

**Date-04/11/23**

## Weekend Task

1. Launch two instances using as below:

- Manual scaling

The screenshot shows the AWS EC2 Instances page. On the left, there's a sidebar with navigation links like EC2 Dashboard, EC2 Global View, Events, Instances, Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, and Images. The main area displays a table with one row for an instance named 'linux'. The instance details are as follows:

Name	Instance ID	Instance state	Instance type	Status
linux	i-0d879f0f33b338b37	Running	t2.micro	2/2

Below the table, there's a section for the selected instance (i-0d879f0f33b338b37). It includes tabs for Details, Security, Networking, Storage, Status checks, Monitoring, and Tags. Under the Details tab, there's an 'Instance summary' section with fields for Instance ID, Public IPv4 address, Private IPv4 addresses, IPv6 address, Instance state, and Public IPv4 DNS.

The screenshot shows the 'Create image' page for the instance i-0d879f0f33b338b37. The page has a header 'EC2 > Instances > i-0d879f0f33b338b37 > Create image'. The main content area is titled 'Create image' and contains the following fields:

- Instance ID: i-0d879f0f33b338b37 (linux)
- Image name: new-AMI
- Image description - optional: Image description
- No reboot:  Enable
- Instance volumes: A table with columns for Storage type, Device, Snapshot, Size, Volume type, IOPS, Throughput, Delete on, and Encrypted.

At the bottom, there are CloudShell and Feedback buttons, along with a search bar and system status indicators.

Instances | EC2 | us-east-1

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#instances:v=3;\$case=tag:client=false:\$regex=tags:false%5C,client:false

aws Services Search [Alt+S]

EC2 Dashboard EC2 Global View Events Instances Instances Instance Types Launch Templates Spot Requests Savings Plans Reserved Instances Dedicated Hosts Capacity Reservations New Images AMIs AMI Catalog Elastic Block Store Volumes CloudShell Feedback Type here to search © 2023, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences 7:07 PM 11/6/2023

Currently creating AMI `ami-0cff911ea5ae79c17` from instance `i-0d879f0f33b338b37`. Check that the AMI status is 'Available' before deleting the instance or carrying out other actions related to this AMI.

Instances (1) Info

Find Instance by attribute or tag (case-sensitive)

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
linux	i-0d879f0f33b338b37	Running	t2.micro	2/2 checks passed	1/1 h...	us-east-1a

Select an instance

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Images | EC2 | us-east-1

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#images:visibility=owned-by-me

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EC2 Dashboard EC2 Global View Events Instances Instances Instance Types Launch Templates Spot Requests Savings Plans Reserved Instances Dedicated Hosts Capacity Reservations New Images AMIs AMI Catalog Elastic Block Store Volumes CloudShell Feedback Type here to search © 2023, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences 7:07 PM 11/6/2023

Amazon Machine Images (AMIs) (1/1) Info

Recycle Bin EC2 Image Builder Actions Launch instance from AMI

Owned by me Find AMI by attribute or tag

Name	AMI name	AMI ID	Source	Owner
MS-AMI	new-AMI	ami-0cff911ea5ae79c17	331102913523/new-AMI	331102913523

AMI ID: `ami-0cff911ea5ae79c17 (MS-AMI)`

Details Permissions Storage Tags

AMI ID ami-0cff911ea5ae79c17 (MS-AMI)	Image type machine	Platform details Linux/UNIX	Root device type EBS
AMI name new-AMI	Owner account ID 331102913523	Architecture x86_64	Usage operation RunInstances
Root device name /dev/xvda	Status Available	Source 331102913523/new-AMI	Virtualization type hvm

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Instances | EC2 | us-east-1

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instancesv=3;\$case=true%5C,clientfalse;\$regex=tags:false%5C,client:false

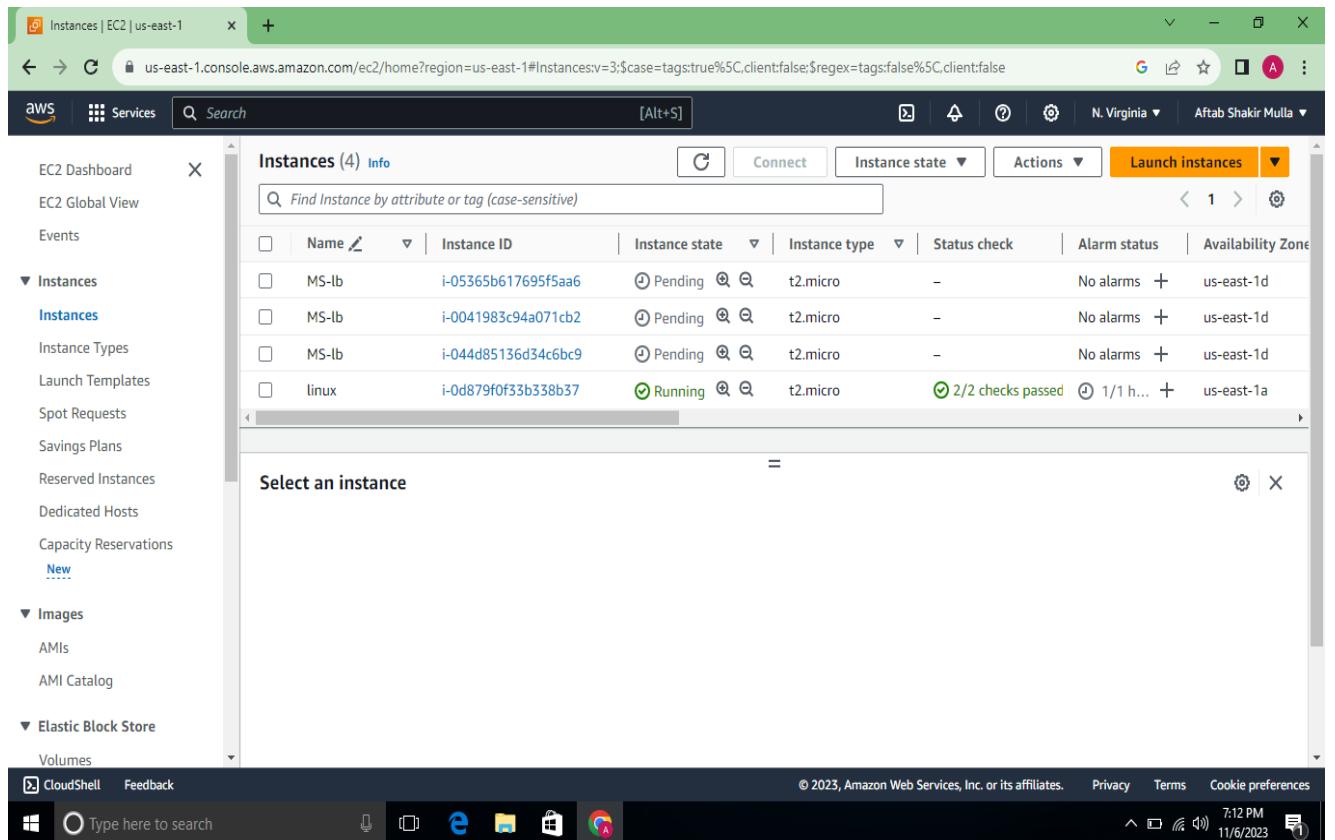
AWS Services Search [Alt+S] N. Virginia Aftab Shakir Mulla

**Instances (4) Info**

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
MS-lb	i-05365b617695f5aa6	Pending	t2.micro	-	No alarms	us-east-1d
MS-lb	i-0041983c94a071cb2	Pending	t2.micro	-	No alarms	us-east-1d
MS-lb	i-044d85136d34c6bc9	Pending	t2.micro	-	No alarms	us-east-1d
linux	i-0d879f0f33b338b37	Running	t2.micro	2/2 checks passed 1/1 h...	+	us-east-1a

Select an instance

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Instances | EC2 | us-east-1

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instancesv=3;\$case=true%5C,clientfalse;\$regex=tags:false%5C,client:false

AWS Services Q load balancers N. Virginia Aftab Shakir Mulla

Search results for 'load'

Try searching with longer queries for more relevant results

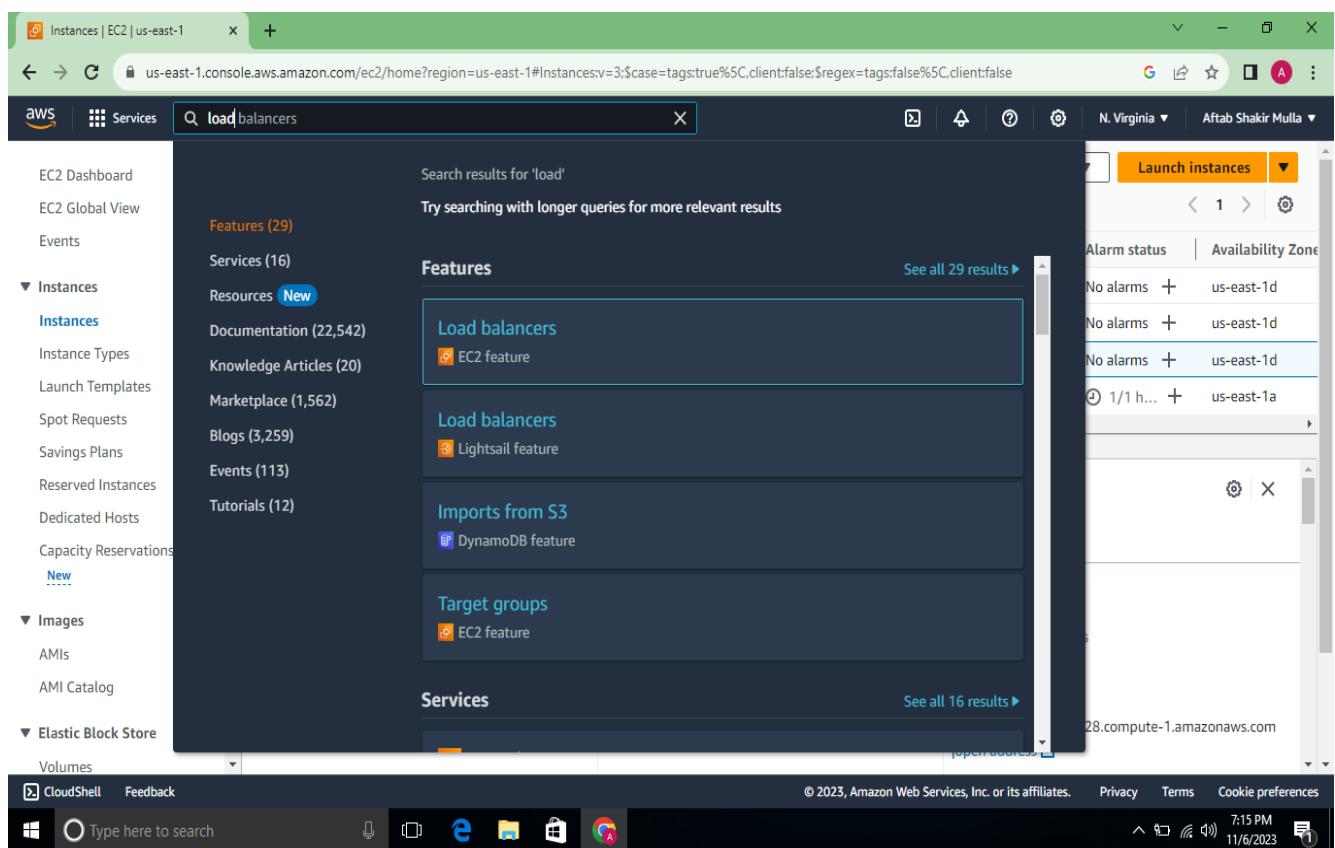
**Features**

Category	Count	Description
Services	16	EC2 feature
Blogs	3,259	Lightsail feature
Events	113	DynamoDB feature
Tutorials	12	EC2 feature

**Services**

Category	Count	Description
Load balancers	1	EC2 feature
Imports from S3	1	DynamoDB feature
Target groups	1	EC2 feature

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Compare and select load balancer

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

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### Load balancer types

Application Load Balancer	Network Load Balancer	Gateway Load Balancer
Choose an Application Load Balancer when you need a flexible feature set for your applications with HTTP and HTTPS traffic. Operating at the request level, Application Load Balancers provide	Choose a Network Load Balancer when you need ultra-high performance, TLS offloading at scale, centralized certificate deployment, support for UDP, and static IP addresses for your	Choose a Gateway Load Balancer when you need to deploy and manage a fleet of third-party virtual appliances that support GENEVE. These appliances enable you to improve security,

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Create application load balancer Step 1 Create target group | EC2 Instances | EC2 | us-east-1

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateTargetGroup:protocol=HTTP:vpc=vpc-03c95515091ca2b1c

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### EC2 > Target groups > Create target group

Step 1 Specify group details

Your load balancer routes requests to the targets in a target group and performs health checks on the targets.

Step 2 Register targets

#### Basic configuration

Settings in this section can't be changed after the target group is created.

Choose a target type

Instances

- Supports load balancing to instances within a specific VPC.
- Facilitates the use of [Amazon EC2 Auto Scaling](#) to manage and scale your EC2 capacity.

IP addresses

- Supports load balancing to VPC and on-premises resources.
- Facilitates routing to multiple IP addresses and network interfaces on the same instance.
- Offers flexibility with microservice based architectures, simplifying inter-application communication.
- Supports IPv6 targets, enabling end-to-end IPv6 communication, and IPv4-to-IPv6 NAT.

Lambda function

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Create application load balancer Step 1 Create target group | EC2 Instances | EC2 | us-east-1

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateTargetGroup:protocol=HTTP:vpc=vpc-03c95515091ca2b1c

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Target group name: MS-tg

Protocol : Port: HTTP 80

IP address type: IPv4

VPC: default

Protocol version: HTTP1

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Create application load balancer Step 1 Create target group | EC2 Instances | EC2 | us-east-1

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateTargetGroup:protocol=HTTP:vpc=vpc-03c95515091ca2b1c

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Protocol: HTTP2

Health checks

Health check protocol: HTTP

Health check path: /index.html

Attributes

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Screenshot of the AWS Cloud Console showing the 'Register targets' step for creating a target group. The browser tabs are: 'Create application load balancer', 'Step 2 Create target group | EC2', and 'Instances | EC2 | us-east-1'. The main content area shows the 'Available instances (3/3)' table:

Instance ID	Name	State	Security groups
i-05365b617695f5aa6	MS-lb1	Running	linux demo
i-0041983c94a071cb2	MS-lb2	Running	linux demo
i-044d85136d34c6bc9	MS-lb3	Running	linux demo

Below the table, it says '3 selected'. A section for 'Ports for the selected instances' is shown, with a note: 'Ports for routing traffic to the selected instances.' The status bar at the bottom shows: CloudShell, Feedback, Type here to search, © 2023, Amazon Web Services, Inc. or its affiliates., Privacy, Terms, Cookie preferences, 10:18 PM, 11/6/2023.

Screenshot of the AWS Cloud Console showing the 'Review targets' step for creating a target group. The browser tabs are: 'Create application load balancer', 'Step 2 Create target group | EC2', and 'Instances | EC2 | us-east-1'. The main content area shows the 'Targets (3)' table:

Remove	Health status	Instance ID	Name	Port	State	Security groups	Zon
X	Pending	i-05365b617695f5aa6	MS-lb1	80	Running	linux demo	us-e
X	Pending	i-0041983c94a071cb2	MS-lb2	80	Running	linux demo	us-e
X	Pending	i-044d85136d34c6bc9	MS-lb3	80	Running	linux demo	us-e

Below the table, it says '3 pending'. Buttons for 'Cancel', 'Previous', and 'Create target group' are visible. The status bar at the bottom shows: CloudShell, Feedback, Type here to search, © 2023, Amazon Web Services, Inc. or its affiliates., Privacy, Terms, Cookie preferences, 10:19 PM, 11/6/2023.

Create application load balancer | Target group details | EC2 | us-east-1 | Instances | EC2 | us-east-1 | +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#TargetGroup:targetGroupArn=arn:aws:elasticloadbalancing:us-east-1:331102913523:targetgroup/MS-tg/f559f244c307b8bc

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EC2 Dashboard EC2 Global View Events

Instances Instances Instance Types Launch Templates Spot Requests Savings Plans Reserved Instances Dedicated Hosts Capacity Reservations New

Images AMIs AMI Catalog

Elastic Block Store Volumes

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Successfully created target group: MS-tg.

EC2 > Target groups > MS-tg

## MS-tg

Actions

**Details**

arn:aws:elasticloadbalancing:us-east-1:331102913523:targetgroup/MS-tg/f559f244c307b8bc

Target type	Protocol : Port	Protocol version	VPC
Instance	HTTP: 80	HTTP1	vpc-03c95515091ca2b1c
IP address type	Load balancer	None associated	
IPv4			

Total targets	Healthy	Unhealthy	Unused	Initial	Draining
3	0	0	3	0	0

**Distribution of targets by Availability Zone (AZ)**

Select values in this table to see corresponding filters applied to the Registered targets table below.

Create application load balancer | Target group details | EC2 | us-east-1 | Instances | EC2 | us-east-1 | +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#TargetGroup:targetGroupArn=arn:aws:elasticloadbalancing:us-east-1:331102913523:targetgroup/MS-tg/f559f244c307b8bc

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EC2 Dashboard EC2 Global View Events

Instances Instances Instance Types Launch Templates Spot Requests Savings Plans Reserved Instances Dedicated Hosts Capacity Reservations New

Images AMIs AMI Catalog

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Successfully created target group: MS-tg.

EC2 > Target groups > MS-tg

## MS-tg

Actions

**Details**

arn:aws:elasticloadbalancing:us-east-1:331102913523:targetgroup/MS-tg/f559f244c307b8bc

Target type	Protocol : Port	Protocol version	VPC
Instance	HTTP: 80	HTTP1	vpc-03c95515091ca2b1c
IP address type	Load balancer	None associated	
IPv4			

Total targets	Healthy	Unhealthy	Unused	Initial	Draining
3	0	0	3	0	0

**Distribution of targets by Availability Zone (AZ)**

Select values in this table to see corresponding filters applied to the Registered targets table below.

Load Balancer created successfully | Target group details | EC2 | Instances | EC2 | us-east-1 | +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateLBWizardSuccess:loadBalancerArn=arn:aws:elasticloadbalancing:us-east-1:331102913...

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Successfully created load balancer: MS-LB

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.

EC2 > Load balancers > MS-LB > Create Application Load Balancer

## Create Application Load Balancer

Suggested next steps

- Review, customize, or configure attributes for your load balancer and listeners using the **Description** and **Listeners** tabs within [MS-LB](#).
- Discover other services that you can integrate with your load balancer. Visit the **Integrated services** tab within [MS-LB](#).

[View load balancer](#)

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Load balancers | EC2 | us-east-1 | Target group details | EC2 | Instances | EC2 | us-east-1 | +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LoadBalancers:search=MS-LB

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EC2 Dashboard

EC2 Global View

Events

Instances

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Capacity Reservations

New

Images

AMIs

AMI Catalog

Elastic Block Store

Volumes

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EC2 > Load balancers

## Load balancers (1/1)

Elastic Load Balancing scales your load balancer capacity automatically in response to changes in incoming traffic.

Filter load balancers 1 match

MS-LB X Clear filters < 1 > ⚙

Name	DNS name	State	VPC ID	Availability Zones
MS-LB	MS-LB-285206345.us-east...	Active	vpc-03c95515091ca2...	2 Availability Zones

### Load balancer: MS-LB

Details | Listeners and rules | Network mapping | Security | Monitoring | Integrations | Attributes | Tags

#### Details

## - Automatic scaling

The screenshot shows the AWS EC2 Instances page. On the left, a sidebar navigation includes 'EC2 Dashboard', 'EC2 Global View', 'Events', 'Instances' (selected), 'Instance Types', 'Launch Templates', 'Spot Requests', 'Savings Plans', 'Reserved Instances', 'Dedicated Hosts', 'Capacity Reservations', and 'Images' (selected). The main content area displays 'Instances (1/4) Info' with a table showing four instances: MS-lb1, MS-lb2, MS-lb3, and linux. The 'linux' instance is selected and highlighted in blue. A context menu is open over the 'linux' instance, listing 'Connect', 'Instance state', 'Actions', 'Launch instances', 'View details', 'Manage instance state', 'Instance settings', 'Networking', 'Security', 'Image and templates' (which is currently selected and highlighted in orange), and 'Monitor and troubleshoot'. Below the table, an 'Instance summary' section provides details for the selected instance: Instance ID (i-0d879f0f33b338b37), Public IPv4 address (34.203.196.154), Private IPv4 addresses (172.31.32.63), and Public IPv4 DNS. The browser address bar at the top shows the URL 'us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instancesv=3:\$case=tags:true%5C,client:false:\$regex=tags:false%5C,client:false'.

The screenshot shows the 'Create image' wizard. The current step is 'Create image'. The form fields include:

- Instance ID: i-0d879f0f33b338b37 (linux)
- Image name: Auto-AMI
- Image description - optional: Image description
- No reboot:

The browser address bar at the top shows the URL 'us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateImage\$instanceId=i-0d879f0f33b338b37'.

Screenshot of the AWS EC2 Instances page showing four terminated instances (MS-lb1, MS-lb2, MS-lb3) and one running instance (linux). A message at the top indicates an AMI is currently being created from instance MS-lb3.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
MS-lb1	i-05365b617695f5aa6	Terminated	t2.micro	-	No alarms	us-east-1d
MS-lb2	i-0041983c94a071cb2	Terminated	t2.micro	-	No alarms	us-east-1d
MS-lb3	i-044d85136d34c6bc9	Terminated	t2.micro	-	No alarms	us-east-1d
linux	i-0d879f0f33b338b37	Running	t2.micro	Initializing	1/1 h...	us-east-1a

Screenshot of the AWS Auto Scaling Groups page. The main content area features a large heading "Amazon EC2 Auto Scaling helps maintain the availability of your applications". It includes a callout for "Create Auto Scaling group" and a section explaining what Auto Scaling groups are. Below this, there are sections for "How it works" (with a diagram) and "Pricing".

**Create Auto Scaling group**

Get started with EC2 Auto Scaling by creating an Auto Scaling group.

**Create Auto Scaling group**

**How it works**

Auto Scaling groups are collections of Amazon EC2 instances that enable automatic scaling and fleet management features. These features help you maintain the health and availability of your applications.

**Pricing**

Amazon EC2 Auto Scaling features have no additional fees beyond the service fees for Amazon EC2, CloudWatch (for scaling policies), and the other AWS resources that you use. Visit

The screenshot shows the AWS EC2 Auto Scaling group creation wizard at Step 3: Launch template. The main panel displays the 'Launch template' section, which includes a note for accounts created after May 31, 2023, stating that the EC2 console only supports creating Auto Scaling groups with launch templates. Below this, there is a dropdown menu labeled 'Select a launch template' and a button 'Create a launch template'. On the left sidebar, there are several optional steps: Step 3 (Auto Scaling group name), Step 4 (Configure group size and scaling policies), Step 5 (Add notifications), Step 6 (Add tags), and Step 7 (Review). At the bottom right, there are 'Cancel' and 'Next' buttons.

The screenshot shows the AWS EC2 Create launch template wizard. The main panel is titled 'Create launch template' and contains the following fields:

- Launch template name and description**:
  - Launch template name - required**: AS-temp
  - Template version description**: A prod webserver for MyApp
  - Auto Scaling guidance**: Info
  - Provide guidance to help me set up a template that I can use with EC2 Auto Scaling
- Summary** panel on the right showing sections for Software Image (AMI), Virtual server type (instance type), Firewall (security group), and Storage (volumes).
- A tooltip for the 'Free tier' is displayed, stating: 'Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month 30 GiB of EBS storage.'
- At the bottom right are 'Cancel' and 'Create launch template' buttons.

The screenshot shows the 'Create launch template' wizard in the AWS Management Console. The current step is 'Set instance type and AMI'. The left panel displays the 'Amazon Machine Image (AMI)' section, which lists an 'Auto-AMI' entry: `ami-0ca0bc27622bf7218`. The right panel shows the 'Summary' configuration, including the selected 'Software Image (AMI)' as an Auto-AMI and the 'Virtual server type (instance type)' as `t2.micro`. A note indicates that `t2.micro` is eligible for free tier usage. The bottom right corner shows the status bar with the date and time: `10:49 PM 11/6/2023`.

This screenshot shows the same 'Create launch template' wizard at the same step. The left panel now provides more detailed information about the `t2.micro` instance type, listing its family, vCPU count, memory, and current generation. It also notes that it is 'Free tier eligible'. The right panel's summary remains the same, with the note about the free tier. The status bar at the bottom right shows the date and time: `10:49 PM 11/6/2023`.

**Network settings**

Subnet Info: Don't include in launch template

Firewall (security groups): Select existing security group

Security groups: linux demo sg-0cb2c27e289e31c98

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

Software Image (AMI): Auto-AMI (ami-0ca0bc27622bf7218)

Virtual server type (instance type): t2.micro

Firewall (security group): linux demo

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

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per

Create launch template

**Success**  
Successfully created AS-temp(lt-085e7febe5f802874).

**Next Steps**

[Launch an instance](#)  
With On-Demand Instances, you pay for compute capacity by the second (for Linux, with a minimum of 60 seconds) or by the hour (for all other operating systems) with no long-term commitments or upfront payments. Launch an On-Demand Instance from your launch template.

[Launch instance from this template](#)

[Create an Auto Scaling group from your template](#)  
Amazon EC2 Auto Scaling helps you maintain application availability and allows you to scale your Amazon EC2 capacity up or down automatically according to conditions you define. You can use Auto Scaling to help ensure that you are running your desired number of Amazon EC2 instances during demand spikes to maintain performance and decrease capacity during lulls to reduce costs.

[Create Auto Scaling group](#)

[Create Spot Fleet](#)

Create launch template

The screenshot shows the AWS EC2 console interface for creating an Auto Scaling group. The current step is Step 6 - optional: Launch template. A note states: "For accounts created after May 31, 2023, the EC2 console only supports creating Auto Scaling groups with launch templates. Creating Auto Scaling groups with launch configurations is not recommended but still available via the CLI and API until December 31, 2023." The launch template is named "AS-temp".

Description	Launch template	Instance type
-	AS-temp lt-085e7febe5f802874	t2.micro

AMI ID: ami-0ca0bc27622bf7218  
Security groups: -  
Request Spot Instances: No  
Key pair name: linux  
Security group IDs: sg-0cb2c27e289e31c98

Additional details:

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The screenshot shows the AWS EC2 console interface for creating an Auto Scaling group. The current step is Step 7: Choose instance launch options.

**Choose instance launch options** Info

Choose the VPC network environment that your instances are launched into, and customize the instance types and purchase options.

**Instance type requirements** Info Override launch template

You can keep the same instance attributes or instance type from your launch template, or you can choose to override the launch template by specifying different instance attributes or manually adding instance types.

Launch template	Version	Description
AS-temp lt-085e7febe5f802874	Default	-

Instance type: t2.micro

**Network** Info

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.

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The screenshot shows the AWS CloudShell interface. The user is in the process of creating an Auto Scaling group. They have selected the VPC 'vpc-03c95515091ca2b1c (default)' and are now defining the Availability Zones and subnets. A dropdown menu lists several subnets across different Availability Zones:

- us-east-1a | subnet-03a1452e7cf18e0cb
- us-east-1b | subnet-07ca90afc8aa4dd20
- us-east-1c | subnet-017ab58446a6ce48f
- us-east-1d | subnet-07526d30a7b3ae130
- us-east-1e | subnet-06945d2322cb55916
- us-east-1f | subnet-0525d3d1146c1fbba

Below the list is a link to 'Create a subnet'.

The screenshot shows the AWS CloudShell interface. The user is on the 'Configure advanced options - optional' step of the Auto Scaling group creation wizard. The left sidebar lists other optional steps: Step 1 (Choose launch template), Step 2 (Choose instance launch options), Step 3 (Configure advanced options), Step 4 (Configure group size and scaling policies), Step 5 (Add notifications), Step 6 (Add tags), and Step 7 (Review).

The main content area is titled 'Configure advanced options - optional'. It contains a section for 'Load balancing' with three options:

- No load balancer: Traffic to your Auto Scaling group will not be fronted by a load balancer.
- Attach to an existing load balancer: Choose from your existing load balancers.
- Attach to a new load balancer: Quickly create a basic load balancer to attach to your Auto Scaling group.

Below this is a section for 'VPC Lattice integration options'.

Load balancers | EC2 | us-east-1 | Target group details | EC2 | us-e... | Create Auto Scaling group | EC2 | Create launch template | EC2 | +

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

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### Health checks

Health checks increase availability by replacing unhealthy instances. When you use multiple health checks, all are evaluated, and if at least one fails, instance replacement occurs.

EC2 health checks Always enabled

Additional health check types - optional Info

- Turn on Elastic Load Balancing health checks  
Elastic Load Balancing monitors whether instances are available to handle requests. When it reports an unhealthy instance, EC2 Auto Scaling can replace it on its next periodic check.
- Turn on VPC Lattice health checks  
VPC Lattice can monitor whether instances are available to handle requests. If it considers a target as failed a health check, EC2 Auto Scaling replaces it after its next periodic check.

Health check grace period Info  
This time period delays the first health check until your instances finish initializing. It doesn't prevent an instance from terminating when placed into a non-running state.  
 seconds

### Additional settings

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10:54 PM 11/6/2023

Load balancers | EC2 | us-east-1 | Target group details | EC2 | us-e... | Create Auto Scaling group | EC2 | Create launch template | EC2 | +

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

Services Search [Alt+S] N. Virginia Aftab Shakir Mulla

EC2 > Auto Scaling groups > Create Auto Scaling group

Step 1 [Choose launch template](#)

Step 2 [Choose instance launch options](#)

Step 3 - optional [Configure advanced options](#)

Step 4 - optional [Configure group size and scaling policies](#)

Step 5 - optional [Add notifications](#)

Step 6 - optional [Add tags](#)

Step 7 [Review](#)

### Configure group size and scaling policies - optional Info

Set the desired, minimum, and maximum capacity of your Auto Scaling group. You can optionally add a scaling policy to dynamically scale the number of instances in the group.

Group size - optional Info

Specify the size of the Auto Scaling group by changing the desired capacity. You can also specify minimum and maximum capacity limits. Your desired capacity must be within the limit range.

Desired capacity

Minimum capacity

Maximum capacity

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Screenshot of the AWS Cloud Console showing the 'Create Auto Scaling group' wizard Step 5 - optional: Add notifications.

The left sidebar shows steps: Step 1 (Choose launch template), Step 2 (Choose instance launch options), Step 3 - optional (Configure advanced options), Step 4 - optional (Configure group size and scaling policies), Step 5 - optional (Add notifications), Step 6 - optional (Add tags), and Step 7 (Review).

**Add notifications - optional**

Send notifications to SNS topics whenever Amazon EC2 Auto Scaling launches or terminates the EC2 instances in your Auto Scaling group.

**Notification 1**

**SNS Topic**  
Choose an SNS topic to use to send notifications  
mytopic (aftab.smulla@gmail.com)

**Create a topic**

**Event types**  
Notify subscribers whenever instances

Launch  
 Terminate  
 Fail to launch  
 Fail to terminate

**Add notification**

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Screenshot of the AWS Cloud Console showing the 'Create Auto Scaling group' wizard Step 7: Review.

The left sidebar shows steps: Step 1 (Choose launch template), Step 2 (Choose instance launch options), Step 3 - optional (Configure advanced options), Step 4 - optional (Configure group size and scaling policies), Step 5 - optional (Add notifications), Step 6 - optional (Add tags), and Step 7 (Review).

**Review**

**Step 1: Choose launch template**

**Group details**

Auto Scaling group name: AS-new

**Launch template**

Launch template	Version	Description
AS-temp	Default	

**Step 2: Choose instance launch options**

**Network**

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Load balancers | EC2 | us-east-1 | Target group details | EC2 | us-east-1 | Create Auto Scaling group | EC2 | Create launch template | EC2 | + | us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateAutoScalingGroup: | AWS Services | Search | [Alt+S] | N. Virginia | Aftab Shakir Mulla | Add tags | Step 2: Choose instance launch options | Edit | Step 7 | Review | Network | Network | VPC | [vpc-03c95515091ca2b1c](#) | Availability Zone | Subnet | us-east-1a | [subnet-03a1452e7cf18e0cb](#) | 172.31.32.0/20 | us-east-1b | [subnet-07ca90fc8aa4dd20](#) | 172.31.0.0/20 | us-east-1c | [subnet-017ab58446a6ce48f](#) | 172.31.80.0/20 | us-east-1d | [subnet-07526d30a7b3ae130](#) | 172.31.16.0/20 | us-east-1e | [subnet-06945d2322cb55916](#) | 172.31.48.0/20 | us-east-1f | [subnet-0525d3d1146c1fbba](#) | 172.31.64.0/20 | CloudShell | Feedback | © 2023, Amazon Web Services, Inc. or its affiliates. | Privacy | Terms | Cookie preferences | Type here to search | 10:57 PM | 11/6/2023 |

Load balancers | EC2 | us-east-1 | Target group details | EC2 | us-east-1 | Create Auto Scaling group | EC2 | Create launch template | EC2 | + | us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateAutoScalingGroup: | AWS Services | Search | [Alt+S] | N. Virginia | Aftab Shakir Mulla | Health checks | Health check type | EC2 | Health check grace period | 60 seconds | Additional settings | Monitoring | Disabled | Default instance warmup | Disabled | Step 4: Configure group size and scaling policies | Edit | Group size | Desired capacity | 2 | Minimum capacity | 1 | Maximum capacity | 4 | Scaling policy | CloudShell | Feedback | © 2023, Amazon Web Services, Inc. or its affiliates. | Privacy | Terms | Cookie preferences | Type here to search | 10:58 PM | 11/6/2023 |

The screenshot shows the AWS EC2 Auto Scaling groups page. At the top, there are four tabs: Load balancers | EC2 | us-east-1, Target group details | EC2 | us-e..., Auto Scaling groups | EC2 | us-e..., and Create launch template | EC2 | us-e... A browser address bar shows: us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#AutoScalingGroups:. The main content area has a header: Auto Scaling groups (1) Info, with tabs for Launch configurations, Launch templates, Actions, and Create Auto Scaling group. Below is a search bar and a table with columns: Name, Launch template/configuration, Instances, Status, Desired capacity, Min, Max, and Last update. One row is visible: AS-new, AS-temp | Version Default, 0, Updating capacity..., 2, 1, 4, and 2023-06-11 10:59 PM. At the bottom, it says 0 Auto Scaling groups selected.

The screenshot shows the AWS EC2 Instances page. At the top, there are four tabs: Load balancers | EC2 | us-east-1, Target group details | EC2 | us-e..., Instances | EC2 | us-east-1, and Create launch template | EC2 | us-e... A browser address bar shows: us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:. The main content area has a sidebar with links: EC Dashboard, EC2 Global View, Events, Instances (selected), Instances, Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations (New), Images (selected), AMIs, AMI Catalog, and Elastic Block Store (Volumes). The main table header is Instances (1/6) Info, with columns: Name, Instance ID, Instance state, Instance type, Status check, Alarm status, and Availability Zone. The table lists six instances: MS-lb1, MS-lb2, MS-lb3, AS-1, linux, and AS2. AS2 is selected, highlighted with a blue border. A detailed view for Instance: i-0571403416c99f4f0 (AS2) is shown at the bottom, with tabs for Details, Security, Networking, Storage, Status checks, Monitoring, and Tags. The Details tab is selected, showing the Instance summary: i-0571403416c99f4f0 (AS2).

2. Create one Company database, create an employee table having fields id, name, Contact-no, Address, Email-id, salary, Designation . Insert at least 5 records and fetch data from using different-2 select query.

The screenshot shows the AWS EC2 Instances page. A single instance named "linux" is listed, showing it's running and assigned the ID i-0d879f0f33b338b37. The CloudShell tab is active, displaying a terminal session.

```
i-0d879f0f33b338b37 (linux)
Public IPs: 3.81.104.227 Private IPs: 172.31.32.63
```

The screenshot shows a terminal session in CloudShell. It displays a MariaDB monitor welcome message and a MySQL command prompt.

```
A newer release of "Amazon Linux" is available.
Version 2023.1.20230912;
Version 2023.2.20230920;
Version 2023.2.20231002;
Version 2023.2.20231011;
Version 2023.2.20231016;
Version 2023.2.20231018;
Version 2023.2.20231026;
Version 2023.2.20231030;
Run "/usr/bin/dnf check-release-update" for full release and version update info
      #          Amazon Linux 2023
      ~\_\#\#\#
      ~~\_\#\#\#\\
      ~~\_\#\#\#
      ~~\_#\_ https://aws.amazon.com/linux/amazon-linux-2023
      ~~\_V~`-'>
      ~~\_/
      ~~\_/
      _/m`_
Last login: Mon Nov  6 02:58:01 2023 from 113.193.135.206
[ec2-user@ip-172-31-32-63 ~]$ sudo mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.

i-0d879f0f33b338b37 (linux)
Public IPs: 3.81.104.227 Private IPs: 172.31.32.63
```

Instances | EC2 | us-east-1    EC2 Instance Connect | us-east-1    WhatsApp

us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-0d879f0f33b338b37&osUser=ec2-user&region=us-east-1&sshPort=22

AWS Services Search [Alt+S]

Last login: Mon Nov 6 02:58:01 2023 from 113.193.135.206  
[ec2-user@ip-172-31-32-63 ~]\$ sudo mysql -u root -p  
Enter password:  
Welcome to the MariaDB monitor. Commands end with ; or \g.  
Your MariaDB connection id is 3  
Server version: 10.5.18-MariaDB MariaDB Server  
  
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
  
MariaDB [(none)]> show databases;  
+-----+  
| Database |  
+-----+  
| Company |  
| demo |  
| facebook |  
| information\_schema |  
| insta |  
| mysql |  
+-----+  
  
i-0d879f0f33b338b37 (linux)  
PublicIPs: 3.81.104.227 PrivateIPs: 172.31.32.63

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Instances | EC2 | us-east-1    EC2 Instance Connect | us-east-1    WhatsApp

us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-0d879f0f33b338b37&osUser=ec2-user&region=us-east-1&sshPort=22

AWS Services Search [Alt+S]

Your MariaDB connection id is 3  
Server version: 10.5.18-MariaDB MariaDB Server  
  
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
  
MariaDB [(none)]> show databases;  
+-----+  
| Database |  
+-----+  
| Company |  
| demo |  
| facebook |  
| information\_schema |  
| insta |  
| mysql |  
| performance\_schema |  
+-----+  
7 rows in set (0.006 sec)  
  
MariaDB [(none)]> use Company;  
Reading table information for completion of table and column names  
You can turn off this feature to get a quicker startup with -A  
  
i-0d879f0f33b338b37 (linux)  
PublicIPs: 3.81.104.227 PrivateIPs: 172.31.32.63

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```
Instances | EC2 | us-east-1 EC2 Instance Connect | us-east-1 WhatsApp
us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-0d879f0f33b338b37&osUser=ec2-user&region=us-east-1&sshPort=22
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7 rows in set (0.006 sec)

MariaDB [(none)]> use Company;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
MariaDB [Company]> show tables;
+-----+
| Tables_in_Company |
+-----+
| employee |
+-----+
1 row in set (0.000 sec)

MariaDB [Company]> desc employee;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Id    | int(11) | YES  |     | NULL    |       |
| Name  | varchar(20) | YES  |     | NULL    |       |
| Contact_no | varchar(10) | YES  |     | NULL    |       |
| Address | varchar(50) | YES  |     | NULL    |       |
| Email_id | varchar(15) | YES  |     | NULL    |       |
| Salary | int(11) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+

i-0d879f0f33b338b37 (linux)
Public IPs: 3.81.104.227 Private IPs: 172.31.32.63

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Type here to search 6:54 PM 11/6/2023
```

```
Instances | EC2 | us-east-1 EC2 Instance Connect | us-east-1 WhatsApp
us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-0d879f0f33b338b37&osUser=ec2-user&region=us-east-1&sshPort=22
AWS Services Search [Alt+S] N. Virginia Aftab Shakir Mulla

MariaDB [Company]> show tables;
+-----+
| Tables_in_Company |
+-----+
| employee |
+-----+
1 row in set (0.000 sec)

MariaDB [Company]> desc employees;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Id    | int(11) | YES  |     | NULL    |       |
| Name  | varchar(20) | YES  |     | NULL    |       |
| Contact_no | varchar(10) | YES  |     | NULL    |       |
| Address | varchar(50) | YES  |     | NULL    |       |
| Email_id | varchar(15) | YES  |     | NULL    |       |
| Salary | int(11) | YES  |     | NULL    |       |
| Designation | varchar(10) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.001 sec)

MariaDB [Company]> select * from employee;
ERROR 1146 (42S02): Table 'Company.employee' doesn't exist
MariaDB [Company]> select * from employee;
ERROR 1146 (42S02): Table 'Company.employee' doesn't exist
MariaDB [Company]> select * from employee;
Empty set (0.006 sec)

MariaDB [Company]> insert into employee(Id,Name,Contact_no,Address,Email_id,Salary,Designation)values(1,"Aftab",9307533208,Pune,afatb@gmail.com,50000,Manager);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use ~

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Type here to search 6:55 PM 11/6/2023
```

Instances | EC2 | us-east-1    EC2 Instance Connect | us-east-1    WhatsApp

us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-0d879f0f33b338b37&osUser=ec2-user&region=us-east-1&sshPort=22

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Empty set (0.006 sec)

```
MariaDB [Company]> insert into employee(Id,Name,Contact_no,Address,Email_id,Salary,Designation)values(1,"Aftab",9307533208,Pune,afatb@gmail.com,50000,Manager);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use
near '@gmail.com,50000,Manager)' at line 1
MariaDB [Company]> insert into employee(Id,Name,Contact_no,Address,Email_id,Salary,Designation)values(1,"Aftab",9307533208,Pune,"afatb@gmail.com",50000,
ERROR 1054 (42S22): Unknown column 'Pune' in 'field list'
MariaDB [Company]> insert into employee(Id,Name,Contact_no,Address,Email_id,Salary,Designation)values(1,"Aftab",9307533208,"Pune","afatb@gmail.com",50000,
ERROR 1054 (42S22): Unknown column 'Manager' in 'field list'
MariaDB [Company]> insert into employee(Id,Name,Contact_no,Address,Email_id,Salary,Designation)values(1,"Aftab",9307533208,"Pune","afatb@gmail.com",50000,"Manager");
Query OK, 1 row affected (0.011 sec)

MariaDB [Company]> insert into employee(Id,Name,Contact_no,Address,Email_id,Salary,Designation)values(2,"SAM",9307533208,"New York","sam@yahoo.com",60000,"Manager");
Query OK, 1 row affected (0.001 sec)

MariaDB [Company]> insert into employee(Id,Name,Contact_no,Address,Email_id,Salary,Designation)values(3,"Butler",9087789308,"London","Butler@yahoo.com",800000,"Director");
ERROR 1406 (22001): Data too long for column 'Email id' at row 1
MariaDB [Company]> insert into employee(Id,Name,Contact_no,Address,Email_id,Salary,Designation)values(3,"Butler",9087789308,"London","Butler@mail.com",800000,
Query OK, 1 row affected (0.001 sec)

MariaDB [Company]> select *from employee;
+----+----+----+----+----+----+
| Id | Name | Contact_no | Address | Email_id | Salary | Designation |
+----+----+----+----+----+----+
| 1 | Aftab | 9307533208 | Pune | afatb@gmail.com | 50000 | Manager |
+----+----+----+----+----+----+
```

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Instances | EC2 | us-east-1    EC2 Instance Connect | us-east-1    WhatsApp

us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-0d879f0f33b338b37&osUser=ec2-user&region=us-east-1&sshPort=22

aws Services Search [Alt+S]

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```
MariaDB [Company]> insert into employee(Id,Name,Contact_no,Address,Email_id,Salary,Designation)values(2,"SAM",9307533208,"New York","sam@yahoo.com",60000,"Manager");
Query OK, 1 row affected (0.001 sec)

MariaDB [Company]> insert into employee(Id,Name,Contact_no,Address,Email_id,Salary,Designation)values(3,"Butler",9087789308,"London","Butler@yahoo.com",800000,"Director");
ERROR 1406 (22001): Data too long for column 'Email_id' at row 1
MariaDB [Company]> insert into employee(Id,Name,Contact_no,Address,Email_id,Salary,Designation)values(3,"Butler",9087789308,"London","Butler@mail.com",800000,
Query OK, 1 row affected (0.001 sec)

MariaDB [Company]> select *from employee;
+----+----+----+----+----+----+
| Id | Name | Contact_no | Address | Email_id | Salary | Designation |
+----+----+----+----+----+----+
| 1 | Aftab | 9307533208 | Pune | afatb@gmail.com | 50000 | Manager |
| 2 | SAM | 9307533208 | New York | sam@yahoo.com | 60000 | Manager |
| 3 | Butler | 9087789308 | London | Butler@mail.com | 800000 | Director |
+----+----+----+----+----+----+
3 rows in set (0.000 sec)

MariaDB [Company]> insert into employee(Id,Name,Contact_no,Address,Email_id,Salary,Designation)values(4,"John",1789678742,"Germany","John@mail.com",1000000,
Query OK, 1 row affected (0.002 sec)

MariaDB [Company]> insert into employee(Id,Name,Contact_no,Address,Email_id,Salary,Designation)values(5,"Sundar",9876512375,"India","Sundar@gmail.com",100000,
ERROR 1406 (22001): Data too long for column 'Email_id' at row 1
MariaDB [Company]> select *from employee;
+----+----+----+----+----+----+
| Id | Name | Contact_no | Address | Email_id | Salary | Designation |
+----+----+----+----+----+----+
```

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Type here to search 6:57 PM 11/6/2023

```
Instances | EC2 | us-east-1 EC2 Instance Connect | us-east-1 WhatsApp
us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-0d879f0f33b338b37&osUser=ec2-user&region=us-east-1&sshPort=22
AWS Services Search [Alt+S] N. Virginia ▾ Aftab Shakir Mulla ▾
,10 00,
ERROR 1406 (22001): Data too long for column 'Email_id' at row 1
MariaDB [Company]> select *from employee;
+----+----+----+----+----+----+
| Id | Name | Contact_no | Address | Email_id | Salary | Designation |
+----+----+----+----+----+----+
| 1 | Aftab | 9307533208 | Pune | afatb@gmail.com | 50000 | Manager |
| 2 | SAM | 9307533208 | New York | sam@yahoo.com | 60000 | Manager |
| 3 | Butler | 9087789308 | London | Butler@mail.com | 800000 | Director |
| 4 | John | 1789678742 | Germany | John@mail.com | 10000000 | CFO |
+----+----+----+----+----+----+
4 rows in set (0.000 sec)

MariaDB [Company]> insert into employee(Id,Name,Contact_no,Address,Email_id,Salary,Designation)values(5,"Sundar",9876512375,"India","pichai@gmail.com"
,10 00,
ERROR 1406 (22001): Data too long for column 'Email_id' at row 1
MariaDB [Company]> insert into employee(Id,Name,Contact_no,Address,Email_id,Salary,Designation)values(5,"Sundar",9876512375,"India","pichai@mail.com",
10 00,
Query OK, 1 row affected (0.002 sec)

MariaDB [Company]> select *from employee;
+----+----+----+----+----+----+
| Id | Name | Contact_no | Address | Email_id | Salary | Designation |
+----+----+----+----+----+----+
| 1 | Aftab | 9307533208 | Pune | afatb@gmail.com | 50000 | Manager |
| 2 | SAM | 9307533208 | New York | sam@yahoo.com | 60000 | Manager |
| 3 | Butler | 9087789308 | London | Butler@mail.com | 800000 | Director |
| 4 | John | 1789678742 | Germany | John@mail.com | 10000000 | CFO |
| 5 | Sundar | 9876512375 | India | pichai@mail.com | 1000000000 | CEO |
+----+----+----+----+----+----+
5 rows in set (0.000 sec)
```



```
Instances | EC2 | us-east-1 EC2 Instance Connect | us-east-1 WhatsApp
us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-0d879f0f33b338b37&osUser=ec2-user&region=us-east-1&sshPort=22
AWS Services Search [Alt+S] N. Virginia ▾ Aftab Shakir Mulla ▾
MariaDB [Company]> insert into employee(Id,Name,Contact_no,Address,Email_id,Salary,Designation)values(5,"Sundar",9876512375,"India","pichai@mail.com",
10 00,
Query OK, 1 row affected (0.002 sec)

MariaDB [Company]> select *from employee;
+----+----+----+----+----+----+
| Id | Name | Contact_no | Address | Email_id | Salary | Designation |
+----+----+----+----+----+----+
| 1 | Aftab | 9307533208 | Pune | afatb@gmail.com | 50000 | Manager |
| 2 | SAM | 9307533208 | New York | sam@yahoo.com | 60000 | Manager |
| 3 | Butler | 9087789308 | London | Butler@mail.com | 800000 | Director |
| 4 | John | 1789678742 | Germany | John@mail.com | 10000000 | CFO |
| 5 | Sundar | 9876512375 | India | pichai@mail.com | 1000000000 | CEO |
+----+----+----+----+----+----+
5 rows in set (0.000 sec)

MariaDB [Company]> select *from employee where id=1;
+----+----+----+----+----+----+
| Id | Name | Contact_no | Address | Email_id | Salary | Designation |
+----+----+----+----+----+----+
| 1 | Aftab | 9307533208 | Pune | afatb@gmail.com | 50000 | Manager |
+----+----+----+----+----+----+
1 row in set (0.000 sec)

MariaDB [Company]> select *from employee where Address="india";
+----+----+----+----+----+----+
| Id | Name | Contact_no | Address | Email_id | Salary | Designation |
+----+----+----+----+----+----+
| 5 | Sundar | 9876512375 | India | pichai@mail.com | 1000000000 | CEO |
+----+----+----+----+----+----+
1 row in set (0.000 sec)
```



```
Instances | EC2 | us-east-1 EC2 Instance Connect | us-east-1 WhatsApp
us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-0d879f0f3b338b37&osUser=ec2-user&region=us-east-1&sshPort=22

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5 rows in set (0.000 sec)

MariaDB [Company]> select *from employee where id=1;
+----+-----+-----+-----+-----+-----+
| Id | Name | Contact_no | Address | Email_id | Salary | Designation |
+----+-----+-----+-----+-----+-----+
| 1 | Aftab | 9307533208 | Pune | afatb@gmail.com | 50000 | Manager |
+----+-----+-----+-----+-----+-----+
1 row in set (0.000 sec)

MariaDB [Company]> select *from employee where Address="india";
+----+-----+-----+-----+-----+-----+
| Id | Name | Contact_no | Address | Email_id | Salary | Designation |
+----+-----+-----+-----+-----+-----+
| 5 | Sundar | 9876512375 | India | pichai@mail.com | 1000000000 | CEO |
+----+-----+-----+-----+-----+-----+
1 row in set (0.000 sec)

MariaDB [Company]> select *from employee where Designation like "%_o";
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near '%_o' at line 1
MariaDB [Company]> select *from employee where Designation like "%$o";
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near "%$o" at line 1
MariaDB [Company]> select *from employee where Designation like "%C_%";
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near "%C %" at line 1
MariaDB [Company]> select *from employee where Designation like "%C$";
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near "%C$" at line 1
MariaDB [Company]> select *from employee where Designation like "C%";
+----+-----+-----+-----+-----+-----+
2 rows in set (0.000 sec)

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Type here to search 7:01 PM 11/6/2023
```

```
Instances | EC2 | us-east-1 EC2 Instance Connect | us-east-1 WhatsApp
us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-0d879f0f3b338b37&osUser=ec2-user&region=us-east-1&sshPort=22

AWS Services Search [Alt+S] N. Virginia Aftab Shakir Mulla

2 rows in set (0.000 sec)

MariaDB [Company]> Select *from employee order by Name;
+----+-----+-----+-----+-----+-----+
| Id | Name | Contact_no | Address | Email_id | Salary | Designation |
+----+-----+-----+-----+-----+-----+
| 1 | Aftab | 9307533208 | Pune | afatb@gmail.com | 50000 | Manager |
| 3 | Butler | 9087789308 | London | Butler@mail.com | 800000 | Director |
| 4 | John | 1789678742 | Germany | John@mail.com | 10000000 | CFO |
| 2 | SAM | 9307533208 | New York | sam@yahoo.com | 60000 | Manager |
| 5 | Sundar | 9876512375 | India | pichai@mail.com | 1000000000 | CEO |
+----+-----+-----+-----+-----+-----+
5 rows in set (0.000 sec)

MariaDB [Company]> Select *from employee order by Name des;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'des' at line 1
MariaDB [Company]> Select *from employee order by Name desc;
+----+-----+-----+-----+-----+-----+
| Id | Name | Contact_no | Address | Email_id | Salary | Designation |
+----+-----+-----+-----+-----+-----+
| 5 | Sundar | 9876512375 | India | pichai@mail.com | 1000000000 | CEO |
| 2 | SAM | 9307533208 | New York | sam@yahoo.com | 60000 | Manager |
| 4 | John | 1789678742 | Germany | John@mail.com | 10000000 | CFO |
| 3 | Butler | 9087789308 | London | Butler@mail.com | 800000 | Director |
| 1 | Aftab | 9307533208 | Pune | afatb@gmail.com | 50000 | Manager |
+----+-----+-----+-----+-----+-----+
5 rows in set (0.000 sec)

MariaDB [Company]> Select max(Id)from employee;
+-----+
```

The screenshot shows a terminal window titled "CloudShell" with the following MySQL session:

```
MariaDB [Company]> Select *from employee order by Name des;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use
near 'des' at line 1
MariaDB [Company]> Select *from employee order by Name desc;
+----+----+----+----+----+----+
| Id | Name | Contact_no | Address | Email_id | Salary | Designation |
+----+----+----+----+----+----+
| 5 | Sundar | 9876512375 | India | pichai@mail.com | 1000000000 | CEO |
| 2 | SAM | 9307533208 | New York | sam@yahoo.com | 60000 | Manager |
| 4 | John | 1789678742 | Germany | John@mail.com | 10000000 | CFO |
| 3 | Butler | 9087789308 | London | Butler@mail.com | 800000 | Director |
| 1 | Aftab | 9307533208 | Pune | afab@gmail.com | 50000 | Manager |
+----+----+----+----+----+----+
5 rows in set (0.000 sec)

MariaDB [Company]> Select max(Id)from employee;
+----+
| max(Id) |
+----+
|      5 |
+----+
1 row in set (0.000 sec)

MariaDB [Company]> Select sum(Id)from employee;
+----+
| sum(Id) |
+----+
|      15 |
+----+
1 row in set (0.000 sec)

MariaDB [Company]> 
```

Send task in word file to below mail ID

To - [amritanam84@gmail.com](mailto:amritanam84@gmail.com)

Cc- [amrita.namdeo@fortunecloudindia.com](mailto:amrita.namdeo@fortunecloudindia.com)