EC2 | us-east-1

Create volume

Create an Amazon EBS volume to attach to any EC2 instance in the same Availability Zone.

Volume settings

Volume type: General Purpose SSD (gp3)

General Purpose SSD gp3 is now the default selection. gp3 provides up to 20% lower cost per GB than gp2.

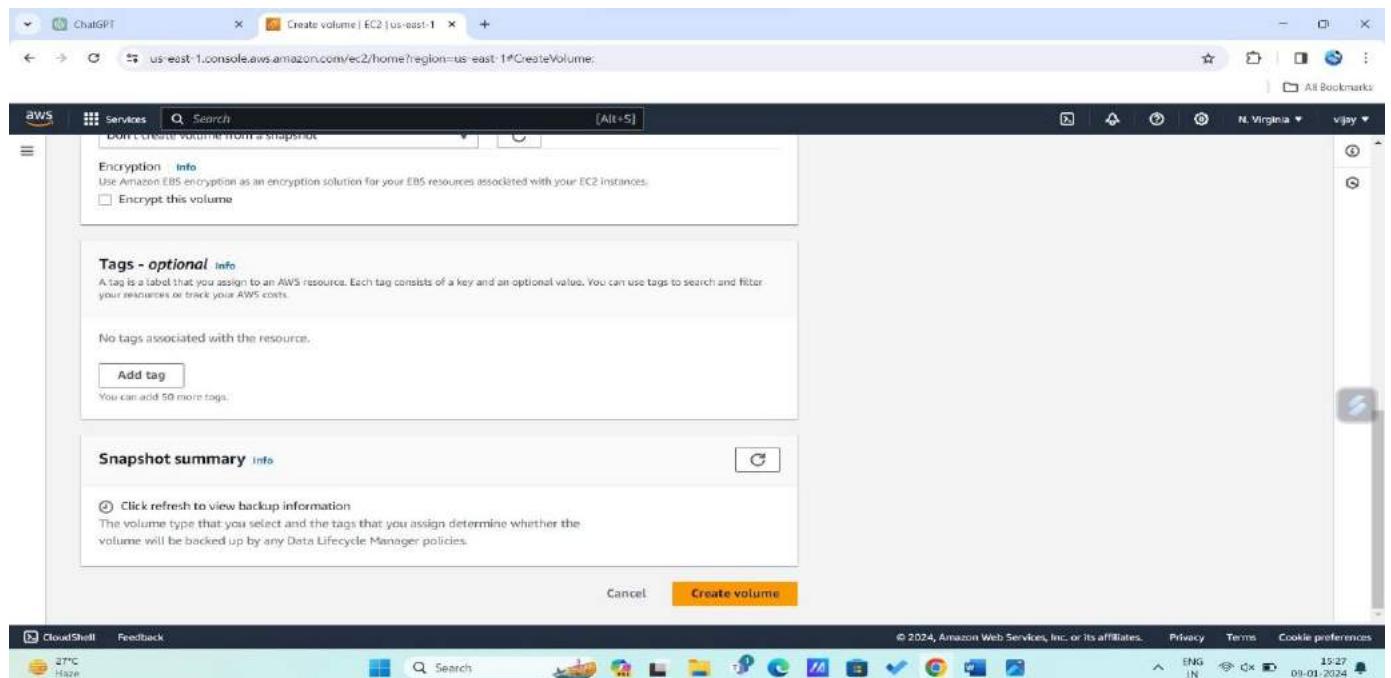
Size (GiB): 5

IOPS: 3000

Throughput (MiB/s): 125

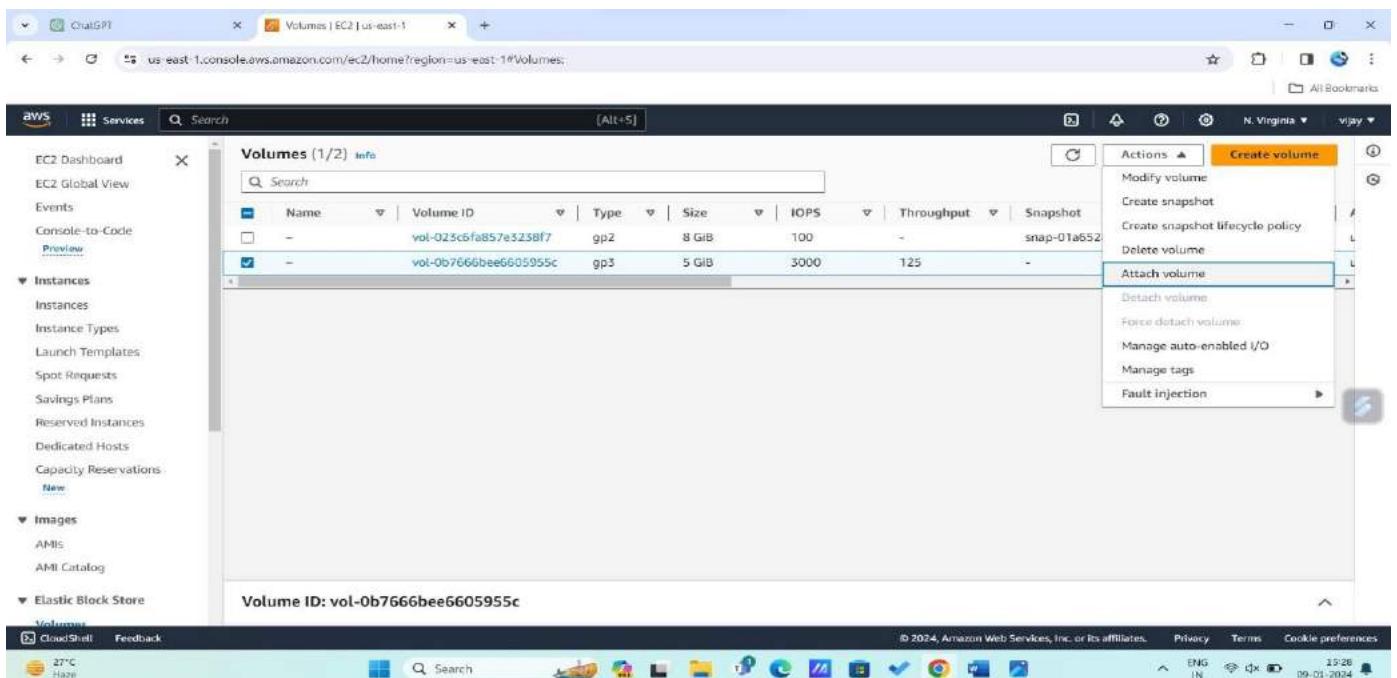
CloudShell Feedback

27°C Haze Search ENG IN 15:27 09-01-2024 All Bookmarks N. Virginia vijay



Now we need to attach the volume to existing EC2.

1. Select the EC2 instances and go to actions there will be a option attach volume click on it then it asks details of EC2 to attach select instance and click on the attach volume.



Attach volume [Info](#)

Attach a volume to an instance to use it as you would a regular physical hard disk drive.

Basic details

Volume ID
vol-0b7666bee660595c

Availability Zone
us-east-1a

Instance Info
i-04da5feb93d10f5e8

Recommended device names for Linux: /dev/sda1 for root volume, /dev/sdf1-p1 for data volumes.

Note: Newer Linux kernels may rename your devices to /dev/xvdf through /dev/xvdg internally, even when the device name entered here (and shown in the detailed [Attachments](#)) doesn't match.

2.we can see it is attached to instance in below.

Instances (1/2) [Info](#)

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
volumes and s...	i-09c76a106d6...	Terminated	t2.micro	-	-	us-east-1a	-
volumes	i-04da5feb93d1...	Running	t2.micro	2/2 checks passed	View alarms	us-east-1a	ec2-3-208-31-175

Instance: i-04da5feb93d10f5e8 (volumes)

Volume ID	Device name	Volume size (GiB)	Attachment status	Attachment time	Encrypted	KMS key ID
vol-023c6fa857e3238f7	/dev/xvda	8	Attached	2024/01/09 15:25 GMT+5:30	No	-
vol-0b7666bee660595c	/dev/sdf	5	Attached	2024/01/09 15:28 GMT+5:30	No	-

```
ec2-user@ip-10-0-15-94:~$ cd downloads/
ec2-user@ip-10-0-15-94:~/downloads$ ls
ec2-user@ip-10-0-15-94:~/downloads$ ssh -i "project.pem" ec2-user@ec2-3-208-31-175.compute-1.amazonaws.com
The authenticity of host 'ec2-3-208-31-175.compute-1.amazonaws.com (3.208.31.175)' can't be established.
ED25519 key fingerprint is SHA256:6ELytD5QXRwkedkW/C7P8Nspau0w/Qdd5i9U3bwdy9Q.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-3-208-31-175.compute-1.amazonaws.com' (ED25519) to the list of known hosts.

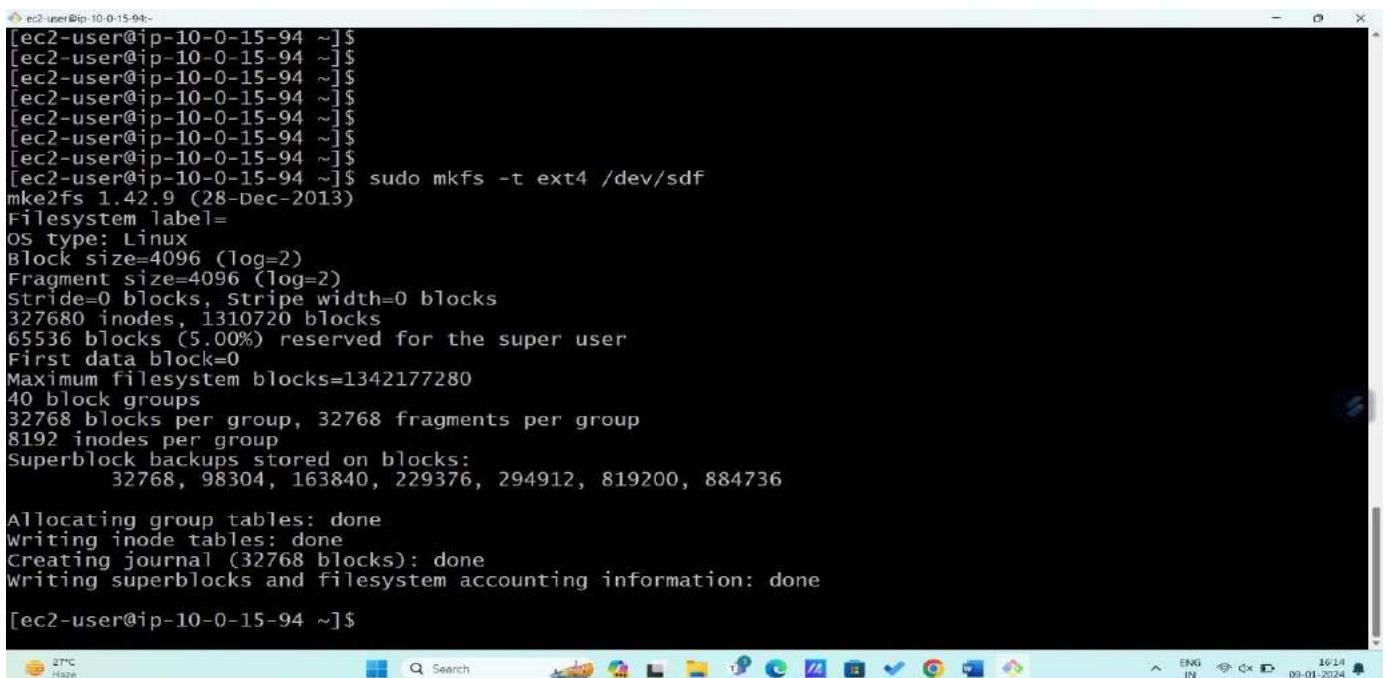
Amazon Linux 2
AL2 End of Life is 2025-06-30.

A newer version of Amazon Linux is available!
Amazon Linux 2023, GA and supported until 2028-03-15.
https://aws.amazon.com/linux/amazon-linux-2023/

[ec2-user@ip-10-0-15-94 ~]$ lsblk
NAME   MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
xvda    202:0    0   8G  0 disk 
└─xvda1 202:1    0   8G  0 part /
xvdf    202:80   0   5G  0 disk 
[ec2-user@ip-10-0-15-94 ~]$ 
```

3.To check the in block storage in terminal use <lsblk>.

4.if we want to add testing files we need to format first by command <sudo mkfs -t ext4 /dev/sdf> which creates a file system to organise store data of storage.



```
[ec2-user@ip-10-0-15-94 ~]$ sudo mkfs -t ext4 /dev/sdf mke2fs 1.42.9 (28-Dec-2013) Filesystem label= OS type: Linux Block size=4096 (log=2) Fragment size=4096 (log=2) Stride=0 blocks, stripe width=0 blocks 327680 inodes, 1310720 blocks 65536 blocks (5.00%) reserved for the super user First data block=0 Maximum filesystem blocks=1342177280 40 block groups 32768 blocks per group, 32768 fragments per group 8192 inodes per group Superblock backups stored on blocks: 32768, 98304, 163840, 229376, 294912, 819200, 884736 Allocating group tables: done Writing inode tables: done Creating journal (32768 blocks): done Writing superblocks and filesystem accounting information: done [ec2-user@ip-10-0-15-94 ~]$
```

5.After this create directory name as test by using command <sudo mkdir /test>.

And give command ,

<cd />

<ls>

We can see list of files in it and open the test file with command

<cd /test>

6.Type

<sudo mount /dev/sdf /test/ and also type

<cd test> and

<ls> and

<cd> and

<lsblk> we can connect to that storage we attached to instance we can see in below figure.

```
ec2-user@ip-10-0-15-94:~$ writing superblocks and filesystem accounting information: done
[ec2-user@ip-10-0-15-94 ~]$ cd
[ec2-user@ip-10-0-15-94 ~]$ sudo mkdir /test
[ec2-user@ip-10-0-15-94 ~]$ ls
[ec2-user@ip-10-0-15-94 ~]$ cd /
[ec2-user@ip-10-0-15-94 ~]$ ls
bin dev home lib64 media opt project run srv test usr
boot etc lib local mnt proc root sbin sys tmp var
[ec2-user@ip-10-0-15-94 ~]$ cd test
[ec2-user@ip-10-0-15-94 test]$ ls
[ec2-user@ip-10-0-15-94 test]$ sudo mount /dev/sdf /test/
[ec2-user@ip-10-0-15-94 test]$ ls
[ec2-user@ip-10-0-15-94 test]$ cd
[ec2-user@ip-10-0-15-94 ~]$ sudo mount /dev/sdf /test/
mount: /test: /dev/xvdf already mounted on /test.
[ec2-user@ip-10-0-15-94 ~]$ cd /
[ec2-user@ip-10-0-15-94 ~]$ ls
bin dev home lib64 media opt project run srv test usr
boot etc lib local mnt proc root sbin sys tmp var
[ec2-user@ip-10-0-15-94 ~]$ cd test
[ec2-user@ip-10-0-15-94 test]$ ls
lost+found
[ec2-user@ip-10-0-15-94 test]$ cd
[ec2-user@ip-10-0-15-94 ~]$ lsblk
NAME   MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
xvda   202:0   0   8G  0 disk
└─xvda1 202:1   0   8G  0 part /
xvdf   202:80  0   5G  0 disk /test
[ec2-user@ip-10-0-15-94 ~]$ |
```

NOW PUT SOME DATA IN IT

1. Now create a file name as testsing.file by using command <sudo touch testsing.file> and <ls>

2. And use sudo vi testsing.file and vim editor and paste testing file.

```
[ec2-user@ip-10-0-15-94 ~]$
[ec2-user@ip-10-0-15-94 ~]$
[ec2-user@ip-10-0-15-94 ~]$ clear
[ec2-user@ip-10-0-15-94 ~]$ sudo touch testsing.file
[ec2-user@ip-10-0-15-94 ~]$ ls
testsing.file
[ec2-user@ip-10-0-15-94 ~]$ sudo vi testing file
```

3. And use <cat testsing.file> to see the content in it.

```

[ec2-user@ip-10-0-15-94 ~]$ sudo vi testing file
2 files to edit
[ec2-user@ip-10-0-15-94 ~]$ sudo vi testsing file
2 files to edit
[ec2-user@ip-10-0-15-94 ~]$ ls
testing.file
[ec2-user@ip-10-0-15-94 ~]$ cat testsing.file
import random

class MarioGame:
    def __init__(self):
        self.player_position = 0
        self.coin_position = random.randint(1, 10)

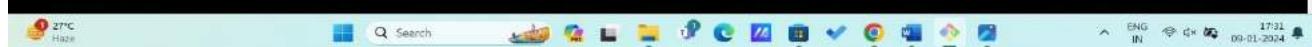
    def display_game(self):
        game_board = ['-'] * 10
        game_board[self.player_position] = 'M'
        game_board[self.coin_position] = 'C'
        print(" ".join(game_board))

    def move_player(self, direction):
        if direction == 'left' and self.player_position > 0:
            self.player_position -= 1
        elif direction == 'right' and self.player_position < 9:
            self.player_position += 1

    def check_collision(self):
        return self.player_position == self.coin_position

def main():

```



NOW EXTEND THE 5GB TO 8GB

Volumes (1/1) info

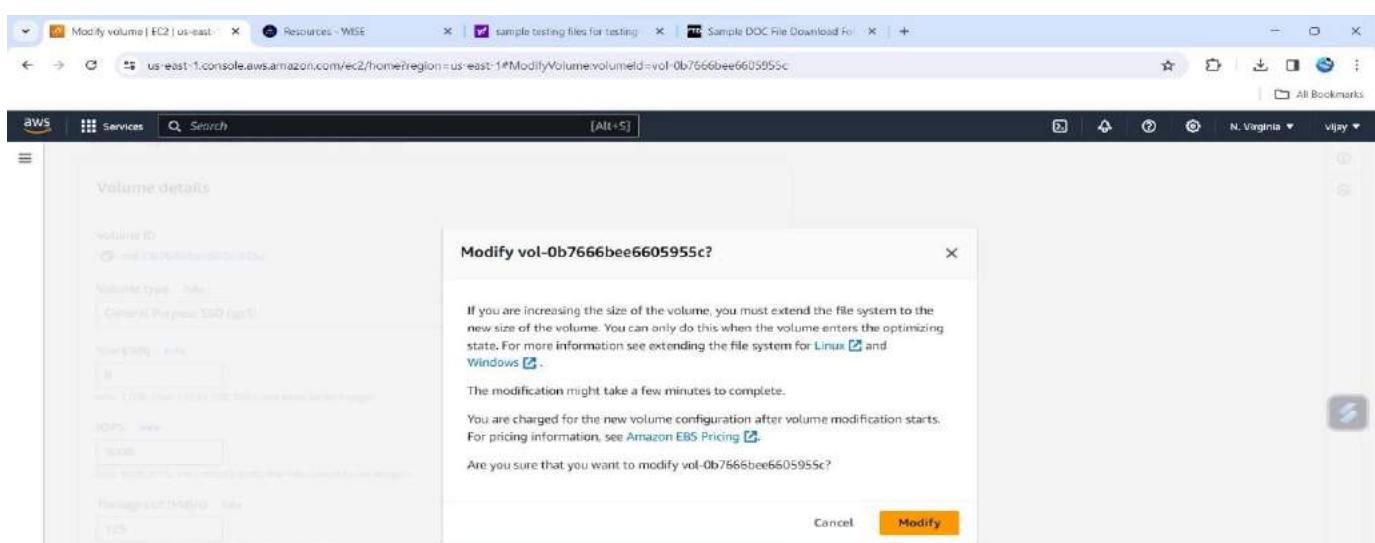
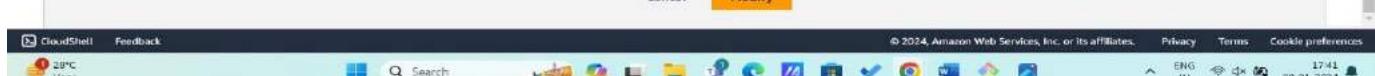
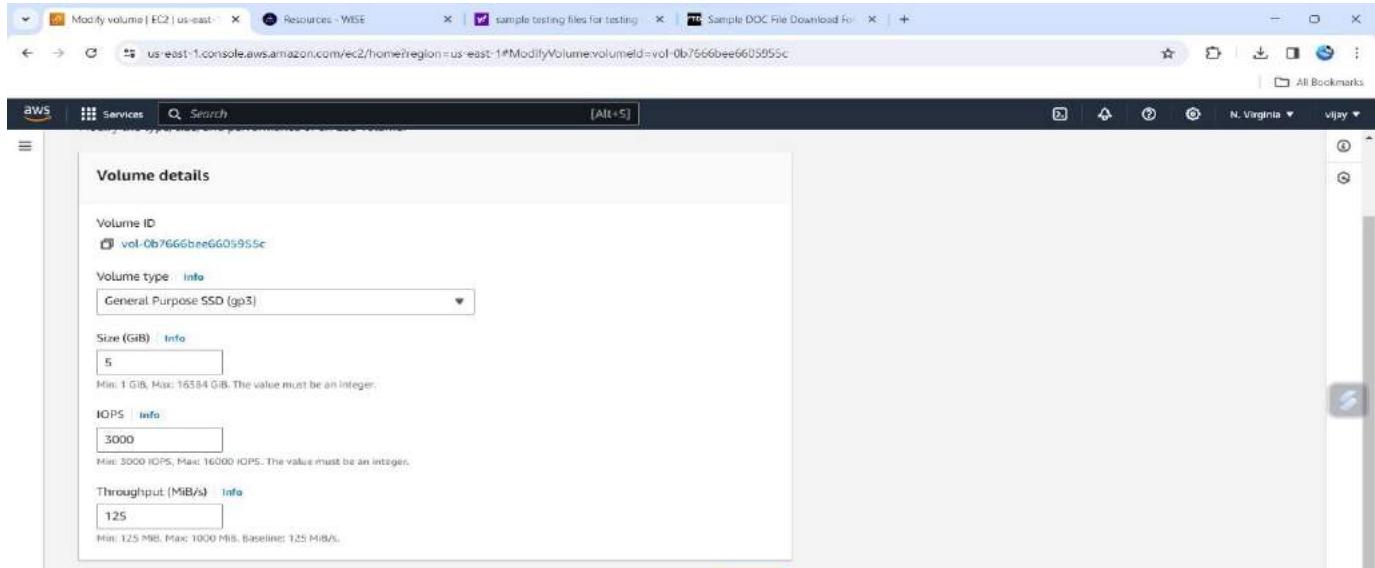
Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot
-	vol-0b7666bee6605955c	gp3	5 GiB	3000	125	none

Actions ▾ **Modify volume**

- Create snapshot
- Create snapshot lifecycle policy
- Delete volume
- Attach volume
- Detach volume
- Force detach volume
- Manage auto-enabled I/O
- Manage tags
- Fault injection

1. Go to volumes and select the volume click in modify volume as shown.

2. It opens the modify volume option and replace the 5GB to 8GB and click on the modify. It shows the modify option then click on it. Then it gets modify from 5 to 8GB. As shown in figure.



Now create a snapshot of the volume and delete it

The screenshot shows two consecutive screenshots of the AWS EC2 console. The top screenshot displays the 'Create snapshot' dialog box. It includes fields for 'Volume ID' (set to 'vol-0b7666bce660595c'), 'Description' ('project'), and 'Encryption info' ('Not encrypted'). Below these are 'Tags' and 'Info' sections, both of which are currently empty. At the bottom are 'Cancel' and 'Create snapshot' buttons. The bottom screenshot shows the 'Snapshots' list after a successful creation. A green banner at the top says 'Successfully created snapshot snap-04c3cd1a2f465eb86'. The list table has columns for Name, Snapshot ID, Volume size, Description, Storage tier, Snapshot status, and Started. One row is visible: 'snap-04c3cd1a2f465eb86', '8 GB', 'project', 'Standard', 'Pending', and '2024/01/09 22:43 GMT'. The message 'Select a snapshot above.' is displayed below the table.

1. Go to snapshot click on create snapshot ,select volume Then select the volume and select the volume id and click on the create snapshot then it is created.

Now deleting the volume

The screenshot shows two consecutive screenshots of the AWS Management Console, specifically the Volumes page under the EC2 service.

Screenshot 1: The user has selected a volume named "vol-0f19391c83a3bc016". In the Actions menu, the "Delete volume" option is highlighted. The volume details are displayed below, including its Volume ID, Size (8 GiB), Type (gp3), IOPS (3000), Throughput (125), and associated Snapshot (snap-04c3...).

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot
-	vol-023c6fa857e5258f7	gp2	8 GiB	100	-	snap-01a6...
<input checked="" type="checkbox"/>	vol-0f19391c83a3bc016	gp3	8 GiB	3000	125	snap-04c3...

Screenshot 2: After performing the delete operation, a green success message "Successfully deleted volume vol-0f19391c83a3bc016." is displayed at the top. The volume list now shows only one volume, "vol-023c6fa857e5258f7". The "Actions" menu is no longer open.

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created
-	vol-023c6fa857e5258f7	gp2	8 GiB	100	-	snap-01a6528...	2024/01/09 15:25 GMT+5...

1. Before deleting we need to detach it from instance and delete it or directly delete it.

Now creating the volume with snapshot

Snapshots (1/1) info

Name	Snapshot ID	Volume size	Description	Storage tier	Snapshot status
-	snap-04c3cd1a2f463ab86	8 GiB	project	Standard	Completed

Actions ▾ **Create snapshot**

- Create volume from snapshot
- Create image from snapshot
- Copy snapshot
- Delete snapshot
- Manage tags
- Snapshot settings
- Archiving

Snapshot ID: snap-04c3cd1a2f463ab86

Volume type: General Purpose SSD (gp3)

General Purpose SSD gp3 is now the default selection. gp3 provides up to 20% lower cost per GB than gp2.

Size (GiB): 8

IOPS: 3000

Throughput (MiB/s): 125

Availability Zone: us-east-1a

1. Go to snapshot and select the snapshot and click on actions
2. Click on the “create volume from snapshot” and click on create volume.

Snapshots (1/1) info

Name	Snapshot ID	Volume size	Description	Storage tier	Snapshot status
-	snap-04c3cd1a2f463ab86	8 GiB	project	Standard	Completed

Snapshot ID: snap-04c3cd1a2f463ab86

Details | Snapshot settings | Storage tier | Tags

Snapshot ID snap-04c3cd1a2f463ab86	Volume size 8 GiB	Progress Available (100%)	Snapshot status Completed
Owner 961390469458	Volume ID vol-0b7660bee660595c	Started Tue Jan 09 2024 22:43:47 GMT+0530 (India Standard Time)	Product codes
Encryption Not encrypted	KMS key ID	KMS key alias	KMS key ARN

Basic details

Volume ID: vol-059eddfa10892f9c3

Availability Zone: us-east-1a

Instance: i-04da5feb93d10f5e8

Device name: /dev/sdf

Only instances in the same Availability Zone as the selected volume are displayed.

Recommended device names for Linux: /dev/sda1 for root volume. /dev/sd[p] for data volumes.

Info: Newer Linux kernels may rename your devices to /dev/xvdf through /dev/xvdp internally, even when the device name entered here (and shown in the details) is /dev/sdf through /dev/sdp.

Cancel | Attach volume

3.we can also check snapshot id.

Now attach this volume to instance

1. Now open the volumes, select the volumes and click on actions, we see a attach volume click on it ,select the instance and click on attach vol

The screenshot shows two browser windows side-by-side. Both windows have the URL `us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Volumes.sort=snapshotId`.

Top Window (Volumes View):

- The sidebar shows the navigation path: Services > Elastic Block Store > Volumes.
- The main table lists two volumes:

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot
-	vol-023c6fa857e3238f7	gp2	8 GiB	100	-	snap-01ab
<input checked="" type="checkbox"/>	vol-059eddfa10892f9c3	gp3	8 GiB	3000	125	snap-04c3

- The context menu for the selected volume (vol-059eddfa10892f9c3) is open, with "Attach volume" highlighted.

Bottom Window (Instances View):

- The sidebar shows the navigation path: Services > EC2 > Instances.
- The main table lists one instance:

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
<input checked="" type="checkbox"/>	i-04da5feb93d10f5e8	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1a	ec2-3-208-51-175

- The context menu for the instance (i-04da5feb93d10f5e8) is open, with "Launch instances" highlighted.
- A modal window titled "Instance: i-04da5feb93d10f5e8 (volumes)" is displayed, showing the attached volumes:

Volume ID	Device name	Volume size (GiB)	Attachment status	Attachment time	Encrypted	KMS key ID
vol-023c6fa857e3238f7	/dev/xvda	8	Attached	2024/01/09 15:25 GMT+5:30	No	-
vol-059eddfa10892f9c3	/dev/sdf	8	Attaching	2024/01/09 23:12 GMT+5:30	No	-

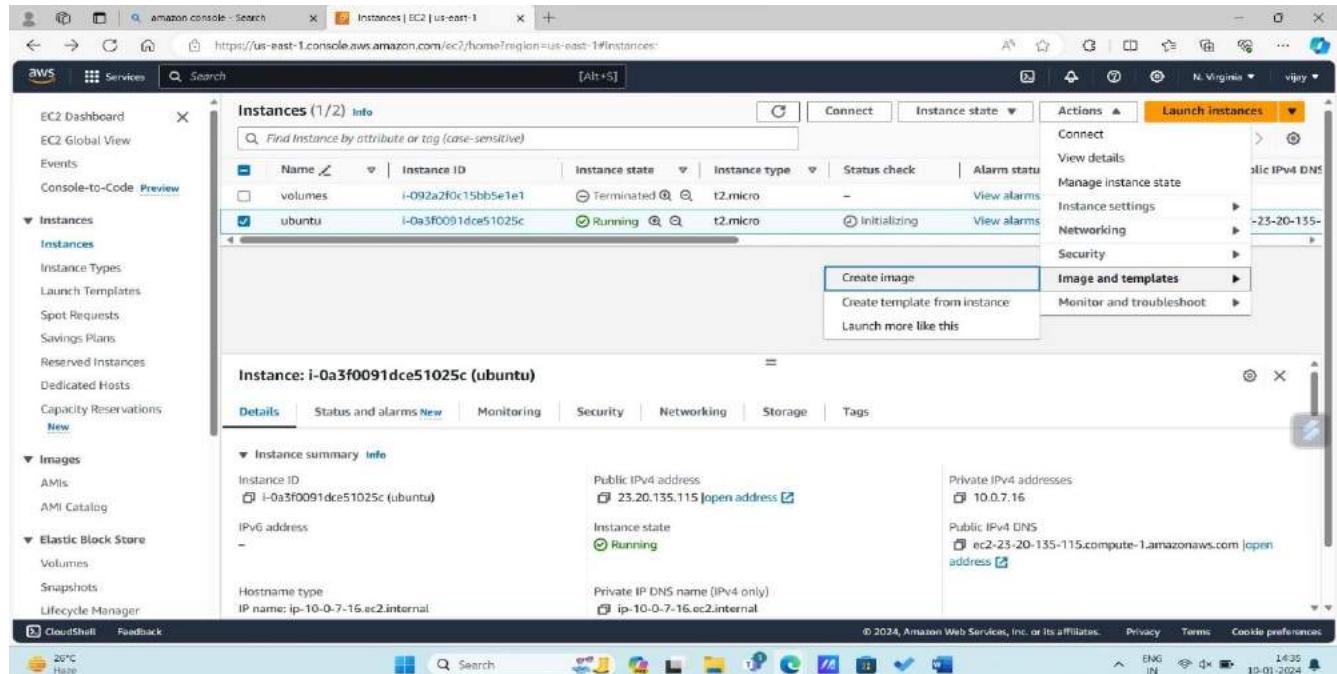
2. It gets attached to it.

PROJECT-7

AMIs

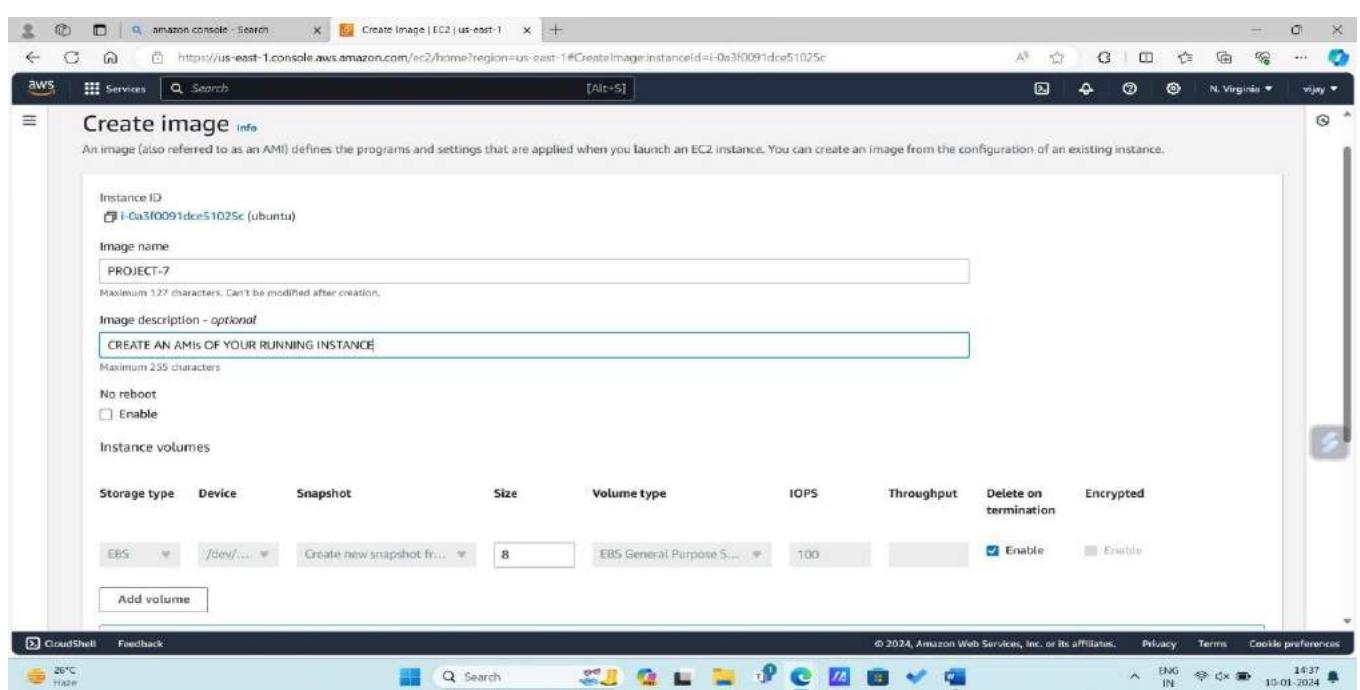
CREATE AN AMIs OF YOUR RUNNING INSTANCE

1. Open console select the instance, click on “actions” and there we can see “image and templates” click on “create image” or Go to AMIs on left side of screen there we can see “images” and AMIs click on it.



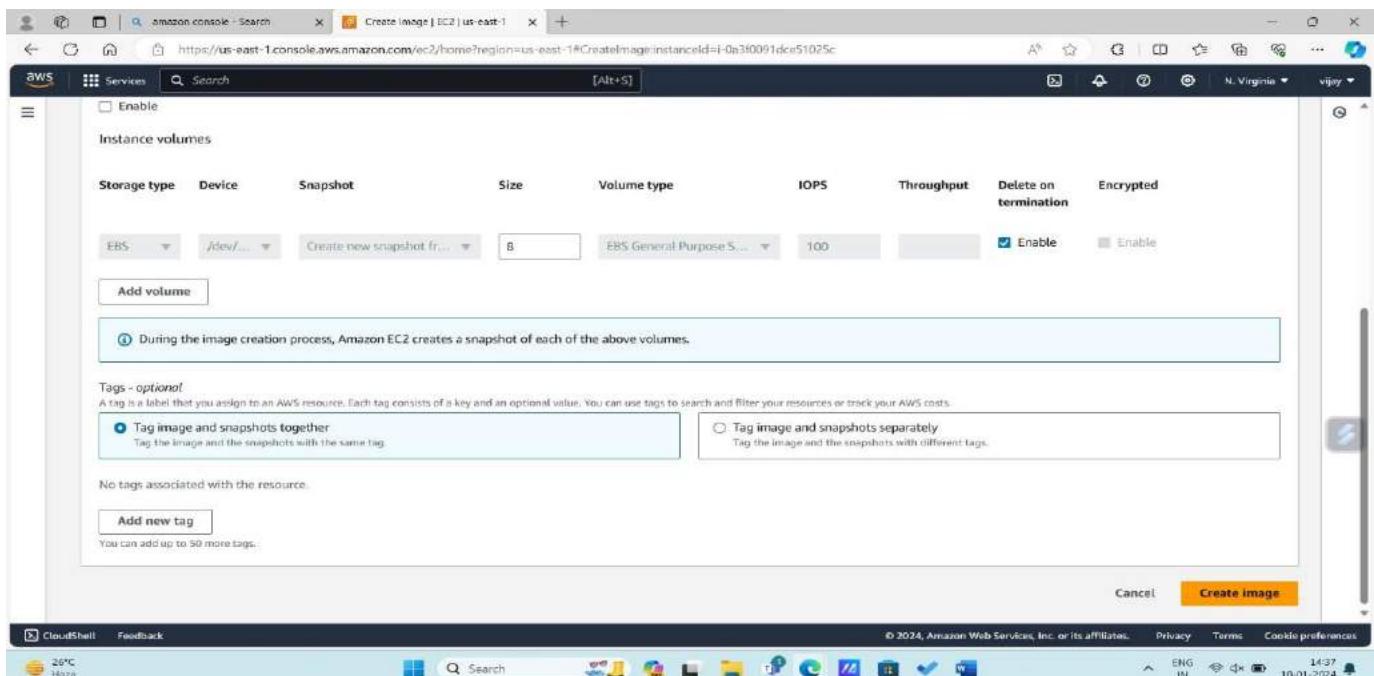
The screenshot shows the AWS EC2 Instances page. On the left sidebar, under the 'Images' section, 'AMIs' is selected. In the main content area, a table lists instances. One instance, 'ubuntu' (Instance ID: i-0a3f0091dce51025c), is shown as 'Running'. A context menu is open over this instance, with 'Create image' highlighted. The 'Actions' menu also has 'Image and templates' selected.

2. Click on create image, give the name of image and description.



The screenshot shows the 'Create image' wizard. The 'Instance ID' field is populated with 'i-0a3f0091dce51025c (ubuntu)'. The 'Image name' field is set to 'PROJECT-7'. The 'Image description - optional' field contains the text 'CREATE AN AMIs OF YOUR RUNNING INSTANCE'. Below these fields, there are checkboxes for 'No reboot' and 'Enable'. Under 'Instance volumes', there is a table with one row. The row shows 'Storage type: EBS', 'Device: /dev...', 'Snapshot: Create new snapshot from...', 'Size: 8', 'Volume type: EBS General Purpose S...', 'IOPS: 100', 'Throughput: 500', 'Delete on termination: Enabled', and 'Encrypted: Enabled'. At the bottom of the wizard, there is a 'Create image' button.

3.Then click on create image then it gets created we can check in AMIs and we can launch the instance from AMIs.

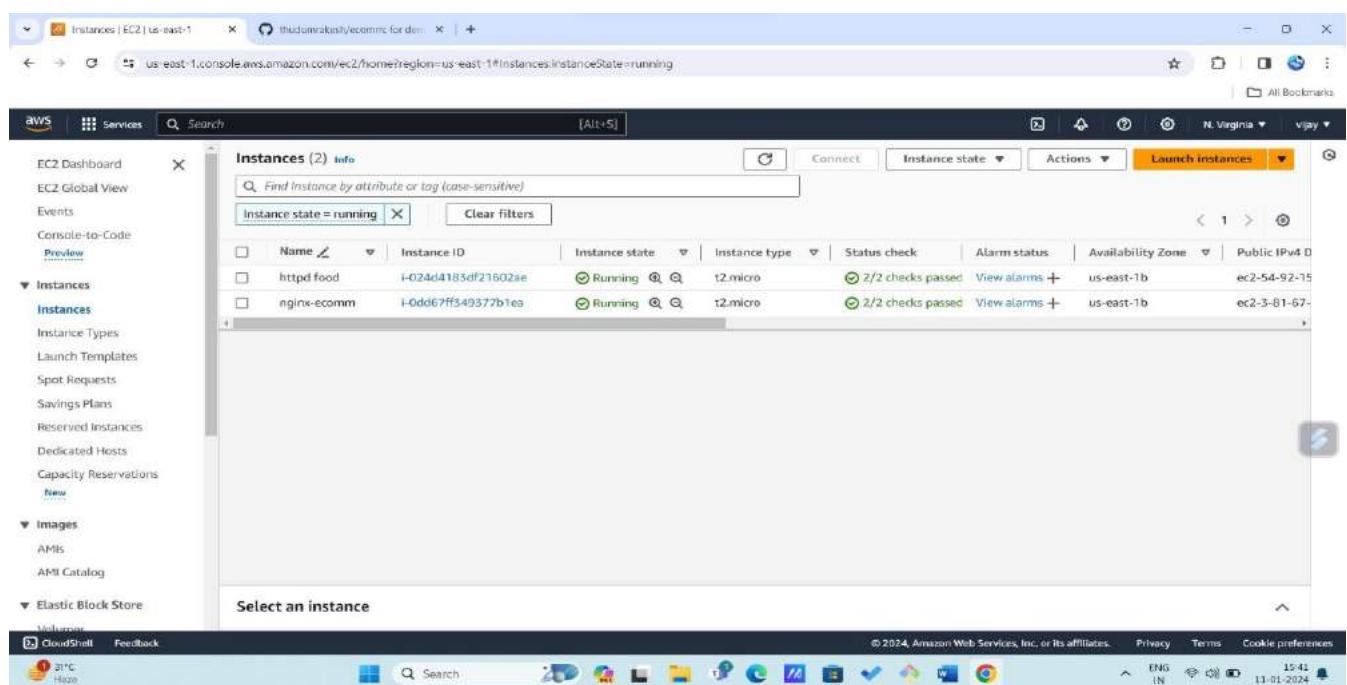


PROJECT-8

LOAD BALANCERS

CREATE 2 EC2 INSTANCE AND INSTALL NGINX AND APACHE SERVER.

1.Go to launch instance and launch the instance with automation or manual.Then it launch instance give the name as NGINX and APACHE.



2.Now the connect to instances with SSH command in terminal in different tabs.

3. After connecting with SSH open the git bash copy ssh and install the nginx with `<sudo yum -y install nginx>` or `<amazon linux extras install nginx>` and enable and start with, `< sudo systemctl start nginx>` and `sudo systemctl enable nginx` and check status. And also download git and clone the code.

4.In another tab open another terminal connect with ssh and apache instance and install the apache with <sudo yum -y install httpd> and, < sudo systemctl start httpd> and sudo systemctl enable httpd and check Status.And also download git and clone the code.

```
MINGW64/c/users/thudum/rakesh/downloads
Resume-Thudum-Rakesh.pdf          project.pem
Resume.pdf                         train-operator.pdf

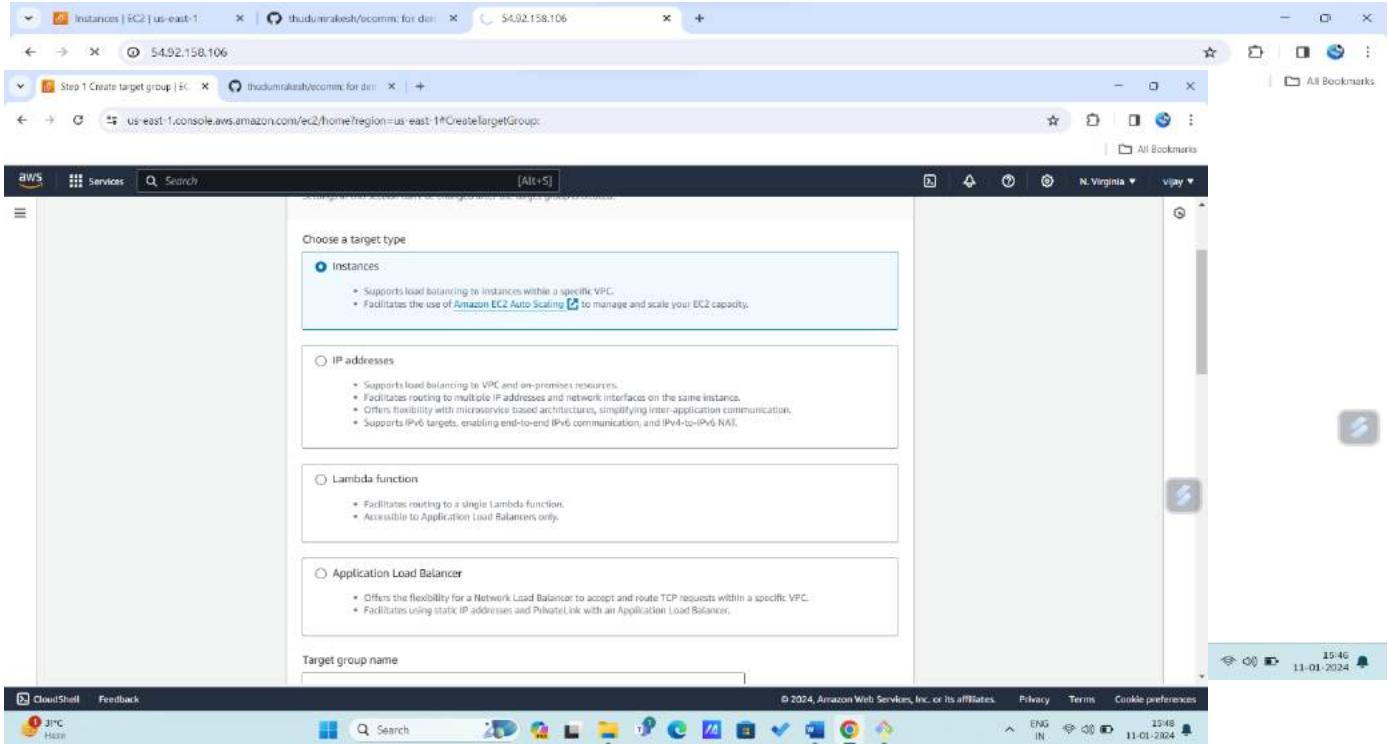
shudum rakesh@RAKESH-RAE123R5: MINGW64 ~/Downloads
$ ssh -i "project.pem" ec2-user@ec2-54-92-158-106.compute-1.amazonaws.com
The authenticity of host 'ec2-54-92-158-106.compute-1.amazonaws.com (54.92.158.1
06)' can't be established.
ECDSA key fingerprint is SHA256:mjhawu4soyenjen/Aao2JVVQqbzMyN1nSGdP5mc6GSM.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-54-92-158-106.compute-1.amazonaws.com' (ED25519)
to the list of known hosts.

  _#_#
 / \###\ Amazon Linux 2
 / \###\ AL2 End of Life is 2025-06-30.
 / \###\ V--> A newer version of Amazon Linux is available!
 / \###\ Amazon Linux 2023, GA and supported until 2028-03-15.
 / \###\ https://aws.amazon.com/linux/amazon-linux-2023/
/m/ [ec2-user@ip-10-0-63-90 ~]$ ls
[ec2-user@ip-10-0-63-90 ~]$ sudo systemctl status httpd
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; vendor preset
: disabled)
     Active: active (running) since Thu 2024-01-11 09:51:51 UTC; 6min ago
       Docs: man:httpd.service(8)
 Main PID: 3342 (httpd)
   Status: "Total requests: 0; Idle/Busy workers 100/0;Requests/sec: 0; Bytes se
rved/sec: 0 B/sec"
      CGroup: /system.slice/httpd.service
              3342 /usr/sbin/httpd -DFOREGROUND
              3346 /usr/sbin/httpd -DFOREGROUND
              3347 /usr/sbin/httpd -DFOREGROUND
              3348 /usr/sbin/httpd -DFOREGROUND
              3349 /usr/sbin/httpd -DFOREGROUND
              3350 /usr/sbin/httpd -DFOREGROUND

Jan 11 09:51:51 ip-10-0-63-90.ec2.internal systemd[1]: Starting The Apache HT...
Jan 11 09:51:51 ip-10-0-63-90.ec2.internal systemd[1]: Started The Apache HT...
Hint: Some lines were ellipsized, use -l to show in full.
[ec2-user@ip-10-0-63-90 ~]$ client_loop: send disconnect: connection reset by pe
r
shudum rakesh@RAKESH-RAE123R5: MINGW64 ~/Downloads
$
```

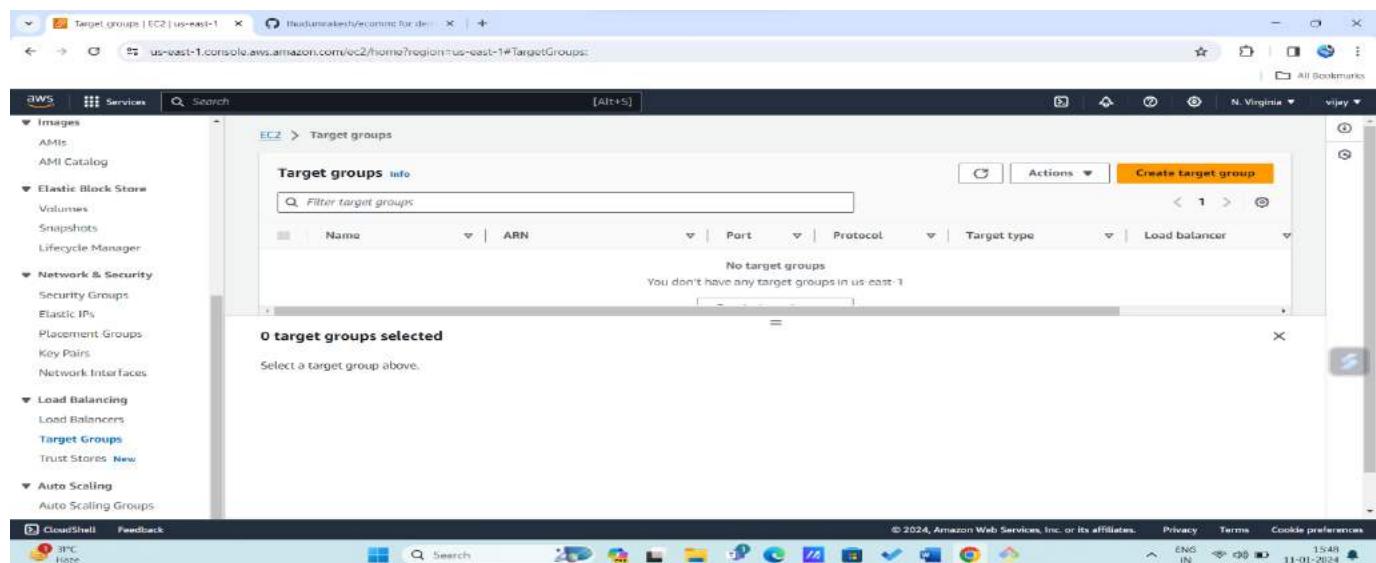
ACCESS BOTH SERVER OVER BROWSER AND CHECKING THE WEBPAGE IS VISIBLE

1. Now copy the PUBLIC IP of both instance and browse it then it appear as error or it won't open because we did not give ports.



Create load balancer and attach both instance.

1. Before creating the load balancer we need to create target group. for that need to open EC2 services and click on target group on left side of the screen it opens page and click on target group on target group.



Step 1 Create target group | EC2 | thudumrakesh/ecomm-for-de... | +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateTargetGroup:

aWS Services Search [Alt+S]

IP address type
Only targets with the indicated IP address type can be registered to this target group.

IPv4
Each instance has a default network interface (eth0) that is assigned the primary private IPv4 address. The instance's primary private IPv4 address is the one that will be applied to the target.

IPv6
Each instance you register must have an assigned primary IPv6 address. This is configured on the instance's default network interface (eth0). [Learn more](#)

VPC
Select the VPC with the instances that you want to include in the target group. Only VPCs that support the IP address type selected above are available in this list.

MY VPC-2
vpc-0426337bea5250222
IPv4: 10.0.0.0/16

Protocol version
 HTTP1
Send requests to targets using HTTP/1.1. Supported when the request protocol is HTTP/1.1 or HTTP/2.

HTTP2
Send requests to targets using HTTP/2. Supported when the request protocol is HTTP/2 or gRPC, but gRPC-specific features are not available.

gRPC
Send requests to targets using gRPC. Supported when the request protocol is gRPC.

CloudShell Feedback

Breaking news: Unfolding now

aWS Services Search [Alt+S]

Health checks

Health check protocol
HTTP

Health check path
Use the default path of "/" to ping the root, or specify a custom path if preferred.
/

Up to 1024 characters allowed.

► Advanced health check settings

Attributes

Certain default attributes will be applied to your target group. You can view and edit them after creating the target group.

► Tags - optional
Consider adding tags to your target group. Tags enable you to categorize your AWS resources so you can more easily manage them.

Step 2 Create target group | EC2 | thudumrakesh/ecomm-for-de... | +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateTargetGroup:

aWS Services Search [Alt+S]

This is an optional step to create a target group. However, to ensure that your load balancer routes traffic to this target group you must register your targets.

Step 2 Register targets

Available instances (2/2)

Filter instances

Instance ID	Name	State	Security groups
i-0dd67ff549577b1ea	nginx-ecomm	Running	launch-wizard-1
i-024d4183df21602ae	httpd food	Running	ELB

2 selected

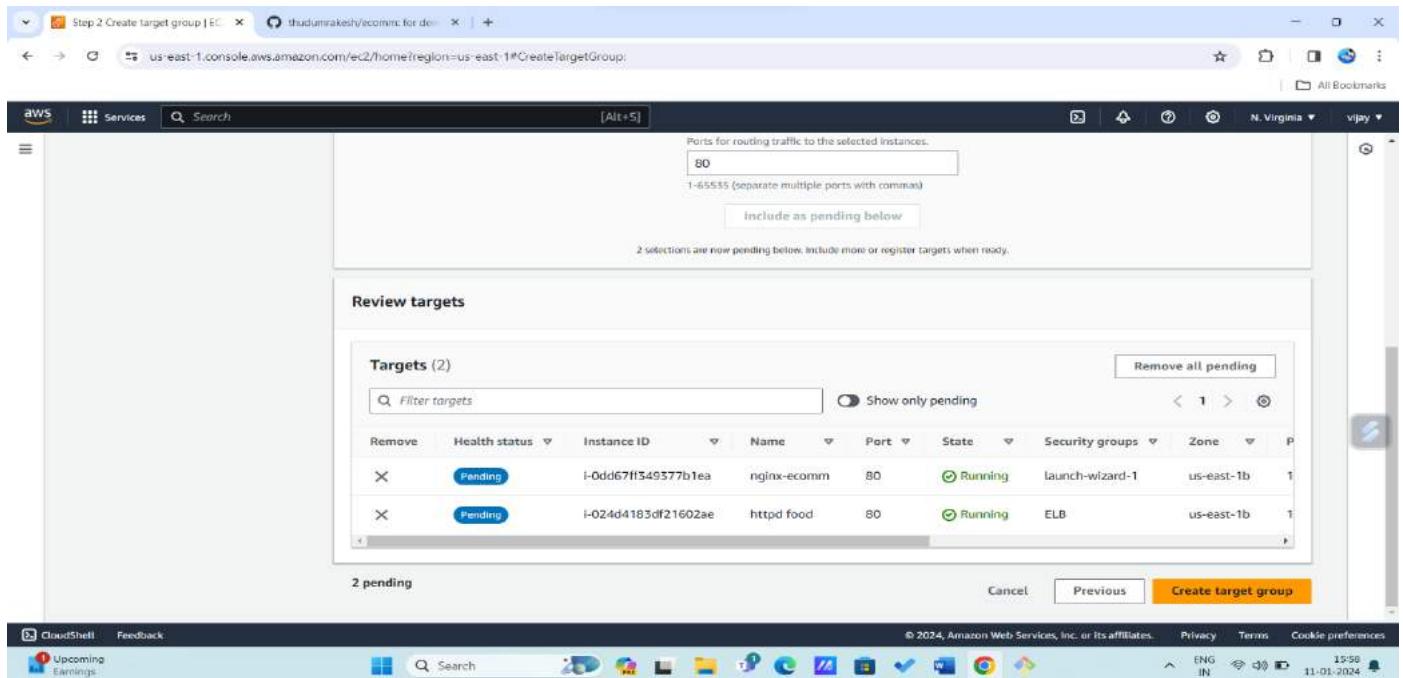
Ports for the selected instances
Ports for routing traffic to the selected instances.

80
1-65535 (separate multiple ports with commas)

Include as pending below

Review targets

2. Select the instance and select the VPC and click on next. Then it shows instances that we created. Select both instances and click on the "include as pending below".

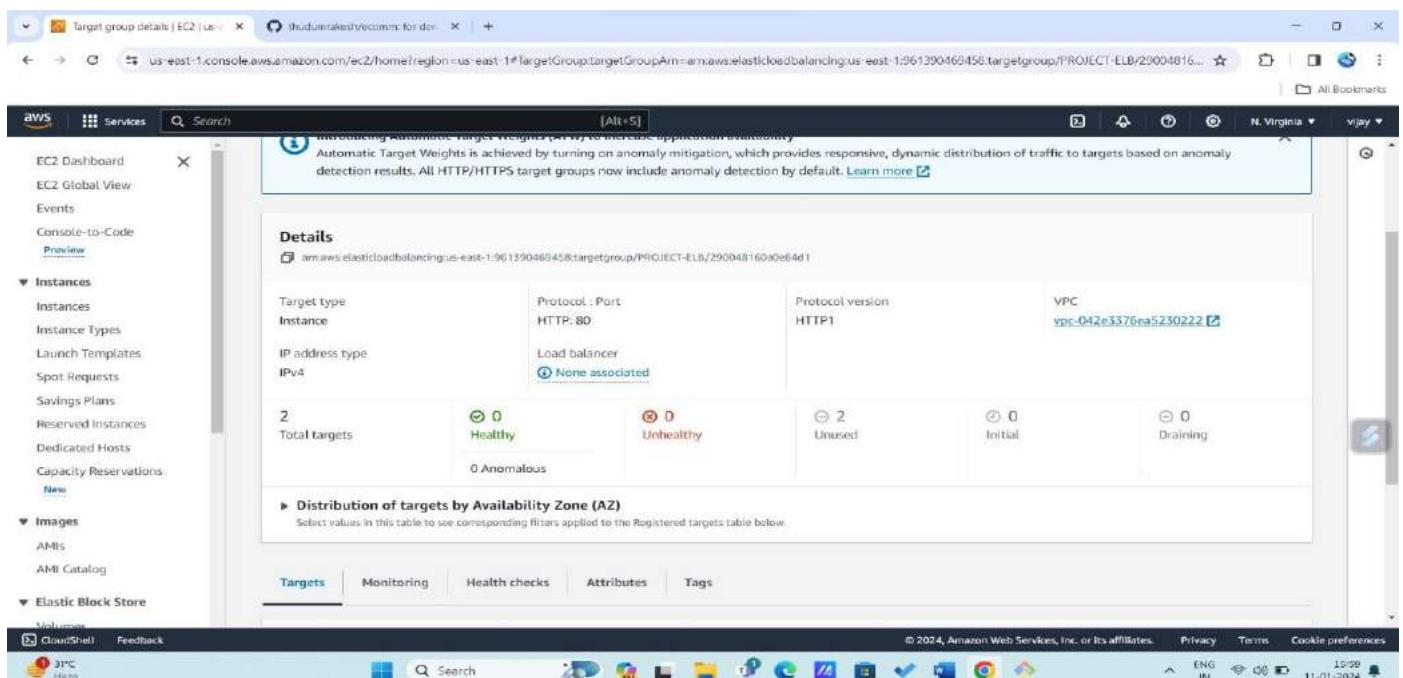


The screenshot shows the 'Create target group' wizard, Step 2: 'Review targets'. It lists two targets:

Remove	Health status	Instance ID	Name	Port	State	Security groups	Zone
X	Pending	i-0dd67ff549377b1ea	nginx-ecommerce	80	Running	launch-wizard-1	us-east-1b
X	Pending	i-024d4183df21602ae	httpd food	80	Running	ELB	us-east-1b

At the bottom, there are buttons for 'Cancel', 'Previous', and 'Create target group'.

3. Click on 'Create target group' it shows the health checks also.



The screenshot shows the 'Target group details' page for a target group named 'aws-elasticloadbalancing-us-east-1-961390469458-targetgroup/PROJECT-ELB/290048160a0e84d1'. The 'Targets' tab is selected, displaying the following information:

Total targets	Healthy	Unhealthy	Unused	Initial	Draining
2	0	0	2	0	0

Below this, a section titled 'Distribution of targets by Availability Zone (AZ)' shows the distribution across zones.

At the bottom, there are tabs for 'Targets', 'Monitoring', 'Health checks', 'Attributes', and 'Tags'.

The screenshot shows the 'Network mapping' step of the Create Classic Load Balancer wizard. It displays the 'VPC' section where 'MY VPC-2' is selected. Below it, the 'Mappings' section lists two Availability Zones: 'us-east-1a (use1-az1)' and 'us-east-1b (use1-az6)'. Each zone has a subnet listed: 'subnet-0abe0632389f2d8ca' for AZ1 and 'subnet-06aef96295333897d' for AZ6. The subnets are associated with 'PROJECT PUBLIC SUBNET 1' and 'PROJECT PUBLIC SUBNET-2' respectively. The browser interface includes standard navigation and search bars at the top.

4. Now go to load balancers and click on create classic load balancer. Fill the basic configuration and network mapping ,security groups.

5. check the details and click on create load balancer

The screenshot shows the 'Listeners and routing' step of the Create Classic Load Balancer wizard. It lists a single listener named 'HTTP:80' with the instance port set to '80'. The 'Security groups' section shows two security groups selected: 'ELB' and 'launch-wizard-1'. The browser interface includes standard navigation and search bars at the top.

[Create classic load balancer](#) | [Edit](#) | [https://dumikash.ecommercefordev.com](#) | [+ New tab](#)

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateCLBWizard:

[CloudShell](#) [Feedback](#)

[Services](#) [Search](#) [Alt+5] [N. Virginia](#) [vijay](#)

Summary

Review and confirm your configurations. [Estimate cost](#)

Basic configuration Edit	Network mapping Edit	Security groups Edit	Listeners and routing Edit
PROJECT-ELB <ul style="list-style-type: none"> Internet-facing 	VPC vpc-042e3376ea5230222 Edit MY VPC-2 <ul style="list-style-type: none"> us-east-1a subnet-0a0c063238912d8ca Edit PROJECT: PUBLIC SUBNET-1 us-east-1b subnet-06aef96295333897d Edit PROJECT: PUBLIC SUBNET-2 	<ul style="list-style-type: none"> ELB sg-0822a16449f414730 Edit launch-wizard-1 sg-09436a3a536ada301 Edit 	<ul style="list-style-type: none"> HTTP:80
Health checks Edit	Instances Edit	Attributes Edit	Tags Edit
HTTP:80/index.html	No instances added yet	<ul style="list-style-type: none"> Cross-zone load balancing: On Connection draining: On Connection draining timeout: 300 seconds 	<i>None</i>

[Cancel](#) [Create load balancer](#)

The screenshot shows the AWS CloudShell interface with the following details:

- Top Bar:** Shows two tabs: "Load Balancer created success!" and "thidumakesh/ecomrc for dev".
- Address Bar:** Displays the URL: "us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateLBWizardSuccess:loadBalancerArn=PROJECT-ELB".
- Header:** AWS logo, Services menu, Search bar, and a button labeled "[Alt+S]".
- Message Bar:** A green bar with the message "Successfully created load balancer: PROJECT-ELB" and a note: "Note: It might take a few minutes for your load balancer to be fully set up and ready to route traffic. Targets will also take a few minutes to complete the registration process and pass initial health checks.".
- Breadcrumbs:** EC2 > Load balancers > PROJECT-ELB > Create Classic Load Balancer.
- Title:** Create Classic Load Balancer.
- Callout Box:** A blue box titled "Suggested next step" with the text: "Review, customize, or configure attributes for your load balancer and listeners using the **Description** and **Listeners** tabs within [PROJECT-ELB](#)".
- Buttons:** "View load balancer" button.
- Bottom Navigation:** CloudShell, Feedback, and other AWS service icons like Lambda, CloudWatch, and S3.

NOW ATTACH THE ELB TO INSTANCES

1. Select the load balancer and scroll down and click on manage instance. And it opens page and select the instances.

The screenshot shows the AWS EC2 Load Balancers page. On the left sidebar, under the 'Load Balancing' section, 'Load Balancers' is selected. In the main content area, the 'Load balancers (1/1)' section displays a table with one row for 'PROJECT-ELB'. The table columns include Name, DNS name, State, VPC ID, Availability Zones, and Type. The 'DNS name' column shows 'PROJECT-ELB-715379136...'. The 'Availability Zones' column shows '2 Availability Zones'. The 'Type' column shows 'classic'. Below this table, a modal window titled 'Load balancer: PROJECT-ELB' is open, specifically the 'Target instances' tab. It shows a table with two rows, both of which are currently 'Not registered'. The 'Name' column lists 'httpd food' and 'nginx-ecomm'. The 'State' column shows 'Running' for both. The 'Health status' column shows '-' for both.

This screenshot shows the 'Manage instances' dialog box for the 'PROJECT-ELB' load balancer. The 'Review selected instances (2/2)' section contains two instances: 'httpd food' and 'nginx-ecomm', both of which are currently 'Not registered'. A summary at the bottom indicates that 2 instance(s) will be registered. At the bottom right, there are 'Cancel' and 'Save changes' buttons. The 'Save changes' button is highlighted in orange.

2. click on save changes and it successfully register target instances.

The screenshot shows the 'PROJECT-ELB' load balancer details page. At the top, a green banner displays the message 'Successfully registered 2 target instances.' Below this, the 'Details' section provides various configuration details for the load balancer. Under 'Load balancer type', it says 'Classic'. Under 'Status', it shows '0 of 2 instances in service'. Under 'Scheme', it says 'Internet-facing'. Under 'VPC', it shows 'vpc-042e3376ea5230222'. Under 'Availability Zones', it lists 'subnet-06ae9f96295333897d us-east-1b (use1-az6)', 'subnet-0abe0652389f2d8ca us-east-1a (use1-az4)', and 'subnet-06ae9f96295333897d us-east-1b (use1-az6)'. The 'Date created' field shows 'January 11, 2024, 16:03 (UTC+05:30)'. At the bottom, the 'DNS name info' section shows the DNS name 'PROJECT-ELB-715379136.us-east-1.elb.amazonaws.com (A Record)'.

3. Open security group and select the S.G which we need to add port 80. Click on inbound rules and select type http source anywhere ipv4 and click on save.

The screenshot shows the AWS EC2 Security Groups console. The URL is <https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#ModifyInboundSecurityGroupRules:securityGroupId=sg-0822a16449f414730>. The page title is "Edit inbound rules". It displays two security group rule entries:

Security group rule ID	Type	Protocol	Port range	Source	Description - optional
sgr-09b8a5680b89d90f3	SSH	TCP	22	Custom 0.0.0.0/0	
-	HTTP	TCP	80	Anyw... 0.0.0.0/0	

A yellow warning box at the bottom states: "⚠️ Rules with source of 0.0.0.0/0 or ::/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only."

ACCESS THE LOAD BALANCER LINK OVER THE BROWSER AND RELOAD IT SHOW CONTENT

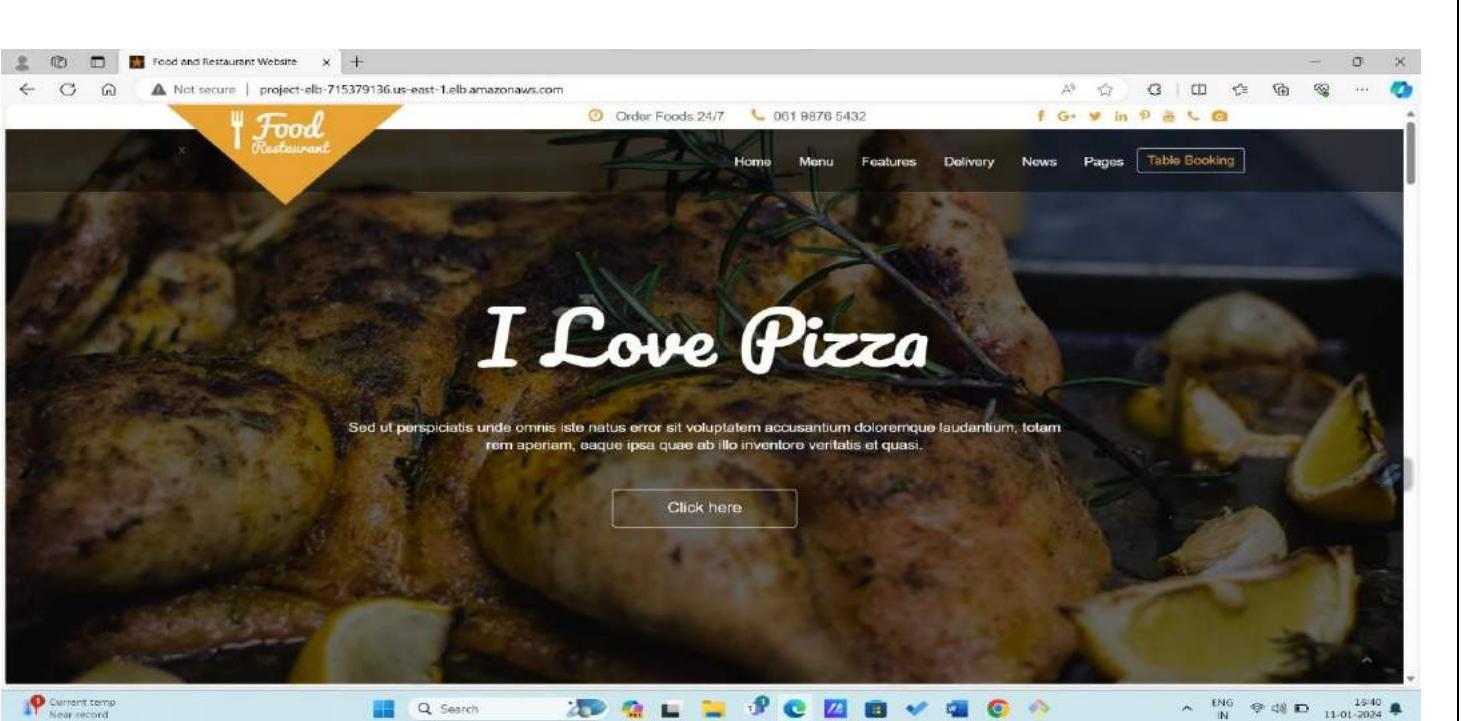
1. Open the load balancer and select the load balancer and copy the DNS name of ELB. Browse it in browser then it show content.
2. PROJECT-ELB-715379136.us-east-1.elb.amazonaws.com is DNS name of ELB reload it every few seconds it changes the content

The screenshot shows the AWS EC2 Load Balancers console. The URL is <https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LoadBalancers>. The page title is "Load balancers". It shows a single load balancer entry:

Name	DNS name copied	State	VPC ID	Availability Zones	Type
PROJECT-ELB	PROJECT-ELB-715379136...	-	vpc-042e3376ea5230222...	2 Availability Zones	classic

The "Details" tab of the "Load balancer: PROJECT-ELB" panel is selected, displaying the following information:

Load balancer type	Status	VPC	Date created
Classic	0 of 2 instances in service	vpc-042e3376ea5230222	January 11, 2024, 16:03 (UTC+05:30)
Scheme	Hosted zone	Availability Zones	
-	-	-	

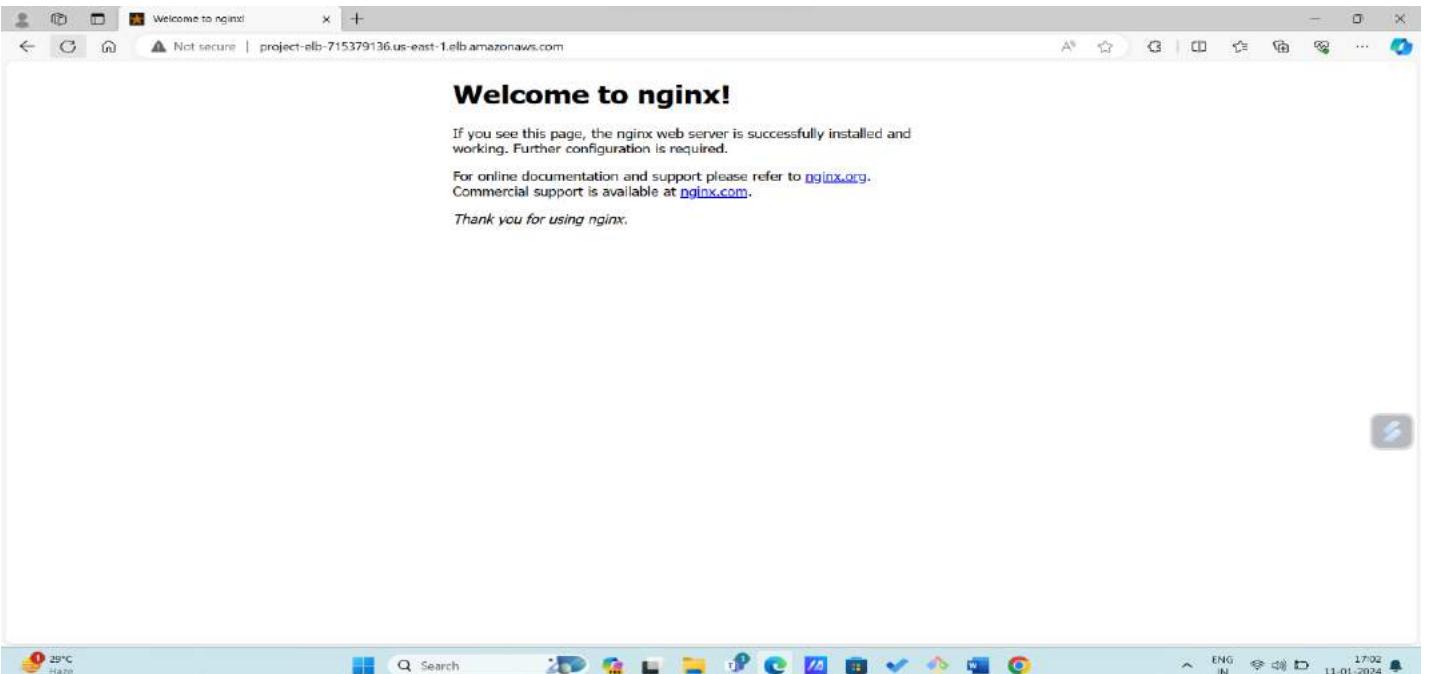


Current temp: Near record

Search Search



ENG IN 10:40 11-01-2024



29°C Haze

Search Search



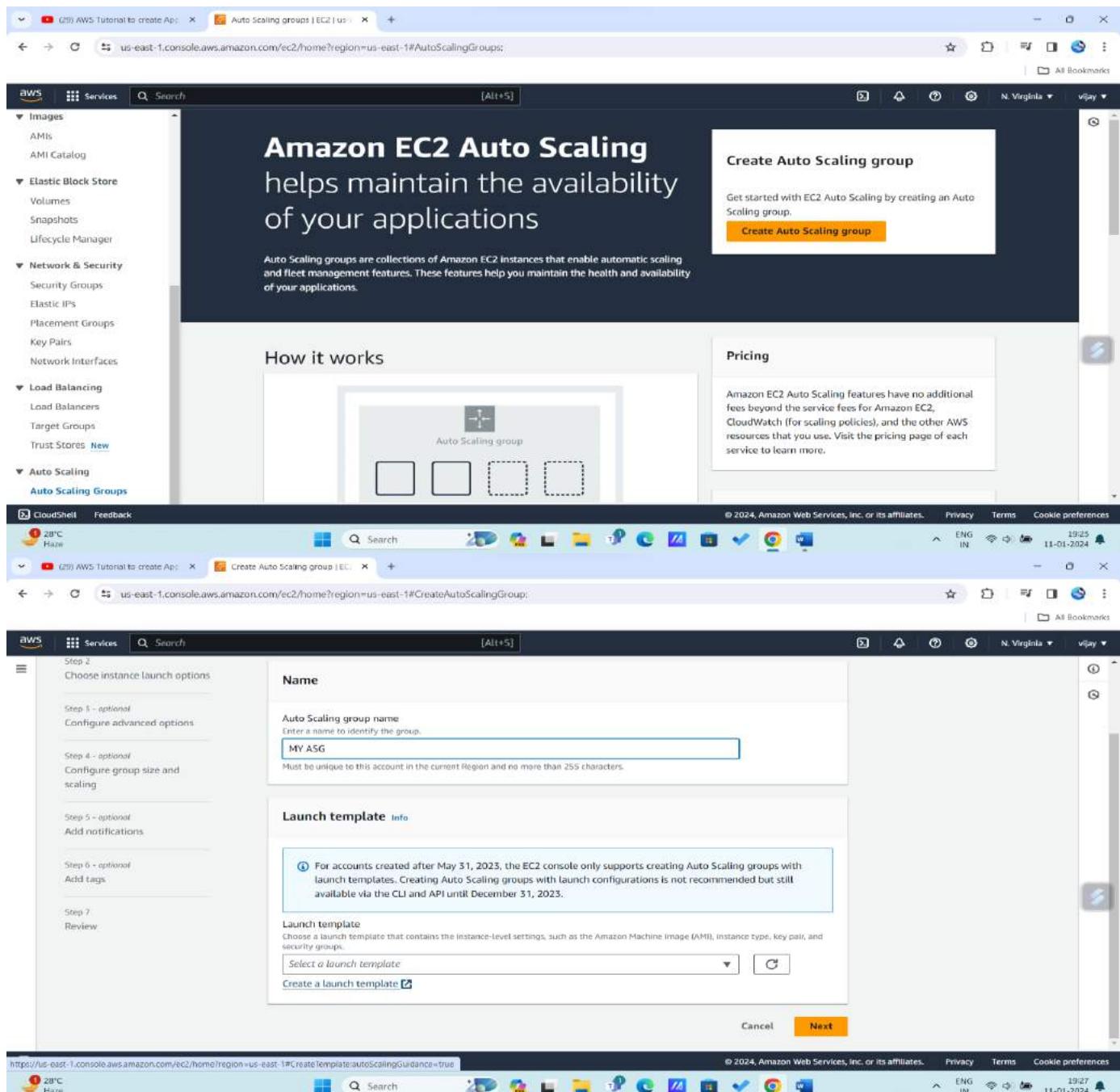
ENG IN 17:02 11-01-2024

PROJECT-9

ASG {auto scaling group} and LC {launch configuration}

CREATE ONE LAUNCH CONFIGURATION WITH UBUNTU SERVER.

1. Open EC2 services scroll down there will be autoscaling click on it.



2. Enter the name and click on the create a launch template and enter the template name and description.

Launch template name - required
MY-ASG-TEMPLATE

Template version description
FOR PROJECT

Auto Scaling guidance Info
Select this if you intend to use this template with EC2 Auto Scaling
 Provide guidance to help me set up a template that I can use with EC2 Auto Scaling

Summary

Software Image (AMI)

Virtual server type (instance type)

Firewall (security group)

Storage (volumes)

Create launch template

3. Select the AMIs currently in use and also enter other details like key pair and subnets etc depending upon the project. And click on launch template.

4. Go to auto scaling group and give name and select the template and click on next.

Launch template
My-ASG-Template

Instance type
t2.micro

Virtual server type (instance type)
Amazon Linux 2

Firewall (security group)
sg-06aa3f7caf3a30282

Storage (volumes)
1 volume(s) - 8 GiB

Next Step

The screenshot shows the 'Create Auto Scaling group | EC2' step 4 of 6. The 'Launch template' section is displayed, showing 'MY-ASG-TEMPLATE' as the selected launch template. Configuration details include:

- Description: FOR PROJECT
- AMI ID: ami-06aa5f7caf3a30282
- Key pair name: project
- Launch template: MY-ASG-TEMPLATE (lt-08002ad9541078000)
- Instance type: t2.micro
- Security groups: -
- Request Spot Instances: No
- Storage (volumes): -
- Date created: Thu Jan 11 2024 19:35:06 GMT+0530 (India Standard Time)

Buttons at the bottom right include 'Cancel', 'Next', and a small 'Edit' icon.

5.In network session select the VPC and subnets and click on next. And also select load balancer depending of project I selected no balancer in advance options

The screenshot shows the 'Step 6 + optional' section of the wizard. The 'Network' tab is selected, displaying the following configuration:

For most applications, you can use multiple Availability Zones and let EC2 Auto Scaling balance your instances across the zones. The default VPC and default subnets are suitable for getting started quickly.

VPC: Choose the VPC that defines the virtual network for your Auto Scaling group.

Subnets selected:

- us-east-1a | subnet-0abe0632389f2d8ca (PROJECT PUBLIC)
SUBNET-1
10.0.31.0/20
- us-east-1b | subnet-06aef96295333897d (PROJECT PUBLIC)
SUBNET-2
10.0.48.0/20

Other subnets listed:
us-east-1a | subnet-0abe0632389f2d8ca (PROJECT PUBLIC SUBNET-1)
10.0.32.0/20
us-east-1b | subnet-06aef96295333897d (PROJECT PUBLIC SUBNET-2)
10.0.48.0/20

Buttons at the bottom right include 'Cancel', 'Skip to review', 'Previous', and 'Next'.

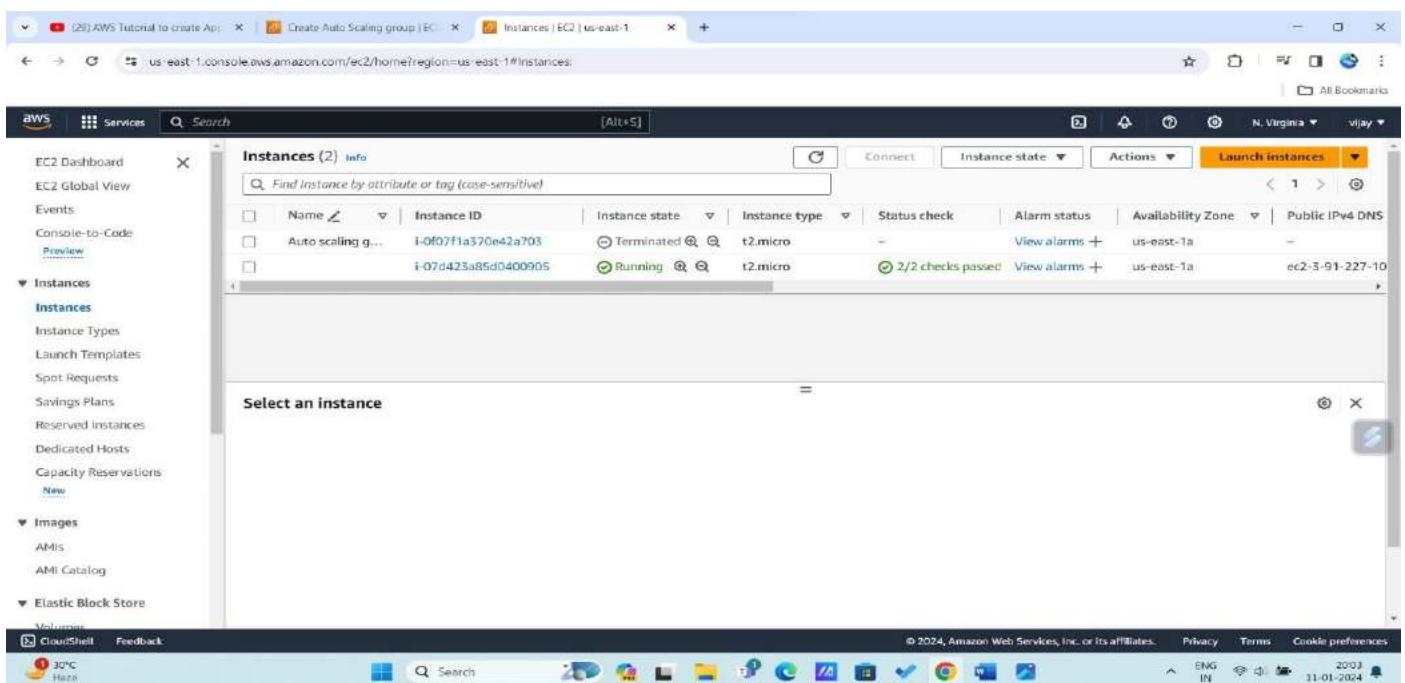
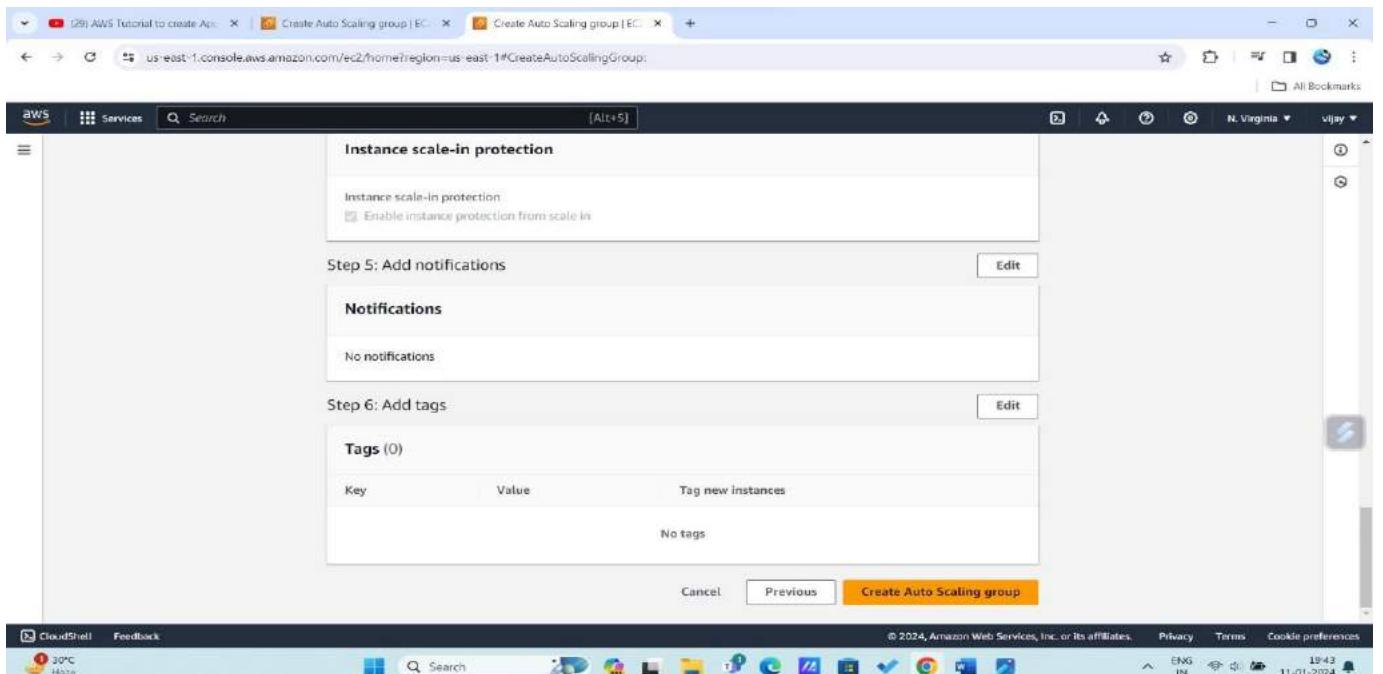
6. Select the desire capacity and minimum and maximum capacity. And click on create autoscaling group and also template is attached autoscaling

The screenshot shows the AWS Create Auto Scaling group wizard at Step 6: Configure advanced options. The left sidebar lists steps 1 through 7. The main content area is divided into two sections: Load balancing and VPC Lattice integration options.

Load balancing: Options include "No load balancer" (selected), "Attach to an existing load balancer", and "Attach to a new load balancer".

VPC Lattice integration options: A note states: "To improve networking capabilities and scalability, integrate your Auto Scaling group with VPC Lattice. VPC Lattice facilitates communications between AWS services and helps you connect and manage your applications across compute services in AWS." Below this is a section titled "Select VPC Lattice service to attach".

Scaling: The "Desired capacity type" is set to "Units (number of instances)" with a value of 1. The "Desired capacity" field also has a value of 1. Under "Scaling limits", "Min desired capacity" is 1 and "Max desired capacity" is 5. The "Automatic scaling - optional" section shows "No scaling policies" selected. The status bar at the bottom indicates "CloudShell Feedback" and the date "11-01-2024".



7. Now delete the one instance, autoscaling automatically create the new instances

(2) AWS Tutorial to create Auto Scaling group | EC2 | Instances | us-east-1#instances

EC2 Dashboard Services Search [Alt+S]

Instances (2) Info Find instance by attribute or tag (case-sensitive)

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
Auto scaling g...	i-0f07f1a370e42a703	Terminated	t2.micro	-	View alarms +	us-east-1a	-
	i-07d423a85d0400905	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1a	ec2-3-91-227-10

Select an instance

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(2) AWS Tutorial to create Auto Scaling group | EC2 | Auto Scaling groups | us-east-1#AutoScalingGroups:id=MY%2520ASG&view=activity

EC2 > Auto Scaling groups

Auto Scaling groups (1/1) Info Launch configurations Launch templates Actions Create Auto Scaling group

Name	Launch template/configuration	Instances	Status	Desired capacity	Min
MY ASG	MY-ASG-TEMPLATE Version Default	1	-	1	1

Auto Scaling group: MY ASG

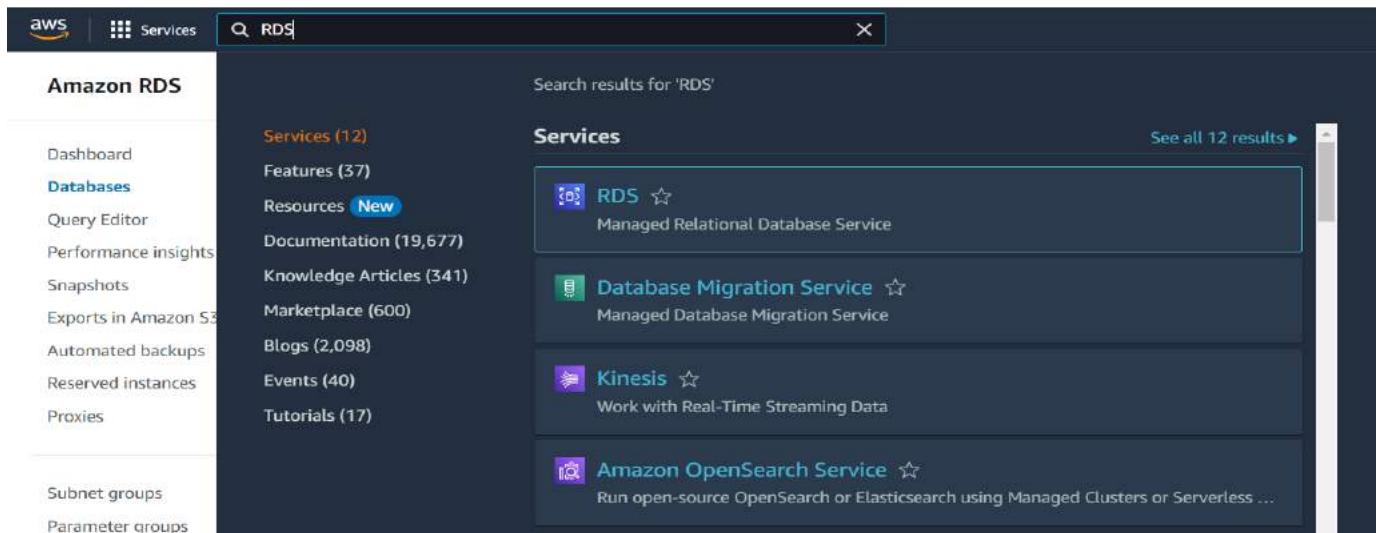
Status	Description	Cause	Start time
Successful	Launching a new EC2 instance: i-07d423a85d0400905	At 2024-01-11T14:13:14Z a user request created an AutoScalingGroup changing the desired capacity from 0 to 1. At 2024-01-11T14:13:29Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 0 to 1.	2024 January 11, 07:43:31 PM +05:30

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PROJECT-10

RDS {Relational Database Service}

1. Log into console and create instance for RDS.



The screenshot shows the AWS search results for 'RDS'. The search bar at the top contains 'RDS'. On the left, there's a sidebar for 'Amazon RDS' with links like Dashboard, Databases, Query Editor, etc. The main search results are titled 'Services' with 12 results. The first result is 'RDS' (Managed Relational Database Service), which is highlighted with a blue border. Other results include 'Database Migration Service', 'Kinesis', and 'Amazon OpenSearch Service'.

Create database

Amazon Relational Database Service (RDS) makes it easy to set up, operate, and scale a relational database in the cloud.

[Restore from S3](#) [Create database](#)

Note: your DB instances will launch in the US East (N. Virginia) region

Service health [View service health dashboard](#)

Current status	Details
✓ Amazon Relational Database Service (N. Virginia)	Service is operating normally

2. Search RDS in search bar and click on it. And click on create database. And click on create database.

Screenshot of the AWS RDS console showing the database creation method selection screen.

Choose a database creation method

- Standard create: You set all of the configuration options, including ones for availability, security, backups, and maintenance.
- Easy create: Use recommended best-practice configurations. Some configuration options can be changed after the database is created.

Engine options

Engine type: MySQL

- Aurora (MySQL Compatible)
- Aurora (PostgreSQL Compatible)
- MySQL
- MariaDB
- PostgreSQL
- Oracle

MySQL

MySQL is the most popular open source database in the world. MySQL on RDS offers the rich features of the MySQL community edition with the flexibility to easily scale compute resources or storage capacity for your database.

- Supports database size up to 64 TiB.
- Supports General Purpose, Memory Optimized, and Burstable Performance instance classes.
- Supports automated backup and point-in-time recovery.
- Supports up to 15 Read Replicas per instance, within a single Region or 5 read replicas cross-region.

- 3.In the database creation method select the Standard Create.
- 4.in the engine options select mysql database. And select free tier.

Screenshot of the AWS RDS console showing the database creation configuration screen.

Create a Multi-AZ DB cluster with one primary DB instance and two readable standby DB instances. Multi-AZ DB clusters provide up to 2x faster transaction commit latency and automatic failover in typically under 35 seconds.

Show versions that support the Amazon RDS Optimized Writes

Engine Version: MySQL 8.0.35

Templates

Choose a sample template to meet your use case.

- Production: Use defaults for high availability and fast, consistent performance.
- Dev/Test: This instance is intended for development use outside of a production environment.
- Free tier: Use RDS Free Tier to develop new applications, test existing applications, or gain hands-on experience with Amazon RDS.

Availability and durability

Deployment options

The deployment options below are limited to those supported by the engine you selected above.

- Multi-AZ DB Cluster: Creates a DB cluster with a primary DB instance and two readable standby DB instances, with each DB instance in a different Availability Zone (AZ). Provides high availability, data redundancy and increases capacity to serve read workloads.
- Multi-AZ DB Instance (not supported for Multi-AZ DB cluster snapshot)

MySQL

MySQL is the most popular open source database in the world. MySQL on RDS offers the rich features of the MySQL community edition with the flexibility to easily scale compute resources or storage capacity for your database.

- Supports database size up to 64 TiB.
- Supports General Purpose, Memory Optimized, and Burstable Performance instance classes.
- Supports automated backup and point-in-time recovery.
- Supports up to 15 Read Replicas per instance, within a single Region or 5 read replicas cross-region.

The screenshot shows the AWS RDS MySQL setup page. On the left, under 'Credentials Settings', there is a 'Master username' field containing 'rakesh'. A note says 'Type a login ID for the master user of your DB Instance.' Below it is a checkbox for 'Manage master credentials in AWS Secrets Manager', which is unchecked. A tooltip states: 'If you manage the master user credentials in Secrets Manager, some RDS features aren't supported.' Under 'Auto generate a password', the checkbox is unchecked. In the 'Master password' and 'Confirm master password' fields, both contain '*****'. On the right, the 'MySQL' section provides information about MySQL and lists its features.

Credentials Settings

Master username [Info](#)
Type a login ID for the master user of your DB Instance.
rakesh
1 to 16 alphanumeric characters. The first character must be a letter.

Manage master credentials in AWS Secrets Manager
Manage master user credentials in Secrets Manager. RDS can generate a password for you and manage it throughout its lifecycle.

ⓘ If you manage the master user credentials in Secrets Manager, some RDS features aren't supported. [Learn more](#)

Auto generate a password
Amazon RDS can generate a password for you, or you can specify your own password.

Master password [Info](#)

Constraints: At least 8 printable ASCII characters. Can't contain any of the following: / (slash), ' (single quote), " (double quote) and @ (at sign).

Confirm master password [Info](#)

Instance configuration

The DB instance configuration options below are limited to those supported by the engine that you selected above.

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MySQL

MySQL is the most popular open source database in the world. MySQL on RDS offers the rich features of the MySQL community edition with the flexibility to easily scale compute resources or storage capacity for your database.

- Supports database size up to 64 TiB.
- Supports General Purpose, Memory Optimized, and Burstable Performance instance classes.
- Supports automated backup and point-in-time recovery.
- Supports up to 15 Read Replicas per instance, within a single Region or 5 read replicas cross-region.

5. Give your database a Master username and Master password or you can allow AWS to generate a password for you.

6. Remember whatever the Username and Password you gave cause you'll need them later to access your database

The screenshot shows the AWS RDS MySQL setup page. Under 'Connectivity', the 'Compute resource' section has 'Connect to an EC2 compute resource' selected. An info box notes: 'Some VPC settings can't be changed when a compute resource is added'. The 'EC2 instance' dropdown shows 'i-06fc925d6be2c3f45'. The 'Network type' dropdown shows 'IPv4'. On the right, the 'MySQL' section provides information about MySQL and lists its features.

Storage autoscaling

Connectivity [Info](#)

Compute resource
Choose whether to set up a connection to a compute resource for this database. Setting up a connection will automatically change connectivity settings so that the compute resource can connect to this database.

Connect to an EC2 compute resource
Set up a connection to an EC2 compute resource for this database. You can manually set up a connection to a compute resource later.

Don't connect to an EC2 compute resource
Don't set up a connection to a compute resource for this database. You can manually set up a connection to a compute resource later.

EC2 instance [Info](#)
Choose the EC2 instance to add as the compute resource for this database. A VPC security group is added to this EC2 instance. A VPC security group is also added to the database with an inbound rule that allows the EC2 instance to access the database.
i-06fc925d6be2c3f45
RDS

ⓘ Some VPC settings can't be changed when a compute resource is added
Adding an EC2 compute resource automatically selects the VPC, DB subnet group, and public access settings for this database. To allow the EC2 instance to access the database, a VPC security group rds-ec2-X is added to the database and another called ec2-rds-X to the EC2 instance. You can remove the new security group for the database only by removing the compute resource.

Network type [Info](#)
To use dual-stack mode, make sure that you associate an IPv6 CIDR block with a subnet in the VPC you specify.

IPv4 Dual-stack mode

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MySQL

MySQL is the most popular open source database in the world. MySQL on RDS offers the rich features of the MySQL community edition with the flexibility to easily scale compute resources or storage capacity for your database.

- Supports database size up to 64 TiB.
- Supports General Purpose, Memory Optimized, and Burstable Performance instance classes.
- Supports automated backup and point-in-time recovery.
- Supports up to 15 Read Replicas per instance, within a single Region or 5 read replicas cross-region.

7. In the connectivity, choose connect to an EC2 compute resource and select the instance that we created in the first place for the database.

8. You'll get that option in the dropdown menu.

The screenshot shows the AWS RDS MySQL setup page. On the left, there's a note: "After a database is created, you can't change its VPC." Below it, there are two options for DB subnet group: "Choose existing" (selected) and "Automatic setup". The "Automatic setup" option is described as creating a new subnet group or reusing an existing one. The DB subnet group name is set to "rds-ec2-db-subnet-group-1". Under Public access, "Yes" is selected, allowing public IP assignment. Under VPC security group (firewall), "Choose existing" is selected. On the right, a sidebar titled "MySQL" provides information about MySQL and lists several features:

- Supports database size up to 64 TiB.
- Supports General Purpose, Memory Optimized, and Burstable Performance instance classes.
- Supports automated backup and point-in-time recovery.
- Supports up to 15 Read Replicas per instance, within a single Region or 5 read replicas cross-region.

At the bottom, there are CloudShell, Feedback, and cookie preference links.

The screenshot shows the AWS RDS MySQL launch instance page. It displays a billing estimate of "14.71 USD" for the month. A note states that the estimate is based on on-demand usage and does not include backup storage costs. It also mentions the AWS Simple Monthly Calculator. Below this, the "Estimated monthly costs" section details the Amazon RDS Free Tier availability and usage rules:

- 750 hrs of Amazon RDS in a Single-AZ db.t2.micro, db.t3.micro or db.t4g.micro Instance.
- 20 GB of General Purpose Storage (SSD).
- 20 GB for automated backup storage and any user-initiated DB Snapshots.

A link to "Learn more about AWS Free Tier" is provided. A note at the bottom states: "You are responsible for ensuring that you have all of the necessary rights for any third-party products or services that you use with AWS services." At the bottom right, there are "Cancel" and "Create database" buttons.

Screenshot of the AWS RDS console showing the Databases page.

The left sidebar shows the following navigation:

- Amazon RDS
- Dashboard
- Databases (selected)
- Query Editor
- Performance Insights
- Snapshots
- Exports in Amazon S3
- Automated backups
- Reserved instances
- Proxies
- Subnet groups
- Parameter groups
- Option groups
- Custom engine versions
- Zero-ETL integrations [New](#)
- Events
- Event subscriptions

The main content area displays the following details for a single database:

DB identifier	Status	Role	Engine	Region & AZ	Size	CPU	Current activity
rakesh	Available	Instance	MySQL Community	us-east-1a	db.t3.micro	2.68%	1 Connections

Buttons at the top right include: Group resources, Modify, Actions, Restore from S3, and Create database.

Screenshot of the AWS Security Groups console showing the Inbound rules page.

The table lists the inbound rules for a specific security group:

Security group rule ID	Type	Protocol	Port range	Source	Description - optional
sgr-04b6d58976a1fc220	MySQL/Aurora	TCP	3306	Custom	Rule to allow connections from EC2 instances with sg-02cad20bb016078ee attached
-	Custom TCP	TCP	3306	My... 49.37.155.219/32	Delete

Buttons at the bottom include: Add rule, Preview changes, and Save rules.

9.To access your database use command [mysql -h -u -p]

10.Here refers to the endpoint provided by your RDS database refers to the username you created while provisioning RDS database.

11.After clicking upon Enter, you'll be asked a password to login.

12.Provide the password you set along with the Username. • You'll finally enter into your MySQL database

```
ec2-user@ip-10-0-26-179:~$ ls
CoverLetter.pdf  'INTERNSHIP PROJECTS (1).pdf'  Resume.pdf  desktop.ini  'project rds.pem'
Document11.pdf   "RDS (1).pem"      'Screenshot 2024-01-19 011032_cleanup (1).png'  github.pdf  'rds.pem'
'tHEDUNTHUDUM-Rakesh.pptx'  Resume-'Thudum-Rakesh.pdf'  'Screenshot 2024-01-19 011032_cleanup.png'  jenkins interviewer.pdf

ec2-user@ip-10-0-26-179:~$ ssh -i "project rds.pem" ec2-user@ec2-34-227-31-132.compute-1.amazonaws.com
Warning: Permanently added 'ec2-34-227-31-132.compute-1.amazonaws.com' (ED25519) to the list of known hosts.
sh: can't open device file /dev/urandom
ssh: connect to host ec2-34-227-31-132.compute-1.amazonaws.com (34.227.31.132) port 22: Connection refused
The authenticity of host 'ec2-34-227-31-132.compute-1.amazonaws.com (34.227.31.132)' can't be established.
ED25519 key fingerprint is SHA256:Up5j1POTfews2Kh0Cs1o3aR2mF8MSeppielerufo.
This key is known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-34-227-31-132.compute-1.amazonaws.com' (ED25519) to the list of known hosts.

.
.
.
Amazon Linux 2
AL2 End of Life is 2025-06-30.
.
.
.
A newer version of Amazon Linux is available!
.
.
.
Amazon Linux 2023, GA and supported until 2028-03-15.
https://aws.amazon.com/linux/amazon-linux-2023/
ec2-user@ip-10-0-26-179:~$ sudo yum -y install mysql
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
--> Package mariadb.x86_64 1:5.5.68-1.amzn2.0.1 will be installed
--> Finished Dependency Resolution
dependencies Resolved

Transaction Summary
Install 1 Package

Total download size: 8.8 M
Installed size: 49 M
Downloading packages:
mariadb-5.5.68-1.amzn2.0.1.x86_64.rpm                                         | 8.8 MB  00:00:00
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
Installing : 1:mariadb-5.5.68-1.amzn2.0.1.x86_64                                         1/1
  verifying : 1:mariadb-5.5.68-1.amzn2.0.1.x86_64                                         1/1
Installed:
  mariadb.x86_64 1:5.5.68-1.amzn2.0.1

Complete!
[ec2-user@ip-10-0-26-179 ~]$
```

AWS & DEVOPS INTERNSHIP

MINI PROJECT-2

GITHUB

- 1.PROVISIONING EC2 INSTANCE.**
- 2.CREATING REPO IN LOCAL MACHINE.**
- 3.CREATING REPO IN REMOTE LOCATION.**
- 4.WORKING WITH REMOTE REPOSITORY.**
- 5.PUSHING A LOCAL REPO TO GITHUB.**
- 6.CREATING A NEW BRANCH FROM MAIN.**
- 7.PULLING ALL BRANCHES IN LOCAL MACHINE.**
- 8.MERGING NEW BRANCH WITH MAIN BRANCH.**
- 9.PULLING NEW CHANGES IN LOCAL REPO.**

1.PROVISIONING EC2 INSTANCE

1.Log into AWS management console.

2.I logged in with my AWS credentials and entered into my AWS management console.

3.Search for EC2 in the services search bar.

4Opens EC2 dashboard. Click on Instances and click on Launch Instances on the top right corner.

5 Give your Instance a name Select the OS/AMI, whichever is suitable.

6.Select the OS/AMI, whichever is suitable.

7.Select the Instance type as t2micro. Create a keypair to access your Instance later.

8.Create a new Security Group and add Inbound rule SSH allowed form My IP.

9.Check all the configurations you made and click on create Instance Accessing Instance.

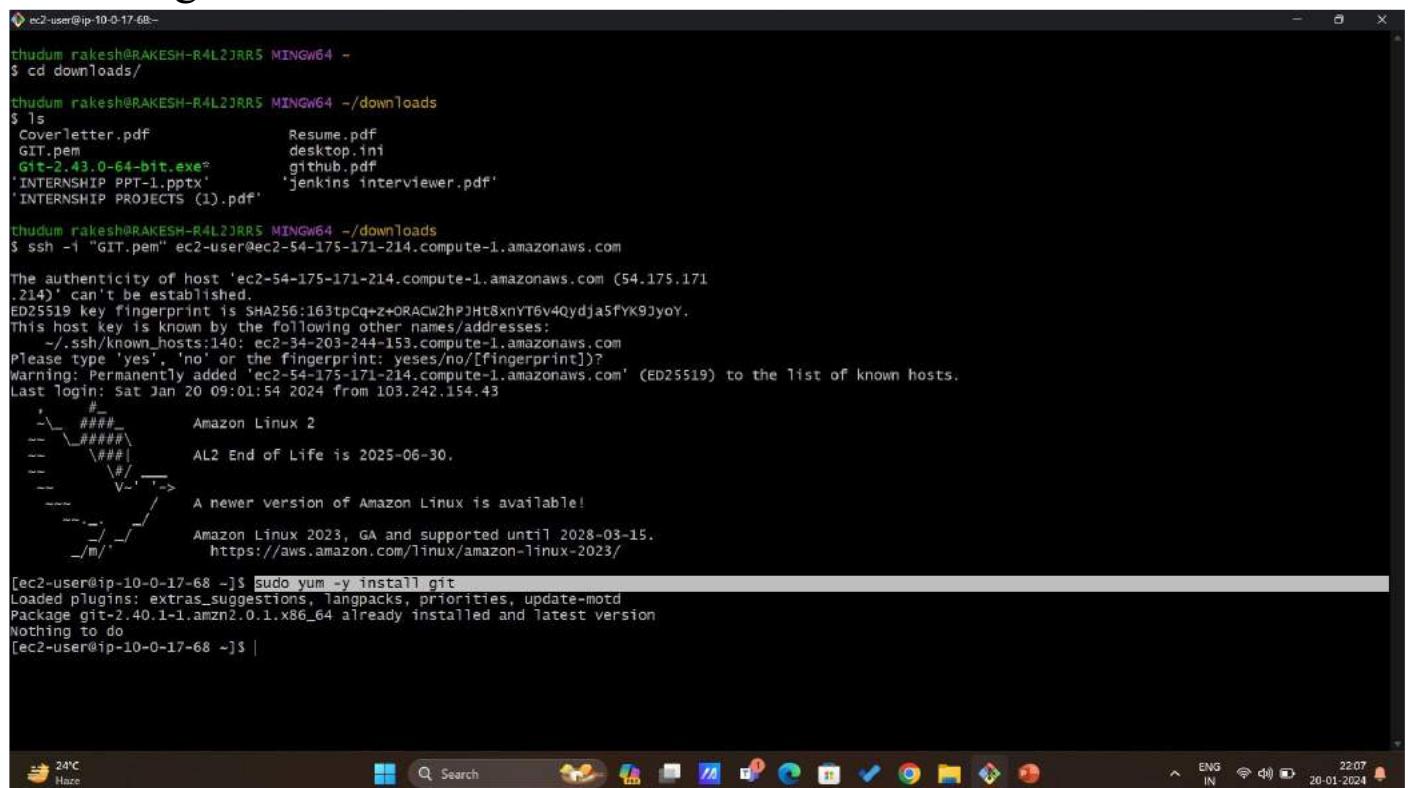
The screenshot shows the AWS EC2 Instances page. The left sidebar has a tree view with 'Instances' selected, showing sub-options like 'Instance Types', 'Launch Templates', 'Spot Requests', 'Savings Plans', 'Reserved Instances', 'Dedicated Hosts', 'Capacity Reservations', and 'Images'. The main content area is titled 'Instances (1/2) Info' and lists two instances:

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4
project git	i-03fb0138a650c0d3d	Running	t2.micro	Initializing	View alarms +	us-east-1a	ec2-34-203-
GIT	i-00419fe3f6674e6f5	Terminated	t2.micro	-	View alarms +	us-east-1a	-

At the bottom, it says 'Instance: i-03fb0138a650c0d3d (project git)'.

ACCESSING INSTANCE

- 1. Accessing your instance through Git bash includes copying your public IP of your Instance.**
- 2. Get in to the path where your keypair is saved and use SSH command to login.**
- 3. Install Git in your instance by using the command “sudo yum -y install git”.**



```
ec2-user@ip-10-0-17-68:~  
thudum rakesh@RAKESH-R4L2JRRS MINGW64 ~  
$ cd downloads/  
  
thudum rakesh@RAKESH-R4L2JRRS MINGW64 ~/downloads  
$ ls  
Coverletter.pdf Resume.pdf  
GIT.pem desktop.ini  
'Git-2.43.0-64-bit.exe' github.pdf  
'INTERNSHIP PPT-1.pptx' 'jenkins interviewer.pdf'  
'INTERNSHIP PROJECTS (1).pdf'  
  
thudum rakesh@RAKESH-R4L2JRRS MINGW64 ~/downloads  
$ ssh -i "GIT.pem" ec2-user@ec2-54-175-171-214.compute-1.amazonaws.com  
  
The authenticity of host 'ec2-54-175-171-214.compute-1.amazonaws.com (54.175.171.214)' can't be established.  
ED25519 key fingerprint is SHA256:163tpCq+Z+ORACw2hPJHt8xnYT6v4Qydja5fYK9JyoY.  
This host key is known by the following other names/addresses:  
    -./ssh/known_hosts:140: ec2-34-203-244-153.compute-1.amazonaws.com  
Please type 'yes', 'no' or the fingerprint: yes/no/[fingerprint])?  
warning: Permanently added 'ec2-54-175-171-214.compute-1.amazonaws.com' (ED25519) to the list of known hosts.  
Last login: Sat Jan 20 09:01:54 2024 from 103.242.154.43  
[  
  #  
  -- \###_ Amazon Linux 2  
  -- \###\ AL2 End of Life is 2025-06-30.  
  -- \#/ V-->  
  --- / A newer version of Amazon Linux is available!  
  --- / Amazon Linux 2023, GA and supported until 2028-03-15.  
  --- / https://aws.amazon.com/linux/amazon-linux-2023/  
  
[ec2-user@ip-10-0-17-68 ~]$ sudo yum -y install git  
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd  
Package git-2.40.1-1.amzn2.0.1.x86_64 already installed and latest version  
Nothing to do  
[ec2-user@ip-10-0-17-68 ~]$ |  
  
24°C Haze
```

2.CREATING REPO IN LOCAL MACHINE

1.After accessing the Instance through git bash, Create directory, Initialize this directory using command. “git init”.

```
[ec2-user@ip-10-0-17-68:~/miniproject2]$ [ec2-user@ip-10-0-17-68 ~]$ [ec2-user@ip-10-0-17-68 ~]$ [ec2-user@ip-10-0-17-68 ~]$ ls miniproject2 [ec2-user@ip-10-0-17-68 ~]$ cd miniproject2 [ec2-user@ip-10-0-17-68 miniproject2]$ ls [ec2-user@ip-10-0-17-68 miniproject2]$ git init hint: Using 'master' as the name for the initial branch. This default branch name hint: is subject to change. To configure the initial branch name to use in all hint: of your new repositories, which will suppress this warning, call: hint: hint: git config --global init.defaultBranch <name> hint: hint: Names commonly chosen instead of 'master' are 'main', 'trunk' and hint: 'development'. The just-created branch can be renamed via this command: hint: hint: git branch -m <name> Initialized empty Git repository in /home/ec2-user/miniproject2/.git/ [ec2-user@ip-10-0-17-68 miniproject2]$
```

2.Now run the command “git status” to check the status There aren’t any files in the directory so there would not be any much of output.

3.Create some empty files using the command “touch git” “git status” command, there are some files present but are not tracked by git.

```
[ec2-user@ip-10-0-17-68 ~]$ [ec2-user@ip-10-0-17-68 ~]$ [ec2-user@ip-10-0-17-68 ~]$ [ec2-user@ip-10-0-17-68 ~]$ ls miniproject2 [ec2-user@ip-10-0-17-68 ~]$ cd miniproject2 [ec2-user@ip-10-0-17-68 miniproject2]$ ls [ec2-user@ip-10-0-17-68 miniproject2]$ git init hint: Using 'master' as the name for the initial branch. This default branch name hint: is subject to change. To configure the initial branch name to use in all hint: of your new repositories, which will suppress this warning, call: hint: hint: git config --global init.defaultBranch <name> hint: hint: Names commonly chosen instead of 'master' are 'main', 'trunk' and hint: 'development'. The just-created branch can be renamed via this command: hint: hint: git branch -m <name> Initialized empty Git repository in /home/ec2-user/miniproject2/.git/ [ec2-user@ip-10-0-17-68 miniproject2]$ git status On branch master No commits yet nothing to commit (create/copy files and use "git add" to track) [ec2-user@ip-10-0-17-68 miniproject2]$ touch minifile{1..5} [ec2-user@ip-10-0-17-68 miniproject2]$ ls minifile1 minifile2 minifile3 minifile4 minifile5 [ec2-user@ip-10-0-17-68 miniproject2]$
```

4.For them to track by git, use command “git add”, Here I added. refers to all the files in the directory.

5. Running “git status” command again will show you the files that are being tracked by git. The files are now in the staging area.

```
[ec2-user@ip-10-0-17-68:~/miniproject2]$ git status
On branch master
No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    minifile1
    minifile2
    minifile3
    minifile4
    minifile5

nothing added to commit but untracked files present (use "git add" to track)
[ec2-user@ip-10-0-17-68 miniproject2]$ git add .
[ec2-user@ip-10-0-17-68 miniproject2]$ git status
On branch master
No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file:  minifile1
    new file:  minifile2
    new file:  minifile3
    new file:  minifile4
    new file:  minifile5

[ec2-user@ip-10-0-17-68 miniproject2]$ |
```

6. To commit these changes use command “git commit –m”. Run git status once again and it will show that the working tree is clean.

```
[ec2-user@ip-10-0-17-68:~/miniproject2]$ git commit -m "add new files"
[master (root-commit) 72a7533] add new files
  Committer: EC2 Default User <ec2-user@ip-10-0-17-68.ec2.internal>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly. Run the
following command and follow the instructions in your editor to edit
your configuration file:

  git config --global --edit

After doing this, you may fix the identity used for this commit with:

  git commit --amend --reset-author

5 files changed, 0 insertions(+), 0 deletions(-)
create mode 100644 minifile1
create mode 100644 minifile2
create mode 100644 minifile3
create mode 100644 minifile4
create mode 100644 minifile5
[ec2-user@ip-10-0-17-68 miniproject2]$ |
```

```

ec2-user@ip-10-0-17-68:~/miniproject2
new file: minifile4
new file: minifile5

[ec2-user@ip-10-0-17-68 miniproject2]$ git commit -m "add new files"
[master (root-commit) 72a7533] add new files
Committer: EC2 Default User <ec2-user@ip-10-0-17-68.ec2.internal>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly. Run the
following command and follow the instructions in your editor to edit
your configuration file:

git config --global --edit

After doing this, you may fix the identity used for this commit with:

git commit --amend --reset-author

5 files changed, 0 insertions(+), 0 deletions(-)
create mode 100644 minifile1
create mode 100644 minifile2
create mode 100644 minifile3
create mode 100644 minifile4
create mode 100644 minifile5
[ec2-user@ip-10-0-17-68 miniproject2]$ git status
On branch master
nothing to commit, working tree clean
[ec2-user@ip-10-0-17-68 miniproject2]$
```

24°C Haze

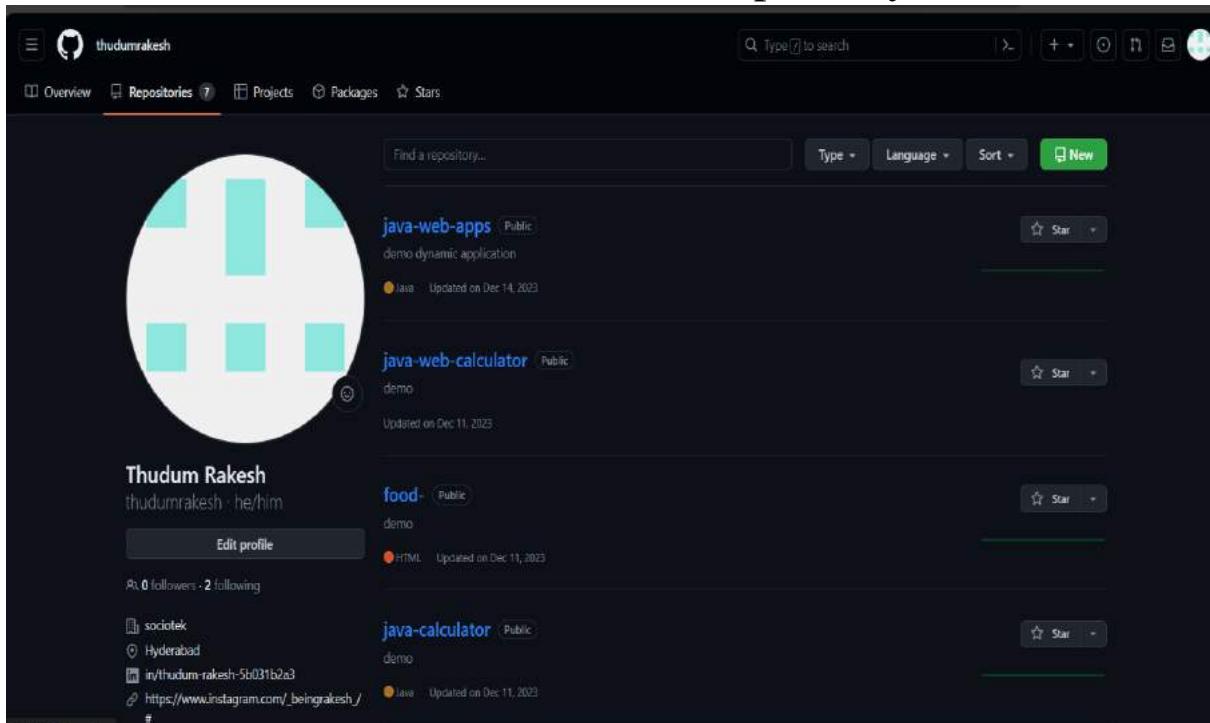
Search

22:23 20-01-2024

3.CREATING REPO IN REMOTE LOCATION

1.To create a repository in git hub. Login to your git hub account with your credentials.

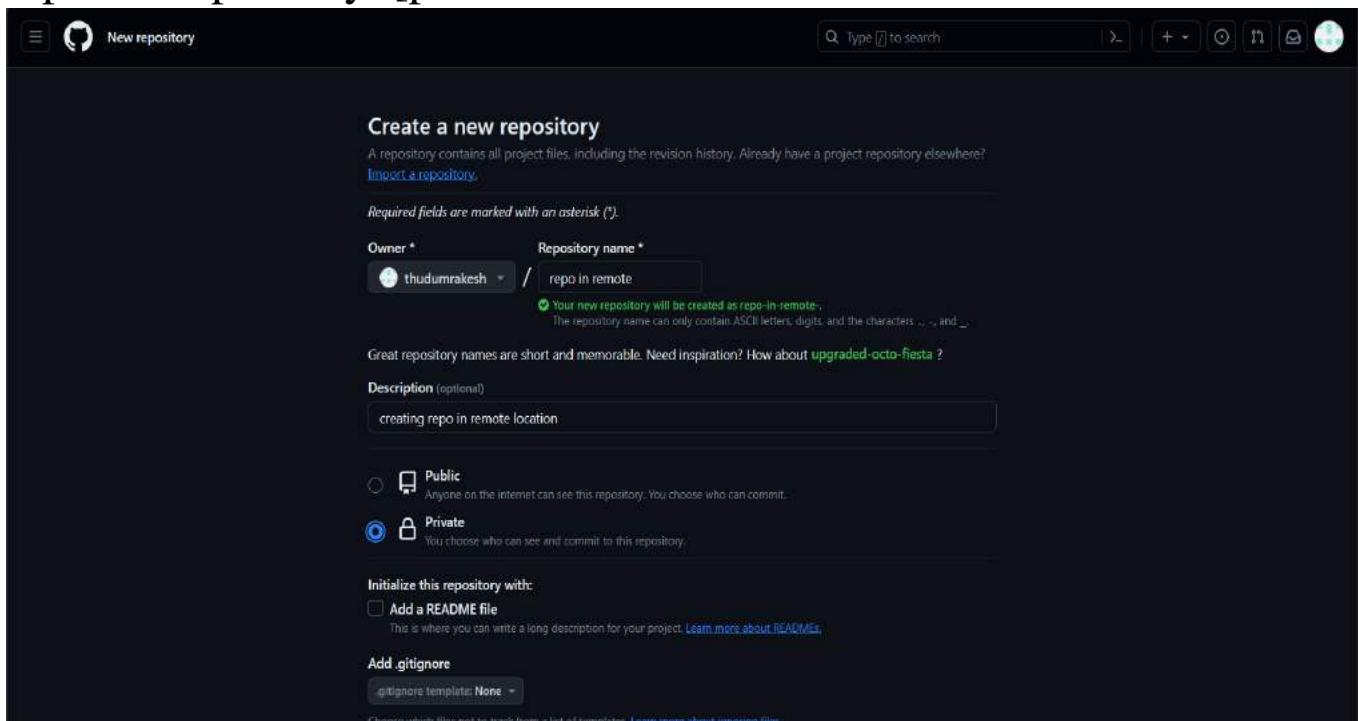
2.Click on + and then click on New Repository.



The screenshot shows a GitHub user profile for 'thudumrakesh'. The profile picture is a white circle with a teal cross pattern. Below the profile, the user's name is 'Thudum Rakesh' and their GitHub handle is 'thudumrakesh · he/him'. There are 0 followers and 2 following. The user has four public repositories listed:

- java-web-apps** [Public] - demo dynamic application. Updated on Dec 14, 2023. Language: Java.
- java-web-calculator** [Public] - demo. Updated on Dec 11, 2023. Language: Java.
- food-** [Public] - demo. Updated on Dec 11, 2023. Language: HTML.
- java-calculator** [Public] - demo. Updated on Dec 11, 2023. Language: Java.

3.Give your repository a name and select whether it is a private or a public repository. [private is recommended].



The screenshot shows the 'Create a new repository' form on GitHub. The title is 'Create a new repository'. A note says 'A repository contains all project files, including the revision history. Already have a project repository elsewhere? Import a repository.' Below is a note: 'Required fields are marked with an asterisk (*).'

Owner *: thudumrakesh

Repository name *: repo-in-remote

A note: 'Your new repository will be created as repo-in-remote-. The repository name can only contain ASCII letters, digits, and the characters ., -, and _.'

Below the repository name, there is a note: 'Great repository names are short and memorable. Need inspiration? How about upgraded-octo-fiesta ?'

Description (optional): creating repo in remote location

Visibility:
 Public: Anyone on the internet can see this repository. You choose who can commit.
 Private: You choose who can see and commit to this repository.

Initialize this repository with:
 Add a README file: This is where you can write a long description for your project. [Learn more about READMEs](#).

Add .gitignore:
gitignore template: None

4.Initialize this repository by adding a README.md file and click on Create repository.

Description (optional)
creating repo in remote location

Public
Anyone on the internet can see this repository. You choose who can commit.

Private
You choose who can see and commit to this repository.

Initialize this repository with:

Add a README file
This is where you can write a long description for your project. [Learn more about READMEs](#).

Add .gitignore
gitignore template: None →

Choose which files not to track from a list of templates. [Learn more about ignore files](#).

Choose a license
License: None →

A license tells others what they can and can't do with your code. [Learn more about licenses](#).

This will set `main` as the default branch. Change the default name in your settings.

① You are creating a private repository in your personal account.

Create repository

thudumrakesh / repo-in-remote- ⚡

Type ⌘ to search

Code Issues Pull requests Actions Projects Security Insights Settings

repo-in-remote- · Private

Unwatch 1 · Fork 0 · Star 0

main · 1 Branch · 0 Tags

Go to file · Add file · Code · About

thudumrakesh · Initial commit · 16 Oct 13 · now · 1 Commit

README.md · Initial commit · now

README

repo-in-remote-

creating repo in remote location

About

creating repo in remote location

· README

Activity

0 stars

1 watching

0 forks

Releases

No releases published · Create a new release

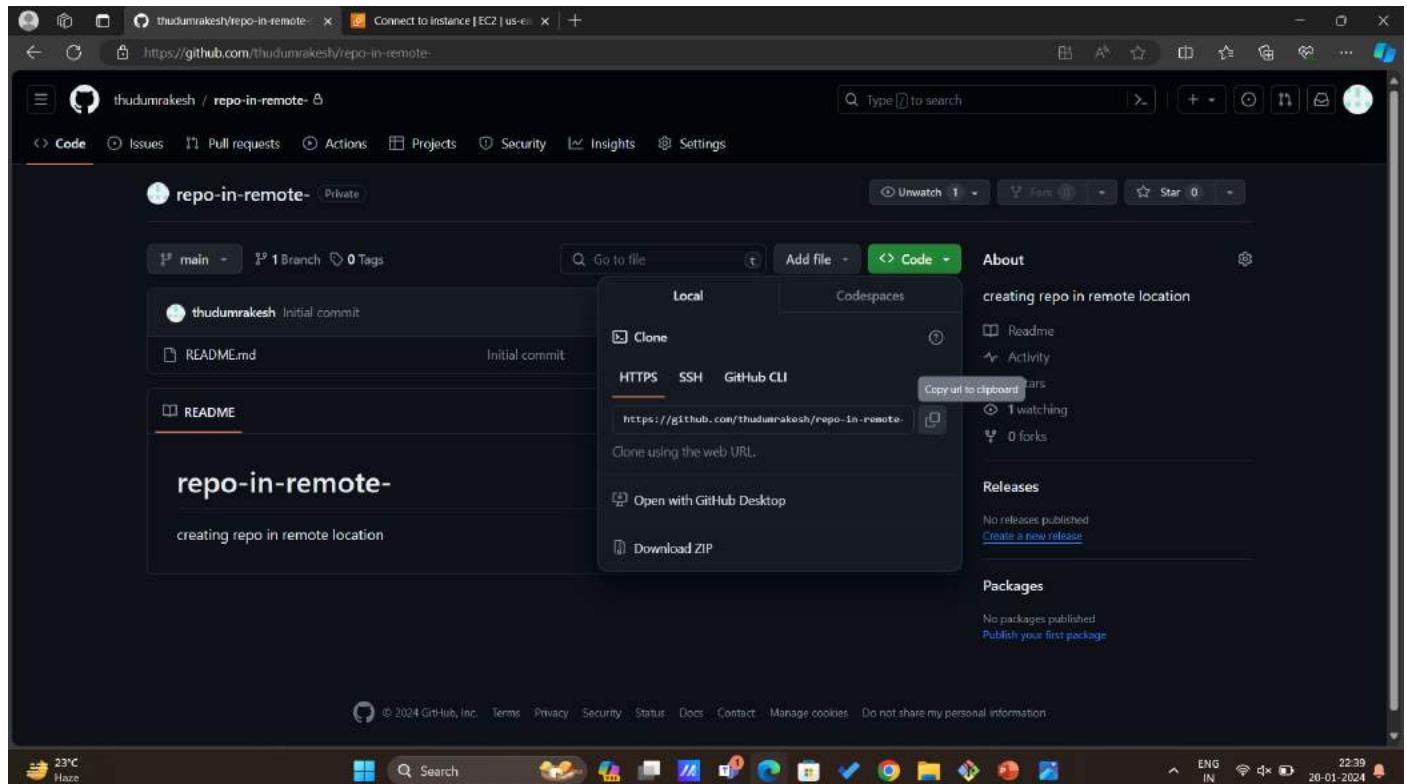
Packages

No packages published · Publish your first package

© 2024 GitHub, Inc. · Terms · Privacy · Security · Status · Docs · Contact · Manage cookies · Do not share my personal information

4.WORKING WITH REMOTE REPOSITORY

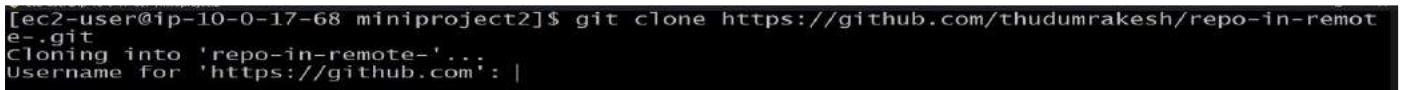
- 1.To clone the repository in to your Local Machine copy the clone URL of your created repository.
- 2.To clone this repository login to your Instance and using the command “git clone” .



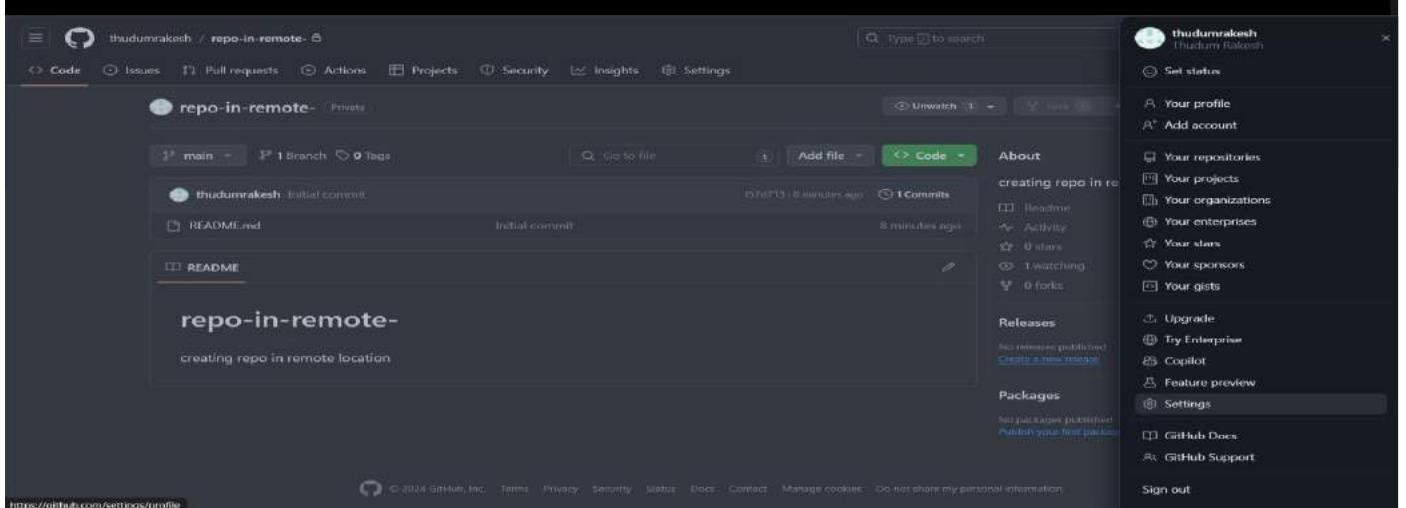
3. In order to clone the repository, it asks for your git hub username and password.
- 4.Give the username and in the password section paste a git access token. On the top right corner click on your profile and scroll down and click on settings.

5.Click on developers settings in the left navigation panel.

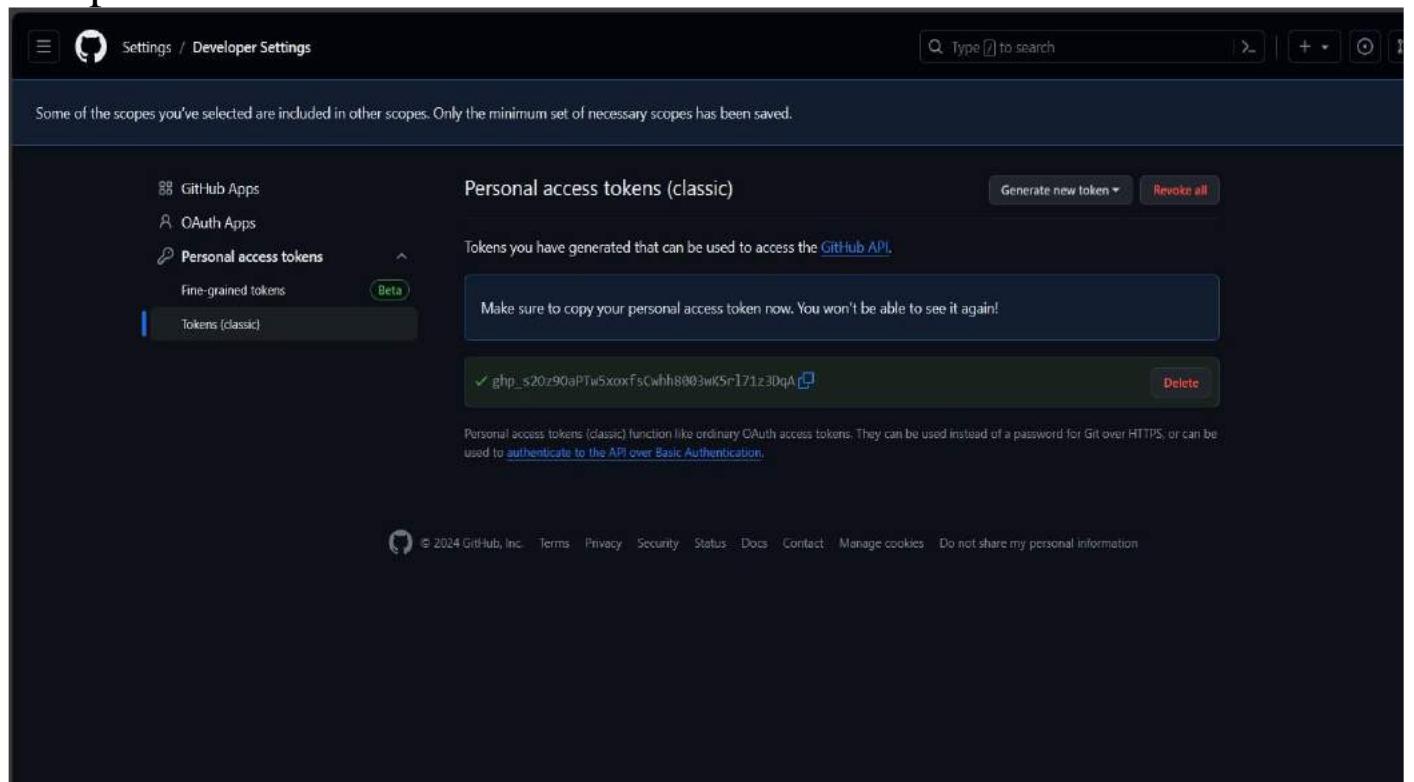
6.Click on Token classic Click on Generate new token classic Give your



```
[ec2-user@ip-10-0-17-68 miniproject2]$ git clone https://github.com/thudumrakesh/repo-in-remote-
Cloning into 'repo-in-remote-'...
Username for 'https://github.com': |
```



token a Note and put check mark on repo under scopes. Copy the token and paste it somewhere else for future use.



Some of the scopes you've selected are included in other scopes. Only the minimum set of necessary scopes has been saved.

Personal access tokens (classic)

Generate new token ▾ Revoke all

Tokens you have generated that can be used to access the [Github API](#).

Make sure to copy your personal access token now. You won't be able to see it again!

✓ ghp_s20z90aPTw5xoxf5Cwhh8003wK5r171z3DqA  Delete

Personal access tokens (classic) function like ordinary OAuth access tokens. They can be used instead of a password for Git over HTTPS, or can be used to authenticate to the API over Basic Authentication.

7.Copy the token and paste it somewhere else for future use Back to cloning the repository, after giving username in the password section paste the token that we just created.

```
[ec2-user@ip-10-0-17-68 ~]$ git clone https://github.com/thudumrakesh/repo-in-remote-.git
Cloning into 'repo-in-remote-'...
Username for 'https://github.com': thudumrakesh
Password for 'https://thudumrakesh@github.com':
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (3/3), done.
[ec2-user@ip-10-0-17-68 ~]$ ls
repo-in-remote-
[ec2-user@ip-10-0-17-68 ~]$ |
```

```
[ec2-user@ip-10-0-17-68 ~]$ git clone https://github.com/thudumrakesh/repo-in-remote-.git
Cloning into 'repo-in-remote-'...
Username for 'https://github.com': thudumrakesh
Password for 'https://thudumrakesh@github.com':
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (3/3), done.
[ec2-user@ip-10-0-17-68 ~]$ ls
repo-in-remote-
[ec2-user@ip-10-0-17-68 ~]$ cd repo-in-remote-
[ec2-user@ip-10-0-17-68 repo-in-remote-]$ ls
README.md
[ec2-user@ip-10-0-17-68 repo-in-remote-]$ git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean
[ec2-user@ip-10-0-17-68 repo-in-remote-]$ touch test{1..3}
[ec2-user@ip-10-0-17-68 repo-in-remote-]$ ls
README.md test1 test2 test3
[ec2-user@ip-10-0-17-68 repo-in-remote-]$
```

```
ec2-user@ip-10-0-17-68:~/repo-in-remote-
 README.md
[ec2-user@ip-10-0-17-68 repo-in-remote-]$ git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean
[ec2-user@ip-10-0-17-68 repo-in-remote-]$ touch test{1..3}
[ec2-user@ip-10-0-17-68 repo-in-remote-]$ ls
README.md test1 test2 test3
[ec2-user@ip-10-0-17-68 repo-in-remote-]$ git status
On branch main
Your branch is up to date with 'origin/main'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    test1
    test2
    test3

nothing added to commit but untracked files present (use "git add" to track)
```

```
nothing added to commit but untracked files present (use "git add" to track)
[ec2-user@ip-10-0-17-68 repo-in-remote-]$ git add .
[ec2-user@ip-10-0-17-68 repo-in-remote-]$ git status
On branch main
Your branch is up to date with 'origin/main'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file: test1
    new file: test2
    new file: test3

[ec2-user@ip-10-0-17-68 repo-in-remote-]$ |
```

```
[ec2-user@ip-10-0-17-68 repo-in-remote-]$ git commit -m "add"
[main acd8248] add
  Committer: EC2 Default User <ec2-user@ip-10-0-17-68.ec2.internal>
  Your name and email address were configured automatically based
  on your username and hostname. Please check that they are accurate.
  You can suppress this message by setting them explicitly. Run the
  following command and follow the instructions in your editor to edit
  your configuration file:

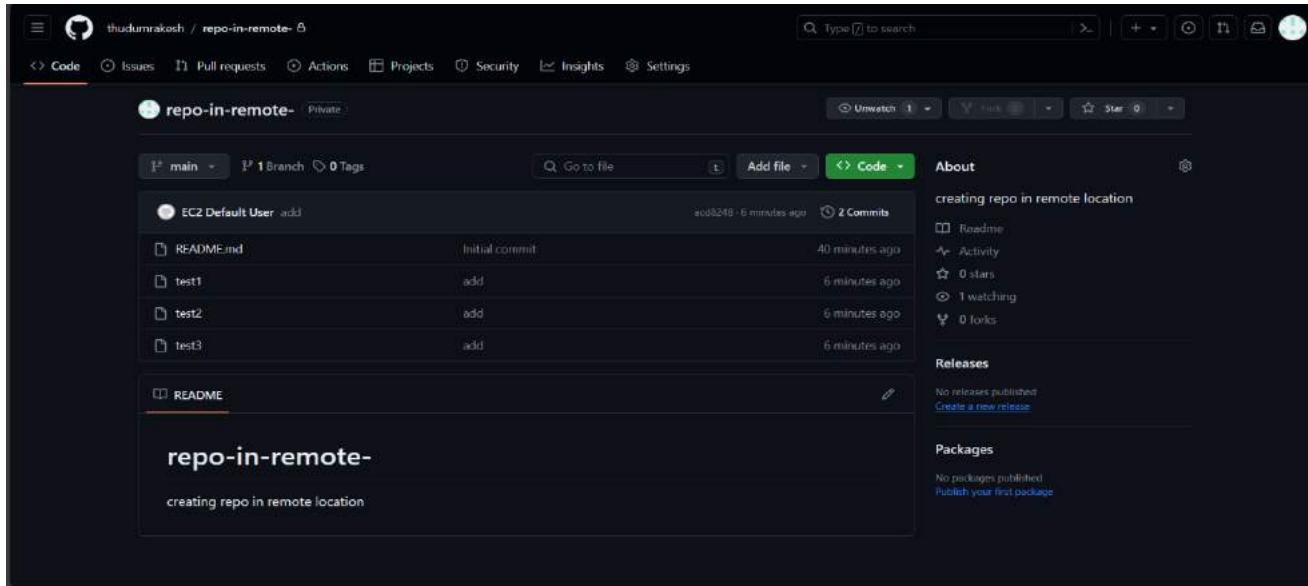
    git config --global --edit

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

  3 files changed, 0 insertions(+), 0 deletions(-)
  create mode 100644 test1
  create mode 100644 test2
  create mode 100644 test3
[ec2-user@ip-10-0-17-68 repo-in-remote-]$
```

```
create mode 100644 tests
[ec2-user@ip-10-0-17-68 repo-in-remote-]$ git push
Username for 'https://github.com': thudumrakesh
Password for 'https://thudumrakesh@github.com':
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 293 bytes | 293.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/thudumrakesh/repo-in-remote-.git
  f57d713..acd8248 main -> main
[ec2-user@ip-10-0-17-68 repo-in-remote-]$
```



5.PUSHING A LOCAL REPO TO GITHUB

- 1.Create a directory in your local machine.
2. Initialize it using command “git init”.
- 3.Create some files using command “touch”.
- 4.Tracks these files and commit them using commands “git add .” And “git commit –m”.
- 5.Open your git hub remote account. · Create a remote repository with same name as local repository [github].
- 6.Click on + and then Give your remote repository same name as local repository
- 7.Create the repository without initializing it. · Click on create repository
- 8.Remote repository is now created successfully
- 9.Execute all the commands shown in the repository. “git branch -M main” “git remote add origin” “git push -u origin main”
- 10.Check the remote repository in git hub. · The files that we created in our local repository are successfully pushed to our remote repository click on New Repository

```

ec2-user@ip-10-0-16-22:~/git-project$ ls
samplefile1 samplefile2 samplefile3 samplefile4 samplefile5
[ec2-user@ip-10-0-16-22 git-project]$ git status
On branch main
nothing to commit, working tree clean
[ec2-user@ip-10-0-16-22 git-project]$ git remote add origin https://github.com/thudumrakesh/git-project.git
error: remote origin already exists.
[ec2-user@ip-10-0-16-22 git-project]$ git branch -M main
[ec2-user@ip-10-0-16-22 git-project]$ git push -u origin main
fatal: 'origin' does not appear to be a git repository
fatal: Could not read from remote repository.

Please make sure you have the correct access rights
and the repository exists.
[ec2-user@ip-10-0-16-22 git-project]$ git push -u origin main
Username for 'https://github.com': thudumrakesh
Password for 'https://thudumrakesh@github.com':
remote: Permission to thudumrakesh/git-project.git denied to thudumrakesh.
fatal: unable to access 'https://github.com/thudumrakesh/git-project.git/': The requested URL returned error: 403
[ec2-user@ip-10-0-16-22 git-project]$ git push -u origin main
Username for 'https://github.com': thudumrakesh
Password for 'https://thudumrakesh@github.com':
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 251 bytes | 251.00 KiB/s, done.
total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/thudumrakesh/git-project.git
 * [new branch]  main > main
branch 'main' set up to track 'origin/main'.
[ec2-user@ip-10-0-16-22 git-project]$

```

git-project Public

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

main 1 Branch 0 Tags Go to file Add file Code About

EC2 Default User new files added ha21c52 · 25 minutes ago 1 Commits

samplefile1	new files added	25 minutes ago
samplefile2	new files added	25 minutes ago
samplefile3	new files added	25 minutes ago
samplefile4	new files added	25 minutes ago
samplefile5	new files added	25 minutes ago

README

pushing to local to git remote

Activity 0 stars 1 watching 0 forks

No releases published Create a new release

Packages

No packages published Publish your first package

6.CREATING A NEW BRANCH FROM MAIN

1.Open your Git hub remote repository.

2.Click on Main, give your new branch a name and then click on “create branch SAALAR” from main”

The screenshot shows a GitHub repository page for 'thudumrakesh/git-project'. The 'Code' tab is selected. Below the repository header, there are icons for eye, fork, and star. The repository stats show 0 stars, 0 forks, 1 watching, 1 Branch, 0 Tags, and Activity. It is a Public repository. A modal window titled 'Switch branches/tags' is open, showing a search bar with 'SAALAR' typed in. Below the search bar are tabs for 'Branches' (selected) and 'Tags'. A button 'Create branch SAALAR from main' is visible. The main content area shows a list of commits for the 'main' branch, all dated '4 hours ago' and showing 'w files added'. To the right of the commits is a green button 'Go to file'.

3.We see a new branch with the given name is created {SAALAR}

The screenshot shows the 'Branches' page on GitHub. At the top right is a green button 'New branch'. Below it are tabs for 'Overview', 'Yours', 'Active', 'Stale', and 'All'. A search bar contains 'Search branches...'. The 'Default' section shows the 'main' branch with an update time of '4 hours ago'. The 'Your branches' section shows the 'SAALAR' branch with an update time of '1 minute ago' and a status of '0 | 0'. The 'Active branches' section also shows the 'SAALAR' branch with the same details. Each branch row has a trash icon at the end.

4.Make changes in this branch directly from console.

```
[ec2-user@ip-10-0-16-22:~/git-project]$ ls
samplefile1 samplefile2 samplefile3 samplefile4 samplefile5
[ec2-user@ip-10-0-16-22:~/git-project]$ git checkout -b SAALAR
fatal: a branch named 'SAALAR' already exists
[ec2-user@ip-10-0-16-22:~/git-project]$ git switch -c SAALAR
fatal: a branch named 'SAALAR' already exists
[ec2-user@ip-10-0-16-22:~/git-project]$ git checkout SAALAR
Switched to branch 'SAALAR'
[ec2-user@ip-10-0-16-22:~/git-project]$ GIT BRANCH
-bash: GIT: command not found
[ec2-user@ip-10-0-16-22:~/git-project]$ git branch
* SAALAR
  main
[ec2-user@ip-10-0-16-22:~/git-project]$ git switch SAALAR
Already on 'SAALAR'
[ec2-user@ip-10-0-16-22:~/git-project]$ touch prabhas{1..7}
[ec2-user@ip-10-0-16-22:~/git-project]$ ls
prabhas1 prabhas2 prabhas3 prabhas4 prabhas5 prabhas6 prabhas7
prabhas1 prabhas2 prabhas3 prabhas4 prabhas5 prabhas6 prabhas7
[ec2-user@ip-10-0-16-22:~/git-project]$ git status
On branch SAALAR
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    prabhas1
    prabhas2
    prabhas3
    prabhas4
    prabhas5
    prabhas6
    prabhas7

nothing added to commit but untracked files present (use "git add" to track)
[ec2-user@ip-10-0-16-22:~/git-project]$ git add .
[ec2-user@ip-10-0-16-22:~/git-project]$ git commit -m "addpradhas"
[SAALAR f709f9d] addpradhas
Committer: EC2 Default User <ec2-user@ip-10-0-16-22.ec2.internal>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly. Run the
following command and follow the instructions in your editor to edit
your configuration file:
git config --global --edit

After doing this, you may fix the identity used for this commit with:
  git commit --amend --reset-author
7 files changed, 0 insertions(+), 0 deletions(-)

[ec2-user@ip-10-0-16-22:~/git-project]$ git config --global --edit
[ec2-user@ip-10-0-16-22:~/git-project]$ git commit -m "addpradhas"
[SAALAR f709f9d] addpradhas
Committer: EC2 Default User <ec2-user@ip-10-0-16-22.ec2.internal>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly. Run the
following command and follow the instructions in your editor to edit
your configuration file:
git config --global --edit

After doing this, you may fix the identity used for this commit with:
  git commit --amend --reset-author
7 files changed, 0 insertions(+), 0 deletions(-)
create mode 100644 prabhas1
create mode 100644 prabhas2
create mode 100644 prabhas3
create mode 100644 prabhas4
create mode 100644 prabhas5
create mode 100644 prabhas6
create mode 100644 prabhas7
[ec2-user@ip-10-0-16-22:~/git-project]$ git remote add origin https://github.com/thudumrakesh/git-project.git
error: remote origin already exists.
[ec2-user@ip-10-0-16-22:~/git-project]$ git push -u main
fatal: 'main' does not appear to be a git repository
fatal: Could not read from remote repository.

Please make sure you have the correct access rights
and the repository exists.
[ec2-user@ip-10-0-16-22:~/git-project]$ git push -u SAALAR
fatal: 'SAALAR' does not appear to be a git repository
fatal: Could not read from remote repository.

Please make sure you have the correct access rights
and the repository exists.
[ec2-user@ip-10-0-16-22:~/git-project]$ git remote add SAALAR https://github.com/thudumrakesh/git-project.git
[ec2-user@ip-10-0-16-22:~/git-project]$ ls
prabhas1 prabhas2 prabhas3 prabhas4 prabhas5 prabhas6 prabhas7
[ec2-user@ip-10-0-16-22:~/git-project]$ git push -u SAALAR
username for 'https://github.com': thudumrakesh
Password for 'https://thudumrakesh@github.com':
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (2/2), 301 bytes | 302.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/thudumrakesh/git-project.git
  baltic52...f709f9d SAALAR -> SAALAR
branch 'SAALAR' set up to track 'SAALAR/SAALAR'.
[ec2-user@ip-10-0-16-22:~/git-project]$ ls
prabhas1 prabhas2 prabhas3 prabhas4 prabhas5 prabhas6 prabhas7
```

This branch is 1 commit ahead of `main`.

`Compare & pull request`

`Go to file` `+` `<> Code`

`Contribute`

Branch	Author	Last Commit
<code>prabhas1</code>	<code>addpradhas</code>	6 minutes ago
<code>prabhas2</code>	<code>addpradhas</code>	6 minutes ago
<code>prabhas3</code>	<code>addpradhas</code>	6 minutes ago
<code>prabhas4</code>	<code>addpradhas</code>	6 minutes ago
<code>prabhas5</code>	<code>addpradhas</code>	6 minutes ago
<code>prabhas6</code>	<code>addpradhas</code>	6 minutes ago
<code>prabhas7</code>	<code>addpradhas</code>	6 minutes ago
<code>samplefile1</code>	<code>new files added</code>	5 hours ago
<code>samplefile2</code>	<code>new files added</code>	5 hours ago
<code>samplefile3</code>	<code>new files added</code>	5 hours ago

[View all files](#)

7.PULLING ALL BRANCHES IN LOCAL MACHINE

- 1.Get in to your local machine where you created the previous directory.
- 2.Execute command “git pull” All the branches are pulled into your local machine.
3. To check, use command “git branch -a”

```
ec2-user@ip-10-0-16-22:~/git-project
$ git checkout main
Already up-to-date.
[ec2-user@ip-10-0-16-22 git-project]$ git branch -a
* main
  prabhas1
  prabhas2
  prabhas3
  prabhas4
  prabhas5
  prabhas6
  prabhas7
  samplefile1
  samplefile2
  samplefile3

[ec2-user@ip-10-0-16-22 git-project]$ git checkout SAALAR
Already on 'SAALAR'.
Your branch is up-to-date with 'SAALAR/SAALAR'.
[ec2-user@ip-10-0-16-22 git-project]$ git branch -a
* main
  prabhas1
  prabhas2
  prabhas3
  prabhas4
  prabhas5
  prabhas6
  prabhas7
  samplefile1
  samplefile2
  samplefile3

[ec2-user@ip-10-0-16-22 git-project]$ git status
On branch SAALAR
Your branch is up-to-date with 'SAALAR/SAALAR'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    .manner1
    .manner2
    .manner3

nothing added to commit but untracked files present (use "git add" to track)

[ec2-user@ip-10-0-16-22 git-project]$ git add .
[ec2-user@ip-10-0-16-22 git-project]$ git commit -m "add"
[SAALAR 6ac1810] add
  Committer: EC2 Default User <ec2-user@ip-10-0-16-22.ec2.internal>
  Your name and email address were configured automatically based on your
  username and hostname. Please check that they are accurate.
  You can suppress this message by setting them explicitly. Run the
  following command to follow the instructions in your editor to edit
  your configuration file:
    git config --global --edit
After doing this, you may fix the identity used for this commit with:
  git commit --amend --reset-author

3 files changed, 0 insertions(+), 0 deletions(-)
create mode 100644 .manner1
create mode 100644 .manner2
create mode 100644 .manner3
[ec2-user@ip-10-0-16-22 git-project]$ git push
remote: Resolving deltas: 100% (1/1); completed with 1 local object.
To https://github.com/thudumakesh/git-project.git
  77079d9..6ac1810  SAALAR -> SAALAR

23°C
Haze
Search
ENG IN
22:29
24-01-2024
```

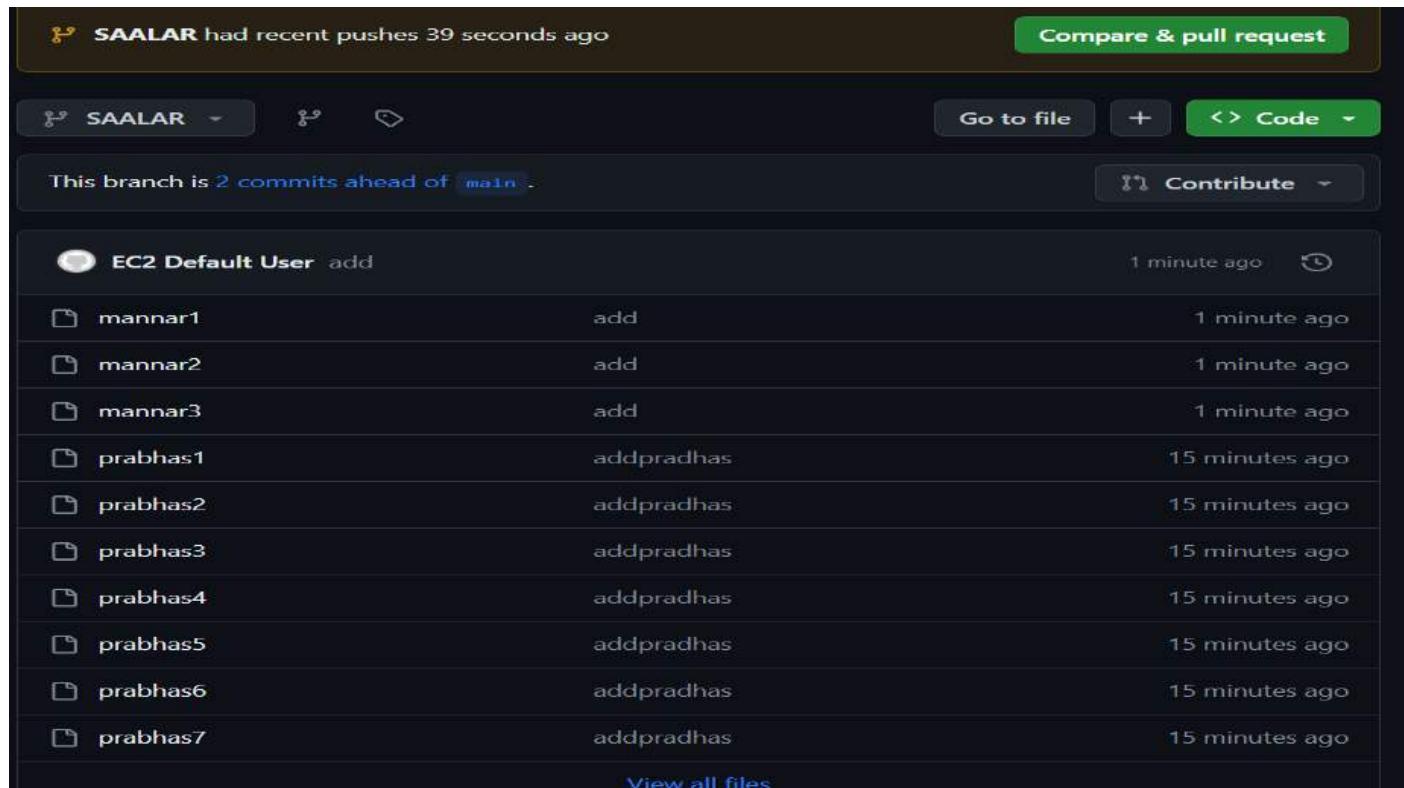
- 4.Switch to the other branch you created [SAALAR] Except the files that are already present, create some new files using “touch” command

Except the files that are already present, create some new files using “touch” command Check the status of the Repo with “git status” command.

5.Check the status of the Repo with “git status” command Add these files using command “git add .”

6.After adding, commit them using command “git commit –m’ Make sure all the files in this branch are added and committed

7.Push these files to remote repository using command “git push”



Commit	Message	Time
EC2 Default User	add	1 minute ago
mannar1	add	1 minute ago
mannar2	add	1 minute ago
mannar3	add	1 minute ago
prabhas1	addpradhas	15 minutes ago
prabhas2	addpradhas	15 minutes ago
prabhas3	addpradhas	15 minutes ago
prabhas4	addpradhas	15 minutes ago
prabhas5	addpradhas	15 minutes ago
prabhas6	addpradhas	15 minutes ago
prabhas7	addpradhas	15 minutes ago

8.Check the remote repository, new files that are created in local repository are now pushed in to remote repository

8.MERGING NEW BRANCH WITH MAIN BRANCH

1.Get in to your remote repository in github account.

The screenshot shows a GitHub repository interface. At the top, a message says "SAALAR had recent pushes 3 minutes ago". Below it, there's a "Compare & pull request" button. The main area shows a list of recent pushes from "EC2 Default User": "samplefile1", "samplefile2", "samplefile3", "samplefile4", and "samplefile5", all added "5 hours ago". Below this is a "README" section with a "Add a README" button and a "Help people interested in this repository understand your project by adding a README." note. There's also a small icon of an open book.

2.Click on compare and pull requests tab.

The screenshot shows a GitHub pull request merge page. At the top, it says "Saalar #1 thudumrakesh wants to merge 2 commits into main from SAALAR". Below this is a "Merge pull request" button. The main content area lists merge requirements: "Require approval from specific reviewers before merging" (with a "Add rule" button), "Continuous integration has not been set up" (with a note about GitHub Actions and other apps), and "This branch has no conflicts with the base branch" (with a note that merging can be performed automatically). At the bottom, there's a "Add a comment" section with "Write" and "Preview" tabs, rich text editor tools, and a text input field that says "Add your comment here...". It also includes a note that Markdown is supported and a file upload section.

3. Make sure the base is set to Main and Compare is set to the Feature repository.

The screenshot shows a GitHub pull request merge dialog. At the top, it says "Saalar #1 thudumrakesh wants to merge 2 commits into main from SAALAR". Below this, there's a commit history from "EC2 Default User" showing two commits: "addpradhast." and "add". A message at the bottom says "Add more commits by pushing to the SAALAR branch on thudumrakesh/git-project". In the center, there's a box for "Merge pull request #1 from thudumrakesh/SAALAR" with the author "Saalar". It also notes that "This commit will be authored by 144659414+thudumrakesh@users.noreply.github.com". At the bottom are "Confirm merge" and "Cancel" buttons. Below the dialog is a "Add a comment" section with a rich text editor.

4. A new pull request is created from the branch SAALAR to Main.

5. Click on Merge Pull request. You can add a comment if you want.

6. Asks for confirmation to merge. Click on Confirm Merge.

7. Now the Merge is Successful.

The screenshot shows a GitHub merge confirmation dialog. At the top, it says "Merged" and "Saalar #1 thudumrakesh merged 2 commits into main from SAALAR now". Below this, it shows a commit from "thudumrakesh" merging commit "062fa77" into "main" now. There is a "Revert" button next to it. A message box says "Pull request successfully merged and closed. You're all set—the SAALAR branch can be safely deleted." with a "Delete branch" button. Below this is another "Add a comment" section with a rich text editor. At the bottom, there are "Markdown is supported" and "Paste, drop, or click to add files" options, along with a "Comment" button.

8.Go in to the Main branch and review.

9.All the files in the branch SAALAR are now merged in Main.

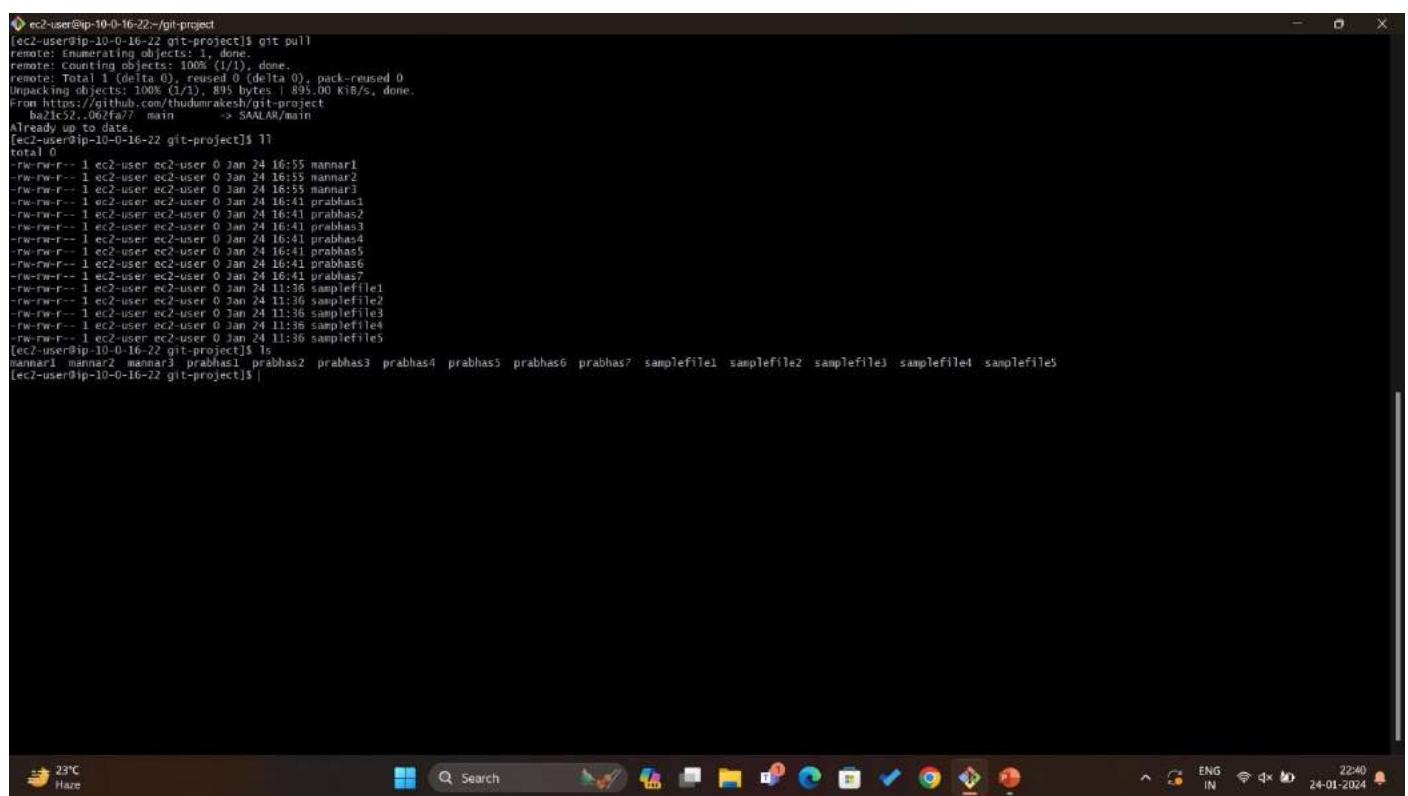
The screenshot shows a GitHub repository interface. At the top, it displays 'main' as the active branch, '2 Branches', and '0 Tags'. Below the header, there's a search bar labeled 'Go to file' and a button 'Add file'. A green 'Code' button is highlighted. To the right of the code button are 'About', 'All Bookmarks', and a gear icon. The main content area shows a list of commits:

Commit	Action	Time Ago
mannar1	add	6 minutes ago
mannar2	add	6 minutes ago
mannar3	add	6 minutes ago
prabhas1	addpradhas	20 minutes ago
prabhas2	addpradhas	20 minutes ago
prabhas3	addpradhas	20 minutes ago
prabhas4	addpradhas	20 minutes ago
prabhas5	addpradhas	20 minutes ago
prabhas6	addpradhas	20 minutes ago
prabhas7	addpradhas	20 minutes ago
samplefile1	new files added	5 hours ago
samplefile2	new files added	5 hours ago
samplefile3	new files added	5 hours ago
samplefile4	new files added	5 hours ago
samplefile5	new files added	5 hours ago

On the right side of the commit list, there are sections for 'Activity' (0 stars, 1 watching, 0 forks), 'Releases' (no releases published, link to 'Create a new release'), and 'Packages' (no packages published, link to 'Publish your first package').

9.PULLING NEW CHANGES IN LOCAL REPO

- 1.Get In to the path where you created your local repository.
- 2.Checkout to the Main branch from Feature branch using command “git checkout main”.
- 3.Pull all the changes done in Remote repository in to your Local repository using command “git pull”.
- 4.All the files are successfully pulled in to Local repository.
- 5.Check using command “ll” or “ls”.



```
ec2-user@ip-10-0-16-22:~/git-project$ git pull
remote: Enumerating objects: 11, done.
remote: Counting objects: 100% (11/11), done.
remote: Total 11 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (11/11) 895 bytes | 895.00 KiB/s, done.
From https://github.com/thudumrakesh/git-project
   ba21c52..062fa??  main      -> SALAR/main
Already up to date.
[ec2-user@ip-10-0-16-22 git-project]$ ll
total 0
-rw-r--r-- 1 ec2-user ec2-user 0 Jan 24 16:55 mannar1
-rw-r--r-- 1 ec2-user ec2-user 0 Jan 24 16:55 mannar2
-rw-r--r-- 1 ec2-user ec2-user 0 Jan 24 16:55 mannar3
-rw-r--r-- 1 ec2-user ec2-user 0 Jan 24 16:41 prabhas1
-rw-r--r-- 1 ec2-user ec2-user 0 Jan 24 16:41 prabhas2
-rw-r--r-- 1 ec2-user ec2-user 0 Jan 24 16:41 prabhas3
-rw-r--r-- 1 ec2-user ec2-user 0 Jan 24 16:41 prabhas4
-rw-r--r-- 1 ec2-user ec2-user 0 Jan 24 16:41 prabhas5
-rw-r--r-- 1 ec2-user ec2-user 0 Jan 24 16:41 prabhas6
-rw-r--r-- 1 ec2-user ec2-user 0 Jan 24 16:41 prabhas7
-rw-r--r-- 1 ec2-user ec2-user 0 Jan 24 11:36 samplefile1
-rw-r--r-- 1 ec2-user ec2-user 0 Jan 24 11:36 samplefile2
-rw-r--r-- 1 ec2-user ec2-user 0 Jan 24 11:36 samplefile3
-rw-r--r-- 1 ec2-user ec2-user 0 Jan 24 11:36 samplefile4
-rw-r--r-- 1 ec2-user ec2-user 0 Jan 24 11:36 samplefile5
[ec2-user@ip-10-0-16-22 git-project]$ ls
mannar1 mannar2 mannar3 prabhas1 prabhas2 prabhas3 prabhas4 prabhas5 prabhas6 prabhas7 samplefile1 samplefile2 samplefile3 samplefile4 samplefile5
[ec2-user@ip-10-0-16-22 git-project]$
```

