CSE322 Cloud Computing

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Batch: 2

Task 1: Install Prometheus tool and identify the performance metrics of working pods/containers (running on top of minikube).

Step 1: Start Minikube
→ minikube start

```
nightfury653@nightfury653-IdeaPad-Gaming-3-15ACH6:~/Documents/College Prep/Cloud Computing$ minikube start
😄  minikube v1.35.0 on Ubuntu 24.04
✨  Using the docker driver based on existing profile
👍  Starting "minikube" primary control-plane node in "minikube" cluster
🚜  Pulling base image v0.0.46 ...
🔄  Restarting existing docker container for "minikube" ...
🐳  Preparing Kubernetes v1.32.0 on Docker 27.4.1 ...
🔎  Verifying Kubernetes components...
    ▪ Using image gcr.io/k8s-minikube/storage-provisioner:v5
    ▪ Using image registry.k8s.io/ingress-nginx/controller:v1.11.3
    ▪ Using image registry.k8s.io/ingress-nginx/kube-webhook-certgen:v1.4.4
    ▪ Using image registry.k8s.io/ingress-nginx/kube-webhook-certgen:v1.4.4
🔎  Verifying ingress addon...
🌟  Enabled addons: storage-provisioner, default-storageclass, ingress
🏄  Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
```

Step 2: Enable metric-server in the minikube addons
→ minikube addons enable metrics-server

```
nightfury653@nightfury653-IdeaPad-Gaming-3-15ACH6:~/Documents/College Prep/Cloud Computing$ minikube addons enable metrics-server
💡  metrics-server is an addon maintained by Kubernetes. For any concerns contact minikube on GitHub.
You can view the list of minikube maintainers at: https://github.com/kubernetes/minikube/blob/master/OWNERS
    ▪ Using image registry.k8s.io/metrics-server/metrics-server:v0.7.2
🌟  The 'metrics-server' addon is enabled
```

Step 3: Download prometheus from the helm repository and update it so that you get the latest version of prometheus
→ helm repo add prometheus-community https://prometheus-community.github.io/helm-charts
→ helm repo update

```
nightfury653@nightfury653-IdeaPad-Gaming-3-15ACH6:~$ helm repo add prometheus-community https://prometheus-community.github.io/helm-charts
helm repo update
"prometheus-community" already exists with the same configuration, skipping
Hang tight while we grab the latest from your chart repositories...
...Successfully got an update from the "prometheus-community" chart repository
Update Complete. ⎈Happy Helming!⎈
```

Step 4: Create a namespace called as monitoring
→ kubectl create namespace monitoring

```
nightfury653@nightfury653-IdeaPad-Gaming-3-15ACH6:~$ kubectl create namespace monitoring
Error from server (AlreadyExists): namespaces "monitoring" already exists
```

Step 5: Install prometheus from the image from the helm repo in the monitoring namespace
→ helm install prometheus prometheus-community/prometheus -n monitoring

```
NAME: prometheus
LAST DEPLOYED: Tue Mar 11 20:53:47 2025
NAMESPACE: monitoring
STATUS: deployed
REVISION: 1
TEST SUITE: None
NOTES:
The Prometheus server can be accessed via port 80 on the following DNS name from within your cluster:
prometheus-server.monitoring.svc.cluster.local


Get the Prometheus server URL by running these commands in the same shell:
  export POD_NAME=$(kubectl get pods --namespace monitoring -l "app.kubernetes.io/name=prometheus,app.kubernetes.io/instance=prometheus" -o jsonpath="{.items[0].metadata.name}")
  kubectl --namespace monitoring port-forward $POD_NAME 9090


The Prometheus alertmanager can be accessed via port 9093 on the following DNS name from within your cluster:
prometheus-alertmanager.monitoring.svc.cluster.local

Get the Alertmanager URL by running these commands in the same shell:
  export POD_NAME=$(kubectl get pods --namespace monitoring -l "app.kubernetes.io/name=alertmanager,app.kubernetes.io/instance=prometheus" -o jsonpath="{.items[0].metadata.name}")
  kubectl --namespace monitoring port-forward $POD_NAME 9093
#################################################################################
######   WARNING: Pod Security Policy has been disabled by default since    #####
######            it deprecated after k8s 1.25+. use                        #####
######            (index .Values "prometheus-node-exporter" "rbac"          #####
###### .          "pspEnabled") with (index .Values                         #####
######            "prometheus-node-exporter" "rbac" "pspAnnotations")       #####
######            in case you still need it.                                #####
#################################################################################


The Prometheus PushGateway can be accessed via port 9091 on the following DNS name from within your cluster:
prometheus-prometheus-pushgateway.monitoring.svc.cluster.local


Get the PushGateway URL by running these commands in the same shell:
  export POD_NAME=$(kubectl get pods --namespace monitoring -l "app=prometheus-pushgateway,component=pushgateway" -o jsonpath="{.items[0].metadata.name}")
  kubectl --namespace monitoring port-forward $POD_NAME 9091

For more information on running Prometheus, visit:
https://prometheus.io/
```

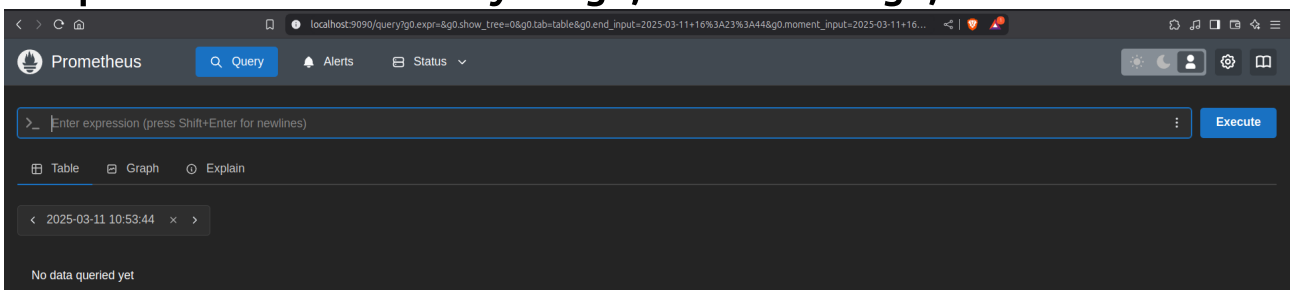
Step 6: Verify the complete installation
→ kubectl get pods -n monitoring

```
^Cnightfury653@nightfury653-IdeaPad-Gaming-3-15ACH6:~$ kubectl get pods -n monitoring -w
NAME                                             READY   STATUS    RESTARTS   AGE
prometheus-alertmanager-0                        1/1     Running   0          6m24s
prometheus-kube-state-metrics-5bd466f7f6-sw66j   1/1     Running   0          6m24s
prometheus-prometheus-node-exporter-vs28c        1/1     Running   0          6m24s
prometheus-prometheus-pushgateway-544579d549-dnqtc   1/1     Running   0          6m24s
prometheus-server-596945876b-rg89s               2/2     Running   0          6m24s
```

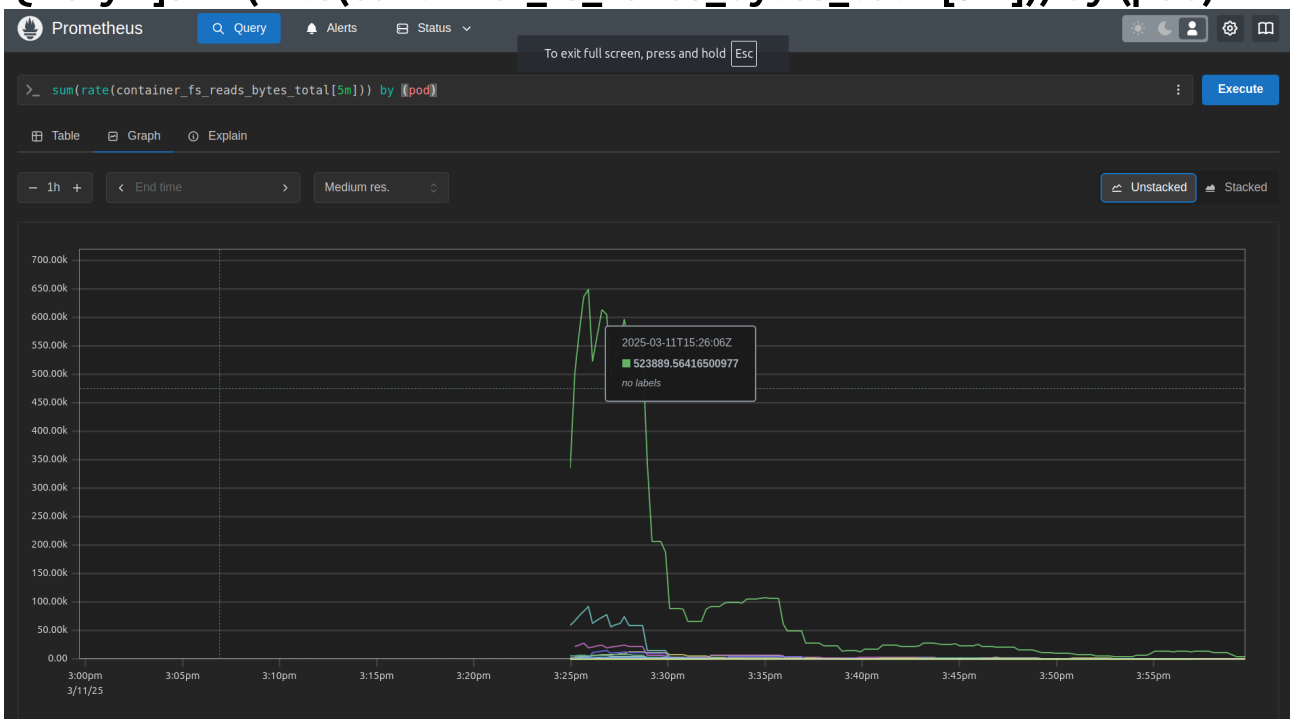
Step 7: Port Forwording in order to get the prometheus ui on the localhost 9090
→ kubectl port-forward -n monitoring svc/prometheus-server 9090:8080

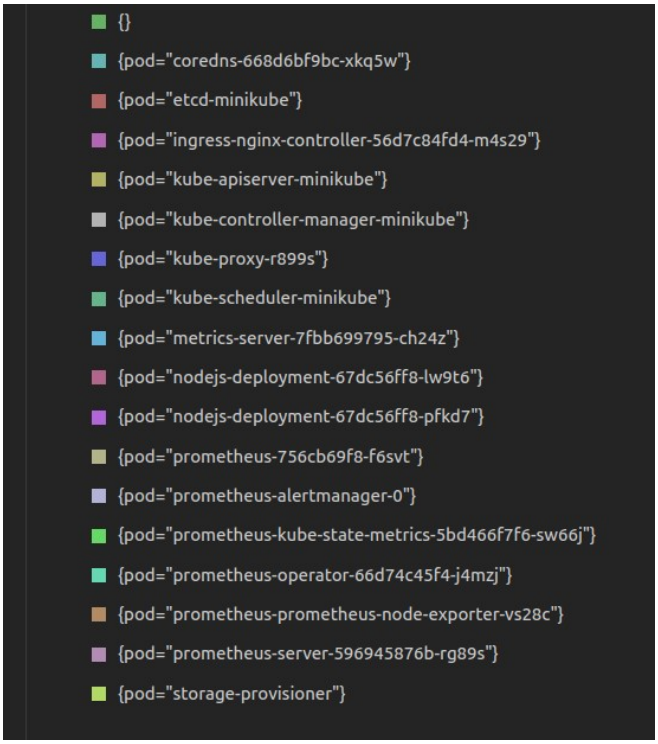
```
^Cnightfury653@nightfury653-IdeaPad-Gaming-3-15ACH6:~kubectl port-forward -n monitoring svc/prometheus-server 9090:8080
Forwarding from 127.0.0.1:9090 -> 9090
Forwarding from [::1]:9090 -> 9090
Handling connection for 9090
Handling connection for 9090
```

Prometheus UI here we are going to run some queries regarding the pods like their memory usage, network usage,etc

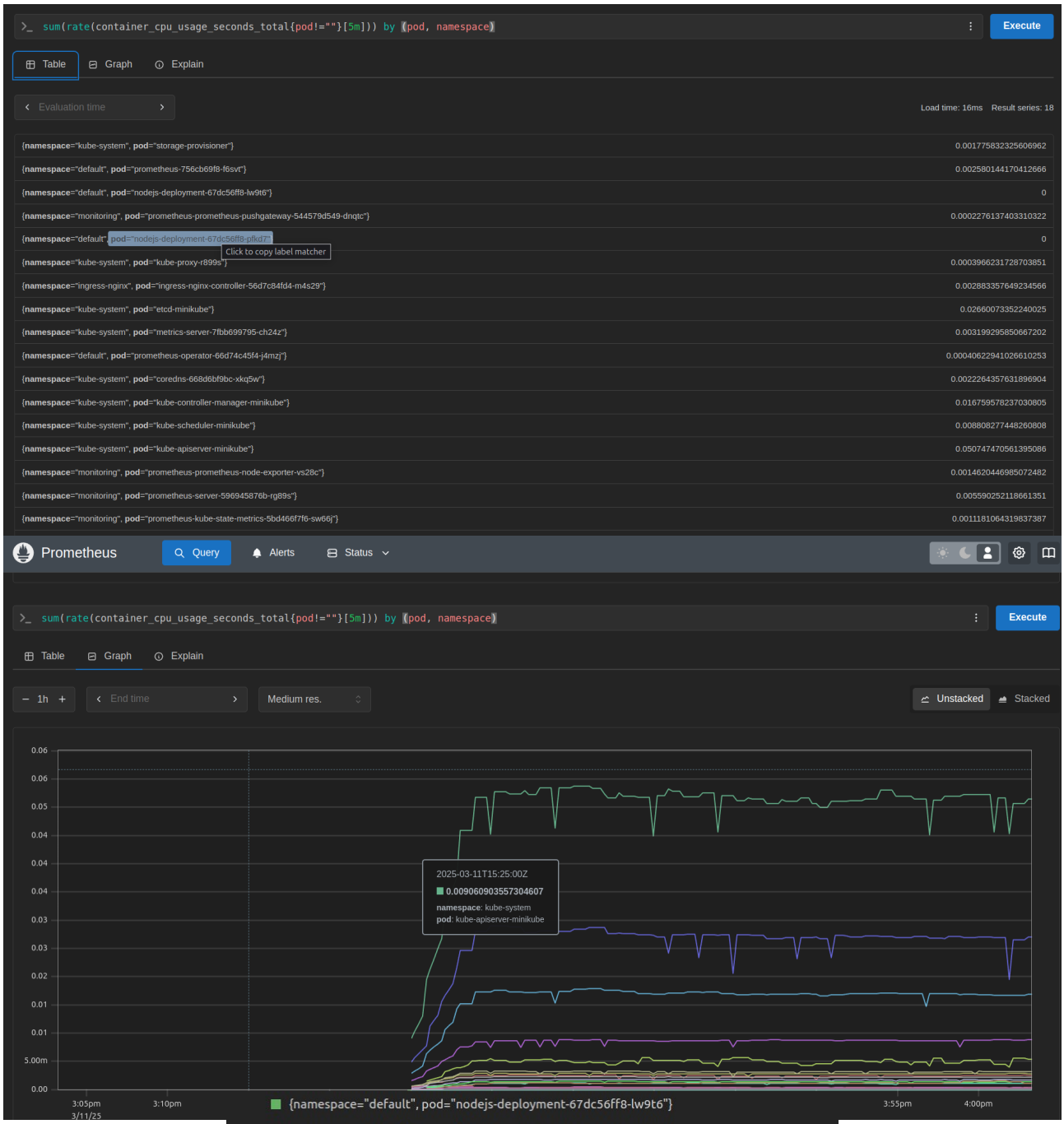


Query 1]sum(rate(container_fs_reads_bytes_total[5m])) by (pod)

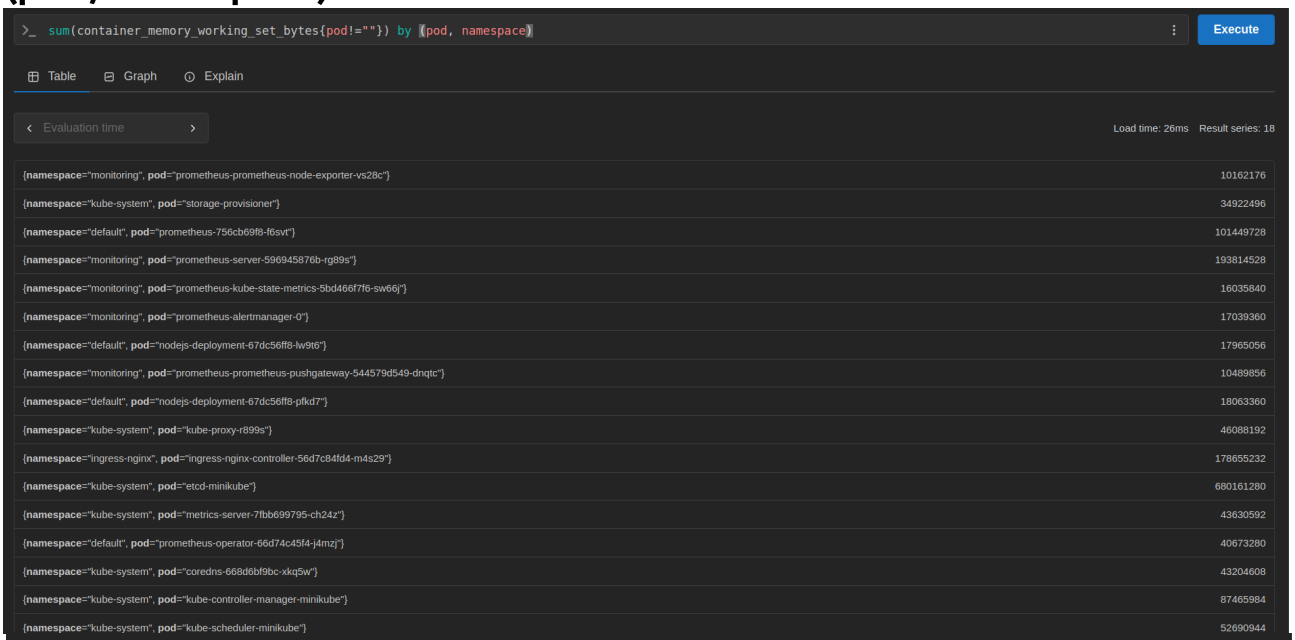


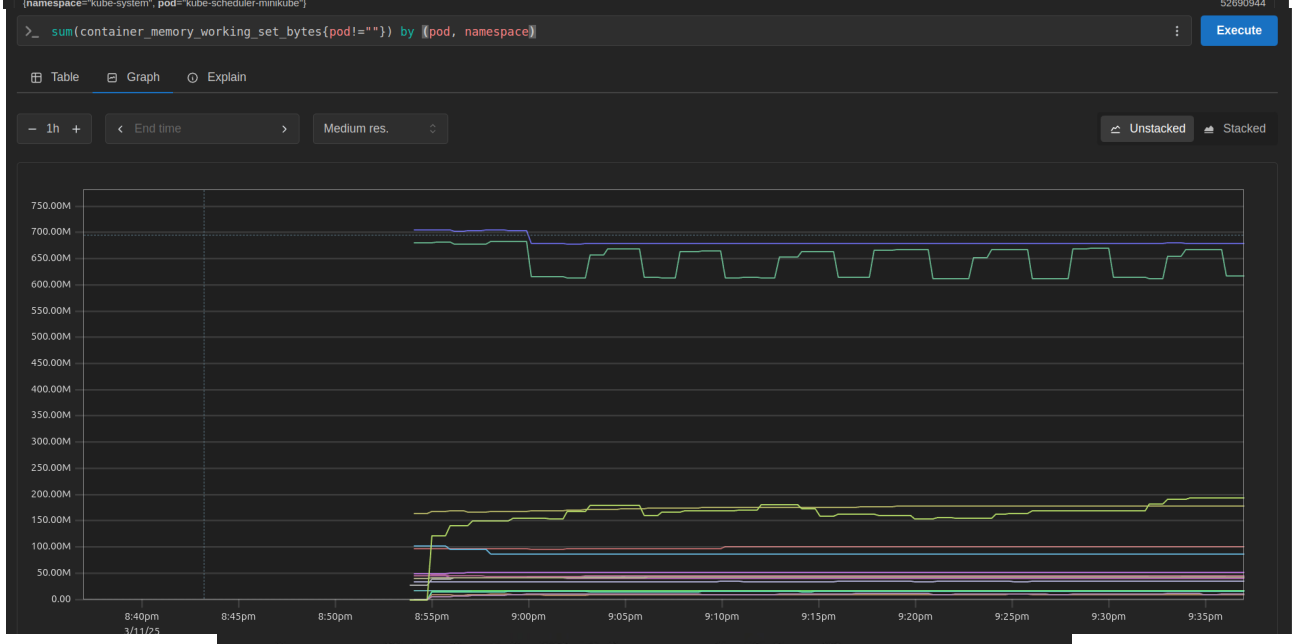


Query 2]sum(rate(container_cpu_usage_seconds_total{pod!=""}[5m])) by (pod, namespace)



Query 3] sum(container_memory_working_set_bytes{pod!=""}) by (pod, namespace)





{namespace="default", pod="nodejs-deployment-67dc56ff8-lw9t6"}
{namespace="default", pod="nodejs-deployment-67dc56ff8-pfkd7"}
{namespace="default", pod="prometheus-756cb69f8-f6svt"}
{namespace="default", pod="prometheus-operator-66d74c45f4-j4mzj"}
{namespace="ingress-nginx", pod="ingress-nginx-controller-56d7c84fd4-m4s29"}
{namespace="kube-system", pod="coredns-668d6bf9bc-xkq5w"}
{namespace="kube-system", pod="etcd-minikube"}
{namespace="kube-system", pod="kube-apiserver-minikube"}
{namespace="kube-system", pod="kube-controller-manager-minikube"}
{namespace="kube-system", pod="kube-proxy-r899s"}
{namespace="kube-system", pod="kube-scheduler-minikube"}
{namespace="kube-system", pod="metrics-server-7fbb699795-ch24z"}
{namespace="kube-system", pod="storage-provisioner"}
{namespace="monitoring", pod="prometheus-alertmanager-0"}
{namespace="monitoring", pod="prometheus-kube-state-metrics-5bd466f7f6-sw66j"}
{namespace="monitoring", pod="prometheus-prometheus-node-exporter-vs28c"}
{namespace="monitoring", pod="prometheus-prometheus-pushgateway-544579d549-dnqtc"}
{namespace="monitoring", pod="prometheus-server-596945876b-rg89s"}

Task 2: Install mongodb on your local machine. Write a service using golang or nodejs that connects to the database and insert a document to the database.

Step 1]Download mongodb from server using curl

→ curl -fsSL https://www.mongodb.org/static/pgp/server-9.0.asc | \
sudo gpg -o /usr/share/keyrings/mongodb-server-8.0.gpg \
--dearmor

```
nightfury653@nightfury653-IdeaPad-Gaming-3-15ACH6:~$ curl -fsSL https://www.mongodb.org/static/pgp/server-8.0.asc | \
   sudo gpg -o /usr/share/keyrings/mongodb-server-8.0.gpg \
   --dearmor
nightfury653@nightfury653-IdeaPad-Gaming-3-15ACH6:~$ echo "deb [ arch=amd64,arm64 signed-by=/usr/share/keyrings/mongodb-server-8.0.gpg ] https://repo.mongodb.org/apt/ubuntu noble/mongodb-org
/8.0 multiverse" | sudo tee /etc/apt/sources.list.d/mongodb-org-8.0.list
deb [ arch=amd64,arm64 signed-by=/usr/share/keyrings/mongodb-server-8.0.gpg ] https://repo.mongodb.org/apt/ubuntu noble/mongodb-org/8.0 multiverse
```

Step 2]Install mongodb-org using sudo

→ sudo apt-get install -y mongodb-org

```
nightfury653@nightfury653-IdeaPad-Gaming-3-15ACH6:~$ sudo apt-get install -y mongodb-org
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
  libb2-1 libqt6core6t64 libqt6dbus6t64 libqt6gui6t64 libqt6help6
  libqt6network6t64 libqt6opengl6t64 libqt6printsupport6t64 libqt6qml6
  libqt6qmlmodels6 libqt6quick6 libqt6sql6-sqlite libqt6sql6t64
  libqt6statemachine6 libqt6waylandclient6 libqt6waylandcompositor6
  libqt6waylandeglclienthwintegration6
  libqt6waylandeglcompositorhwintegration6 libqt6widgets6t64
  libqt6wlshellintegration6 libqt6xml6t64 libsdl-ttf2.0-0 libsdl1.2debian
  libts0t64 qt6-gtk-platformtheme qt6-qpa-plugins qt6-translations-l10n
  qt6-wayland
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  mongodb-database-tools mongodb-mongosh mongodb-org-database
  mongodb-org-database-tools-extra mongodb-org-mongos mongodb-org-server
  mongodb-org-shell mongodb-org-tools
The following NEW packages will be installed:
  mongodb-database-tools mongodb-mongosh mongodb-org mongodb-org-database
  mongodb-org-database-tools-extra mongodb-org-mongos mongodb-org-server
  mongodb-org-shell mongodb-org-tools
0 upgraded, 9 newly installed, 0 to remove and 44 not upgraded.
Need to get 183 MB of archives.
After this operation, 653 MB of additional disk space will be used.
Get:1 https://repo.mongodb.org/apt/ubuntu noble/mongodb-org/8.0/multiverse amd64 mongodb-database-tools amd64 100.11.0 [55.7 MB]
14% [1 mongodb-database-tools 30.9 MB/55.7 MB 55%]                                                    20% [1 mongodb-database-tools 44.7 MB/55.7
 MB 820% [1 mongodb-database-tools 45.2 MB/55.7 MB 81%]                                                                                823 kB/s
Get:2 https://repo.mongodb.org/apt/ubuntu noble/mongodb-org/8.0/multiverse amd64 mongodb-mongosh amd64 2.4.2 [54.5 MB]
Get:3 https://repo.mongodb.org/apt/ubuntu noble/mongodb-org/8.0/multiverse amd64 mongodb-org-shell amd64 8.0.5 [2,600 B]
Get:4 https://repo.mongodb.org/apt/ubuntu noble/mongodb-org/8.0/multiverse amd64 mongodb-org-server amd64 8.0.5 [41.4 MB]
66% [4 mongodb-org-server 25.2 MB/41.4 MB 61%]                                                 71% [4 mongodb-org-server 36.7 MB/41.4 MB 89%]     551
72% [4 mongodb-org-server 39.6 MB/41.4 MB 96%]                                                                                      524 kB/s Get:5 ht
tps://repo.mongodb.org/apt/ubuntu noble/mongodb-org/8.0/multiverse amd64 mongodb-org-mongos amd64 8.0.5 [30.9 MB]
76% [5 mongodb-org-mongos 1,723 kB/30.9 MB 6%]                                                                                 76% [5 mongodb-org-mon
77% [5 mongodb-org-mongos 2,796 kB/30.9 MB 9%]                                                                             77% [5 mongodb-org-mongos 3,35
77% [5 mongodb-org-mongos 3,746 kB/30.9 MB 12%]                                                                      77% [5 mongodb-org-mongos 4,467 kB/30.9 MB
80% [5 mongodb-org-mongos 10.0 MB/30.9 MB 32%]                                                                           82% [5 mongodb-o82% [5 mongodb-org
-mongos 14.8 MB/30.9 82% [5 mo82% [5 mongodb-org-m82% [5 mongodb-org-mongos 16.0 MB/30.9 MB 52%]          83% [5 mongodb-org-mongos 16.7 MB/30.9 MB 54%]          83% [5 mongodb
-org-mongos 17.1 MB/30.9 MB 55%]  83% [5 mongodb-org-mongos 17.5 MB/30.9 MB 57%]                                 505 kB/s 283% [5 mongodb-org-mongos 17.5 MB/30
.9 MB 57%]                                             50583% [5 mongodb-org-mongos 18.1 MB/30.9 MB 58%]                                 83% [5 m83% [5 mon
84% [5 mongodb-org-mongos 19.1 MB/30.9 MB 62%]                                   84% [5 mongodb-org-mongos 20.6 MB/30.9 MB 67%]                              84% [5
mongodb-org-mongos 20.7 MB/30.9 MB 67%]              85% [5 mongodb-org-mongos 21.0 MB/30.9 MB 68%]           720 kB/s 185% [5 mongodb-org-mongos 21.0 MB/30.9 MB 68%]  86% [5
Get:6 https://repo.mongodb.org/apt/ubuntu noble/mongodb-org/8.0/multiverse amd64 mongodb-org-database-tools-extra amd64 8.0.5 [7,384 B]
Get:7 https://repo.mongodb.org/apt/ubuntu noble/mongodb-org/8.0/multiverse amd64 mongodb-org-database amd64 8.0.5 [3,052 B]
Get:8 https://repo.mongodb.org/apt/ubuntu noble/mongodb-org/8.0/multiverse amd64 mongodb-org-tools amd64 8.0.5 [2,394 B]
Get:9 https://repo.mongodb.org/apt/ubuntu noble/mongodb-org/8.0/multiverse amd64 mongodb-org amd64 8.0.5 [2,426 B]
Fetched 183 MB in 5min 0s (608 kB/s)
```

```
Selecting previously unselected package mongodb-database-tools.
(Reading database ... 255902 files and directories currently installed.)
Preparing to unpack .../0-mongodb-database-tools_100.11.0_amd64.deb ...
Unpacking mongodb-database-tools (100.11.0) ...
Selecting previously unselected package mongodb-mongosh.
Preparing to unpack .../1-mongodb-mongosh_2.4.2_amd64.deb ...
Unpacking mongodb-mongosh (2.4.2) ...
Selecting previously unselected package mongodb-org-shell.
Preparing to unpack .../2-mongodb-org-shell_8.0.5_amd64.deb ...
Unpacking mongodb-org-shell (8.0.5) ...
Selecting previously unselected package mongodb-org-server.
Preparing to unpack .../3-mongodb-org-server_8.0.5_amd64.deb ...
Unpacking mongodb-org-server (8.0.5) ...
Selecting previously unselected package mongodb-org-mongos.
Preparing to unpack .../4-mongodb-org-mongos_8.0.5_amd64.deb ...
Unpacking mongodb-org-mongos (8.0.5) ...
Selecting previously unselected package mongodb-org-database-tools-extra.
Preparing to unpack .../5-mongodb-org-database-tools-extra_8.0.5_amd64.deb ...
Unpacking mongodb-org-database-tools-extra (8.0.5) ...
Selecting previously unselected package mongodb-org-database.
Preparing to unpack .../6-mongodb-org-database_8.0.5_amd64.deb ...
Unpacking mongodb-org-database (8.0.5) ...
Selecting previously unselected package mongodb-org-tools.
Preparing to unpack .../7-mongodb-org-tools_8.0.5_amd64.deb ...
Unpacking mongodb-org-tools (8.0.5) ...
Selecting previously unselected package mongodb-org.
Preparing to unpack .../8-mongodb-org_8.0.5_amd64.deb ...
Unpacking mongodb-org (8.0.5) ...
Setting up mongodb-mongosh (2.4.2) ...
Setting up mongodb-org-server (8.0.5) ...
info: Selecting UID from range 100 to 999 ...
info: Adding system user `mongodb' (UID 128) ...
info: Adding new user `mongodb' (UID 128) with group `nogroup' ...
info: Not creating `/nonexistent'.
info: Selecting GID from range 100 to 999 ...
info: Adding group `mongodb' (GID 131) ...
info: Adding user `mongodb' to group `mongodb' ...
Setting up mongodb-org-shell (8.0.5) ...
Setting up mongodb-database-tools (100.11.0) ...
Setting up mongodb-org-mongos (8.0.5) ...
Setting up mongodb-org-database-tools-extra (8.0.5) ...
Setting up mongodb-org-database (8.0.5) ...
Setting up mongodb-org-tools (8.0.5) ...
Setting up mongodb-org (8.0.5) ...
Processing triggers for man-db (2.12.0-4build2) ...
nightfury653@nightfury653-IdeaPad-Gaming-3-15ACH6:~$ ps --no-headers -o comm 1
systemd
nightfury653@nightfury653-IdeaPad-Gaming-3-15ACH6:~$ sudo systemctl start mongod
nightfury653@nightfury653-IdeaPad-Gaming-3-15ACH6:~$ sudo systemctl status mongod
● mongod.service - MongoDB Database Server
     Loaded: loaded (/usr/lib/systemd/system/mongod.service; dis>
     Active: active (running) since Tue 2025-03-11 11:30:56 IST;>
       Docs: https://docs.mongodb.org/manual
   Main PID: 10075 (mongod)
     Memory: 90.2M (peak: 90.4M)
        CPU: 693ms
     CGroup: /system.slice/mongod.service
             └─10075 /usr/bin/mongod --config /etc/mongod.conf
```

Step 3] Start mongo db service
→ sudo systemctl enable mongod

```
nightfury653@nightfury653-IdeaPad-Gaming-3-15ACH6:~$ sudo systemctl enable mongod
Created symlink /etc/systemd/system/multi-user.target.wants/mongod.service → /usr/lib/systemd/system/mongod.service.
nightfury653@nightfury653-IdeaPad-Gaming-3-15ACH6:~$ sudo systemctl status mongod
● mongod.service - MongoDB Database Server
     Loaded: loaded (/usr/lib/systemd/system/mongod.service; enabled; preset: enabled)
     Active: active (running) since Tue 2025-03-11 11:30:56 IST; 1min 12s ago
       Docs: https://docs.mongodb.org/manual
   Main PID: 10075 (mongod)
     Memory: 93.1M (peak: 94.1M)
        CPU: 1.289s
     CGroup: /system.slice/mongod.service
             └─10075 /usr/bin/mongod --config /etc/mongod.conf

Mar 11 11:30:56 nightfury653-IdeaPad-Gaming-3-15ACH6 systemd[1]: Started mongod.service - MongoDB Database Server.
Mar 11 11:30:56 nightfury653-IdeaPad-Gaming-3-15ACH6 mongod[10075]: {"t":{"$date":"2025-03-11T06:00:56.489Z"},"s":"I",  "c":"CONTROL",  "id":7484500, "ctx":"main","msg":"Environment variabl
```

Step 4] Start Mongodb server
→ mongosh

```
nightfury653@nightfury653-IdeaPad-Gaming-3-15ACH6:~$ mongosh
Current Mongosh Log ID: 67cfd40a1a33ef09506b140a
Connecting to:          mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+2.4.2
Using MongoDB:          8.0.5
Using Mongosh:          2.4.2

For mongosh info see: https://www.mongodb.com/docs/mongodb-shell/


To help improve our products, anonymous usage data is collected and sent to MongoDB periodically (https://www.mongodb.com/legal/privacy-policy).
You can opt-out by running the disableTelemetry() command.

------
   The server generated these startup warnings when booting
   2025-03-11T11:30:56.589+05:30: Using the XFS filesystem is strongly recommended with the WiredTiger storage engine. See http://dochub.mongodb.org/core/prodnotes-filesystem
   2025-03-11T11:30:57.009+05:30: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted
   2025-03-11T11:30:57.009+05:30: For customers running the current memory allocator, we suggest changing the contents of the following sysfsFile
   2025-03-11T11:30:57.009+05:30: For customers running the current memory allocator, we suggest changing the contents of the following sysfsFile
   2025-03-11T11:30:57.009+05:30: We suggest setting the contents of sysfsFile to 0.
   2025-03-11T11:30:57.010+05:30: We suggest setting swappiness to 0 or 1, as swapping can cause performance problems.
------
```

Step 5] Create a database and add data to the table

```
test> use mydatabase
switched to db mydatabase
mydatabase> show collections

mydatabase> db.users.insertOne({ name: "Gaurav Malave", age: 21, city: "Pune", rollno:"2022BCD0017" })
{
  acknowledged: true,
  insertedId: ObjectId('67cfd4bc1a33ef09506b140b')
}
mydatabase> show collections
users
```

Step 6] Check all the files in the tables

```
mydatabase> db.users.find()
[
  {
    _id: ObjectId('67cfd4bc1a33ef09506b140b'),
    name: 'Gaurav Malave',
    age: 21,
    city: 'Pune',
    rollno: '2022BCD0017'
  }
]
mydatabase>
```

Step 7] Create a node.js service to add to the tabels

```
JS node app.js > ...
1   const { MongoClient } = require("mongodb");
2
3   async function main() {
4     const client = new MongoClient("mongodb://localhost:27017");
5     try {
6       await client.connect();
7       console.log("Connected to MongoDB");
8
9       const db = client.db("mydatabase");
10      const collection = db.collection("users");
11
12      const result1 = await collection.insertOne({ name: "Aslam", age: 21, city: "Bengaluru", rollno: "2022BCS0092"});
13      const result2 = await collection.insertOne({ name: "Sai Charan", age: 21, city: "Hyderabad", rollno: "2022BCD0029"});
14      console.log("Inserted:", result1.insertedId);
15      console.log("Inserted:", result2.insertedId);
16    } finally {
17      await client.close();
18    }
19  }
20
21    < 1/1 > Accept Tab Accept Word Ctrl + RightArrow ...
22  ```
```

Step 8] Install mongo db from npm and list it, then run the node.js service

```
nightfury653@nightfury653-IdeaPad-Gaming-3-15ACH6:~/Documents/College Prep/Cloud Computing$ npm install mongodb

added 12 packages in 9s
nightfury653@nightfury653-IdeaPad-Gaming-3-15ACH6:~/Documents/College Prep/Cloud Computing$ npm list mongodb
Cloud Computing@ /home/nightfury653/Documents/College Prep/Cloud Computing
└── mongodb@6.14.2

nightfury653@nightfury653-IdeaPad-Gaming-3-15ACH6:~/Documents/College Prep/Cloud Computing$ node app.js
Connected to MongoDB
Inserted: new ObjectId('67cfd9536b4d24ea402ea528')
Inserted: new ObjectId('67cfd9536b4d24ea402ea529')
nightfury653@nightfury653-IdeaPad-Gaming-3-15ACH6:~/Documents/College Prep/Cloud Computing$
```

Step 9] Again check the mongo db database

```
nightfury653@nightfury653-IdeaPad-Gaming-3-15ACH6:~/Documents/College Prep/Cloud Computing$ mongosh
Current Mongosh Log ID: 67cfd9948dbeb930ba6b140a
Connecting to:          mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+2.4.2
Using MongoDB:          8.0.5
Using Mongosh:          2.4.2

For mongosh info see: https://www.mongodb.com/docs/mongodb-shell/

------
   The server generated these startup warnings when booting
   2025-03-11T11:30:56.589+05:30: Using the XFS filesystem is strongly recommended with the WiredTiger storage engine. See http://dochub.mongodb.org/core/prodnotes-filesystem
   2025-03-11T11:30:57.009+05:30: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted
   2025-03-11T11:30:57.009+05:30: For customers running the current memory allocator, we suggest changing the contents of the following sysfsFile
   2025-03-11T11:30:57.009+05:30: For customers running the current memory allocator, we suggest changing the contents of the following sysfsFile
   2025-03-11T11:30:57.009+05:30: We suggest setting the contents of sysfsFile to 0.
   2025-03-11T11:30:57.010+05:30: We suggest setting swappiness to 0 or 1, as swapping can cause performance problems.
------

test> use mydatabase
switched to db mydatabase
mydatabase> show collections
users
mydatabase> db.users.find()
[
  {
    _id: ObjectId('67cfd4bc1a33ef09506b140b'),
    name: 'Gaurav Malave',
    age: 21,
    city: 'Pune',
    rollno: '2022BCD0017'
  },
  {
    _id: ObjectId('67cfd9536b4d24ea402ea528'),
    name: 'Aslam',
    age: 21,
    city: 'Bengaluru',
    rollno: '2022BCS0092'
  },
  {
    _id: ObjectId('67cfd9536b4d24ea402ea529'),
    name: 'Sai Charan',
    age: 21,
    city: 'Hyderabad',
    rollno: '2022BCD0029'
  }
]
```