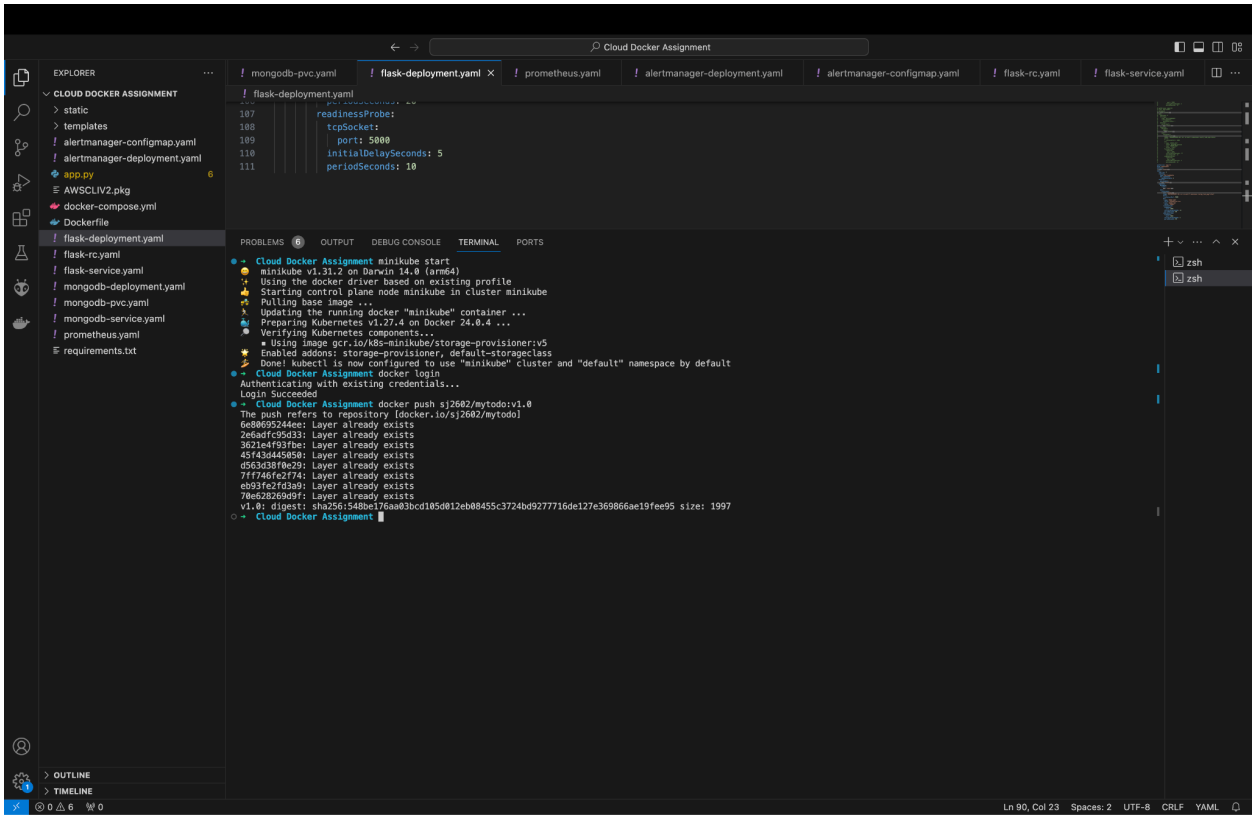
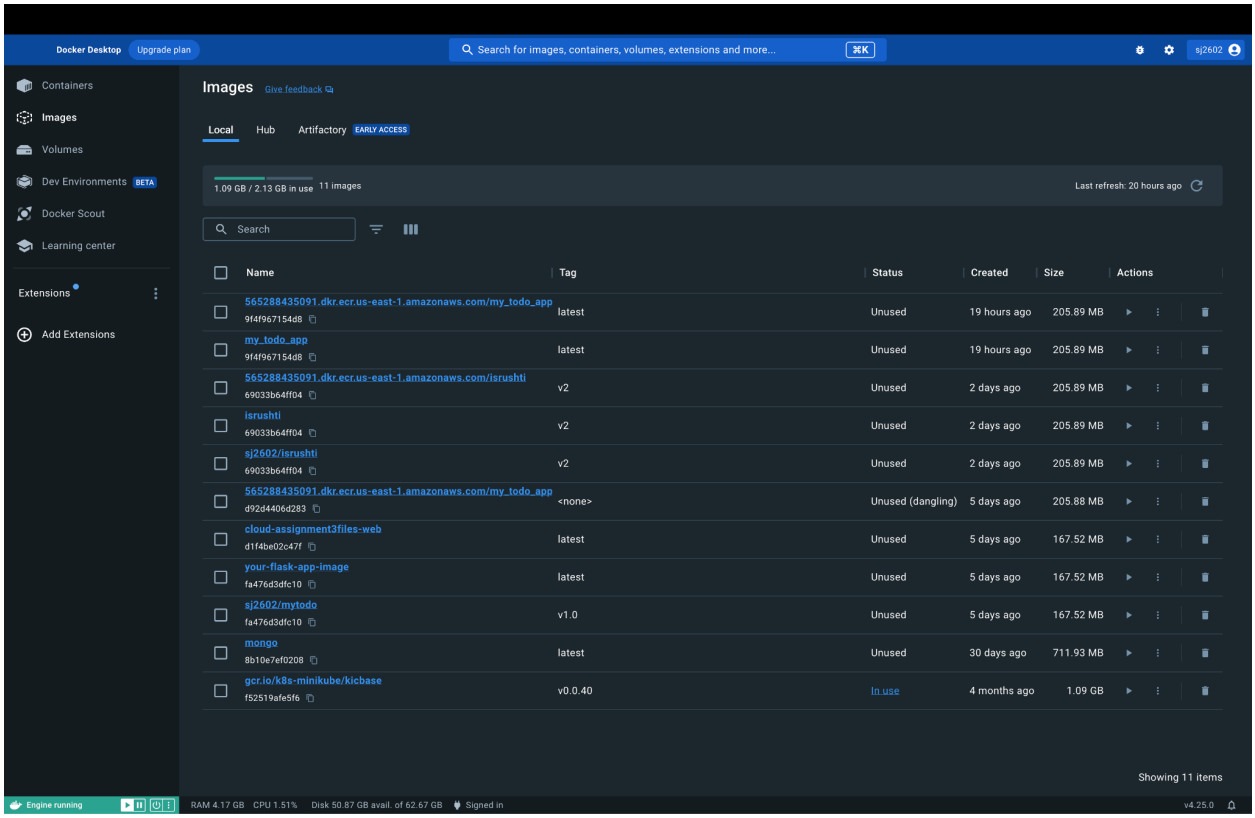
Srushti Jagtap
N14329196

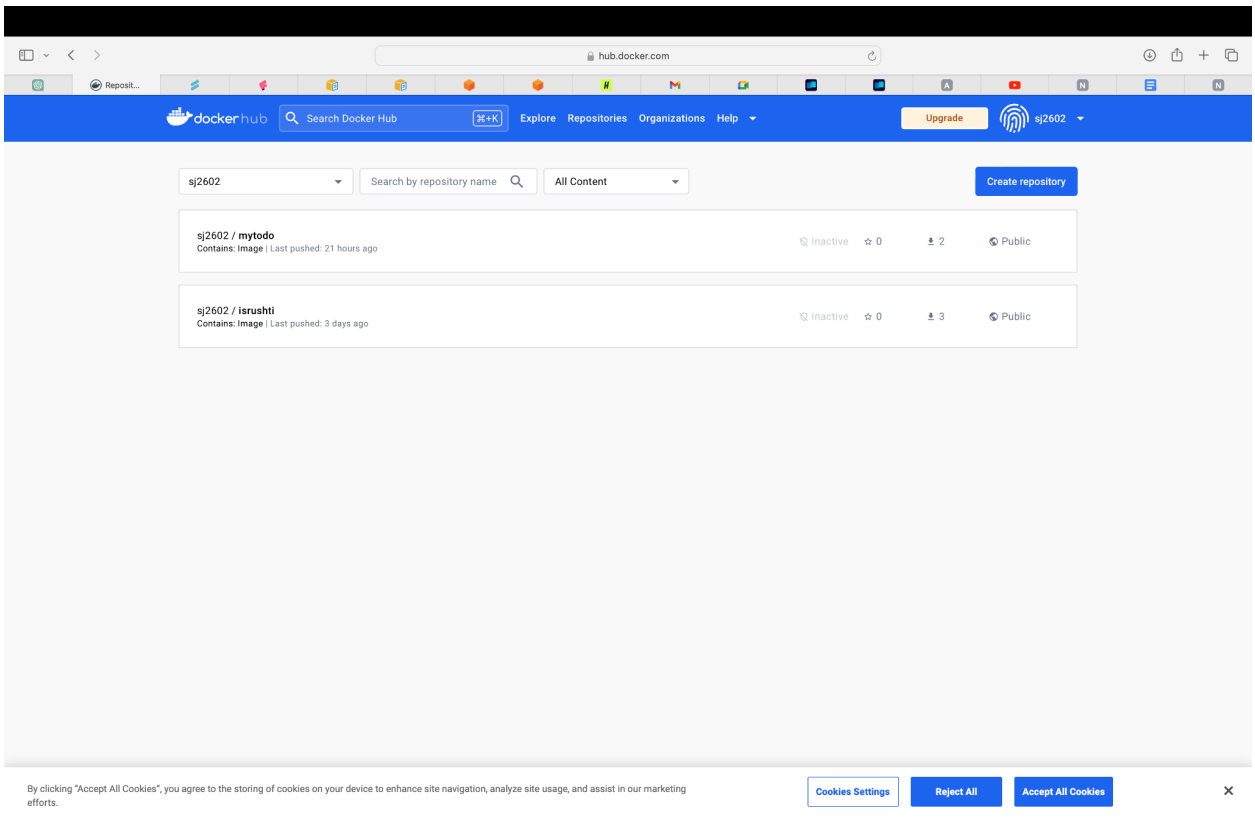
Part 1 : it is just installments.

Part 2 :

Logged in the docker account . Pushed the docker image in username sj2602 in repo my_todo with tag v1.

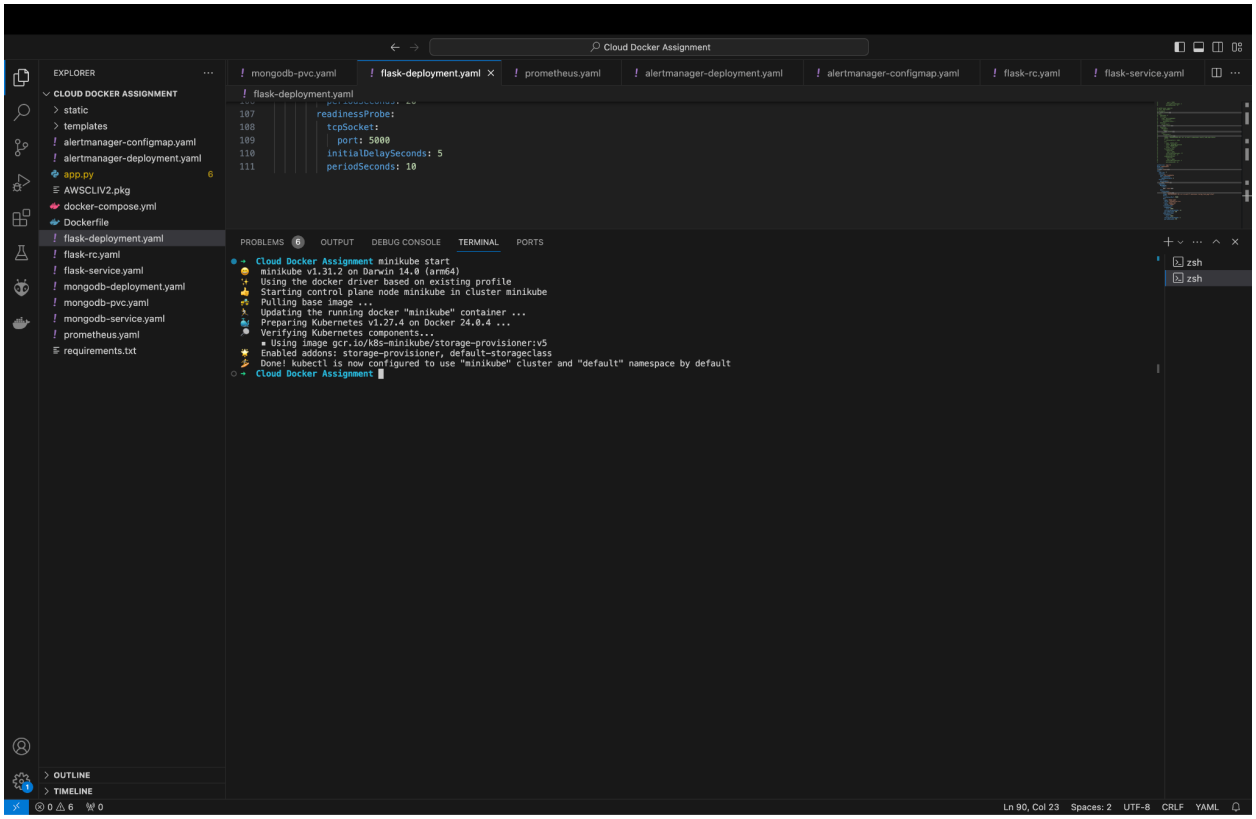


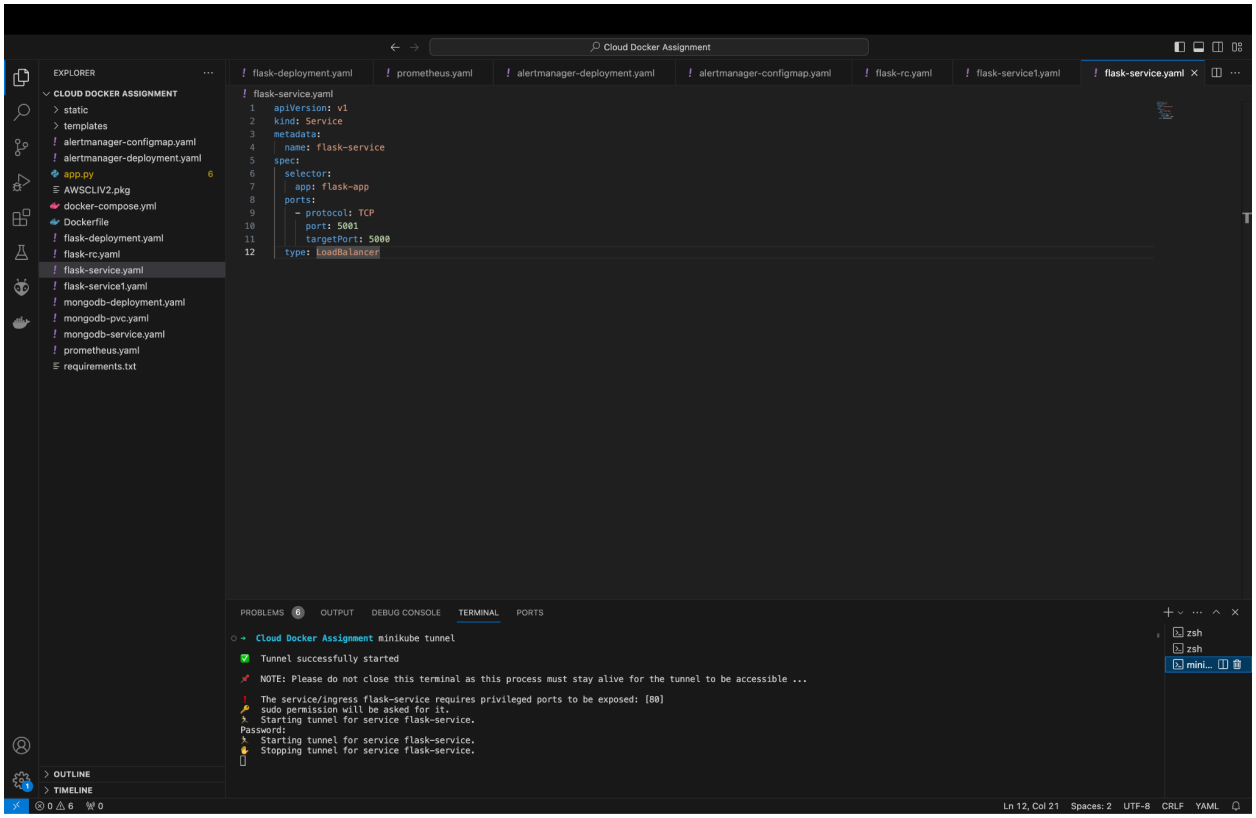


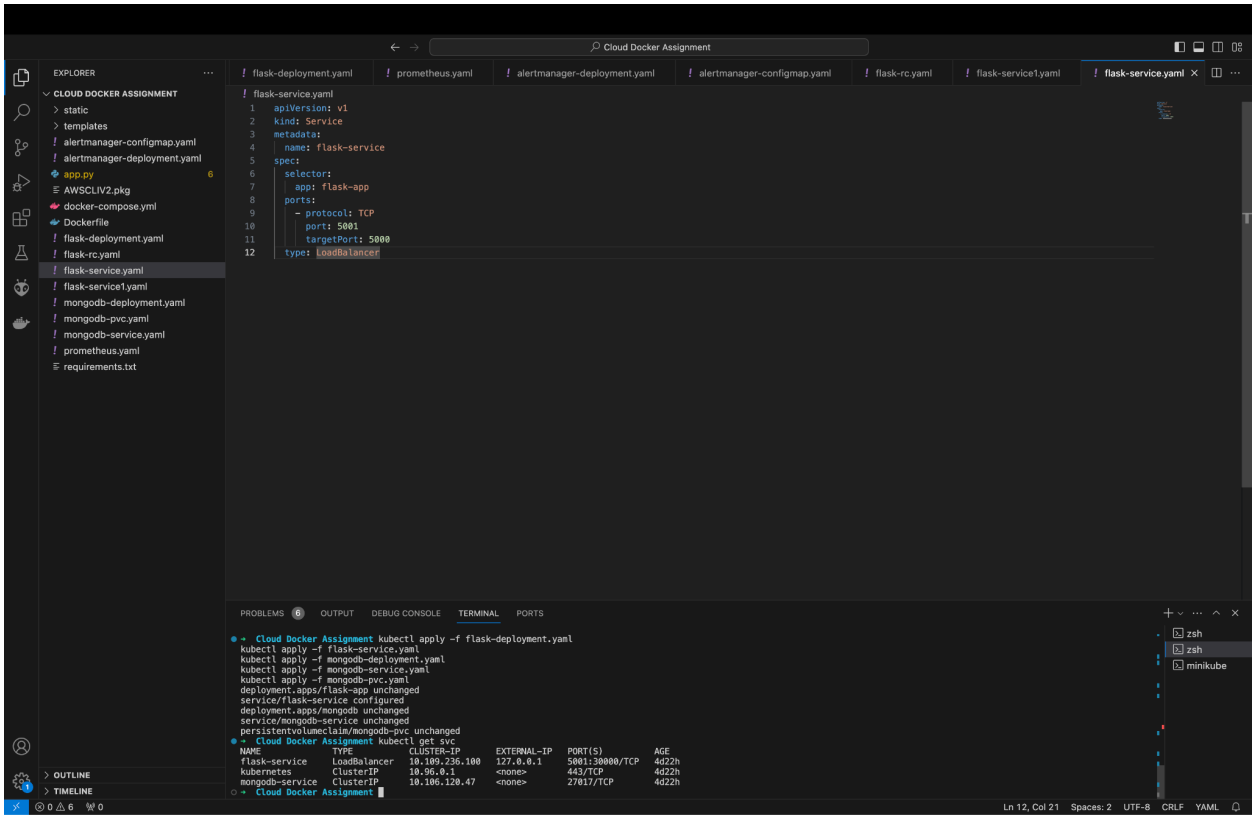


Part 3 :

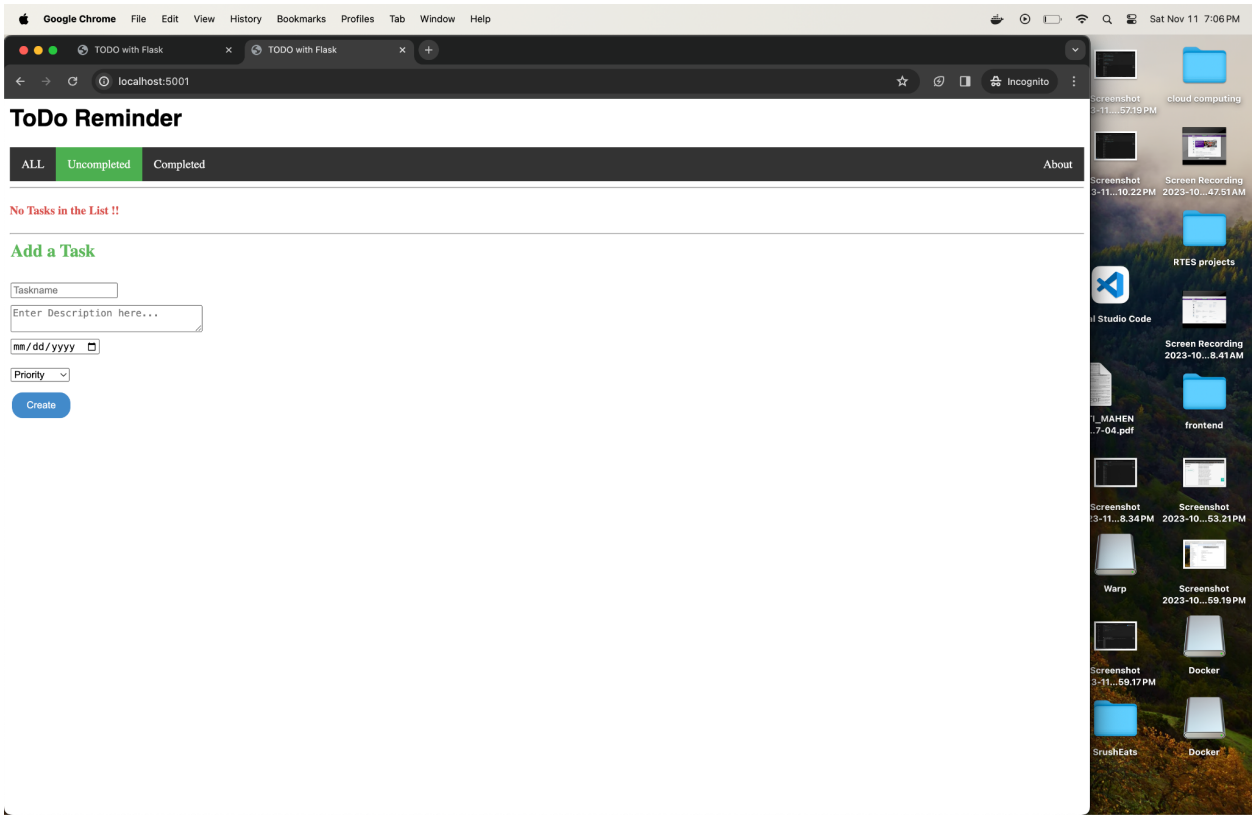
Run “minikube start” and apply the deployment and service files.




Cloud Docker Assignment
EXPLORER
CLOUD DOCKER ASSIGNMENT
static
templates
alertmanager-configmap.yaml
alertmanager-deployment.yaml
app.py 6
AWSCLIV2.pkg
docker-compose.yml
Dockerfile
flask-deployment.yaml
flask-rc.yaml
flask-service.yaml
flask-service1.yaml
mongodb-deployment.yaml
mongodb-pvc.yaml
mongodb-service.yaml
prometheus.yaml
requirements.txt
OUTLINE
TIMELINE
flask-deployment.yaml
prometheus.yaml
alertmanager-deployment.yaml
alertmanager-configmap.yaml
flask-rc.yaml
flask-service1.yaml
flask-service.yaml
flask-service.yaml
1 apiVersion: v1
2 kind: Service
3 metadata:
4 name: flask-service
5 spec:
6 selector:
7 app: flask-app
8 ports:
9 - protocol: TCP
10 port: 5001
11 targetPort: 5000
12 type: LoadBalancer
PROBLEMS 6
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
Cloud Docker Assignment minikube tunnel
Tunnel successfully started
NOTE: Please do not close this terminal as this process must stay alive for the tunnel to be accessible ...
The service/ingress flask-service requires privileged ports to be exposed: [80]
sudo permission will be asked for it.
Starting tunnel for service flask-service.
Password:
Starting tunnel for service flask-service.
Stopping tunnel for service flask-service.
zsh
zsh
mini...
Ln 12, Col 21
Spaces: 2
UTF-8
CRLF
YAML

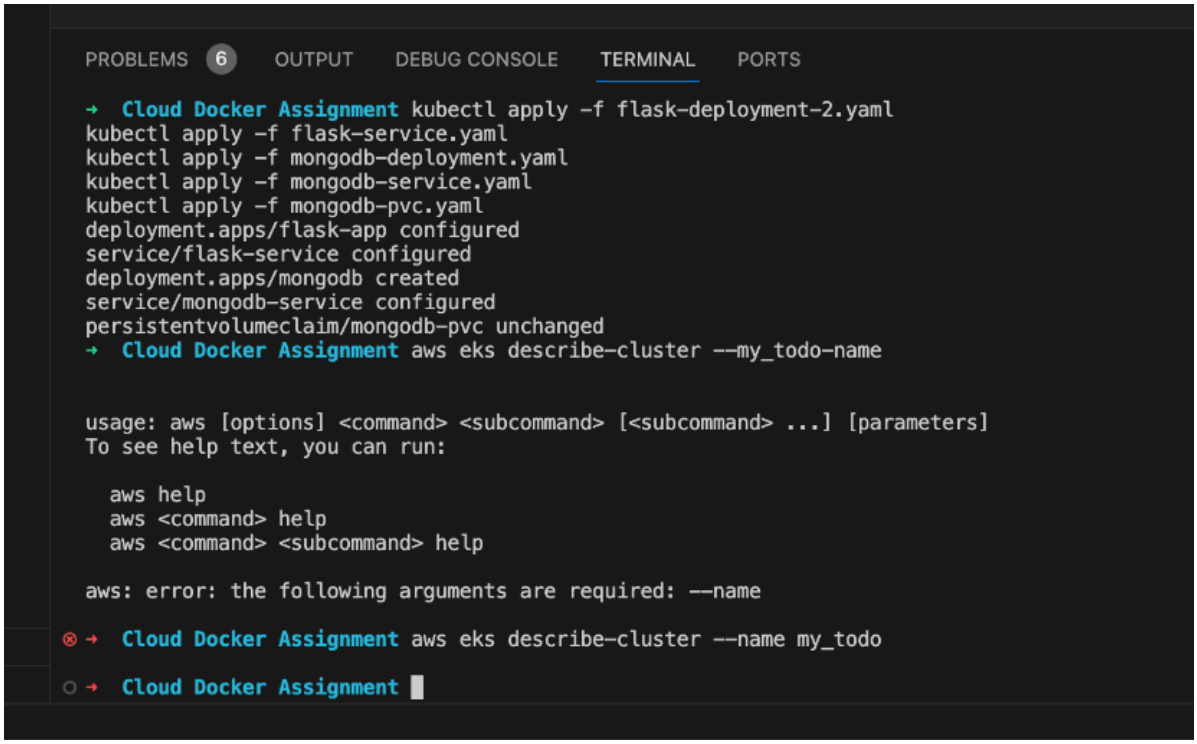

Cloud Docker Assignment
EXPLORER
CLOUD DOCKER ASSIGNMENT
static
templates
alertmanager-configmap.yaml
alertmanager-deployment.yaml
app.py 6
AWSCLIV2.pkg
docker-compose.yml
Dockerfile
flask-deployment.yaml
flask-rc.yaml
flask-service.yaml
flask-service1.yaml
mongodb-deployment.yaml
mongodb-pvc.yaml
mongodb-service.yaml
prometheus.yaml
requirements.txt
OUTLINE
TIMELINE
flask-deployment.yaml
prometheus.yaml
alertmanager-deployment.yaml
alertmanager-configmap.yaml
flask-rc.yaml
flask-service1.yaml
flask-service.yaml
flask-service.yaml
1 apiVersion: v1
2 kind: Service
3 metadata:
4 name: flask-service
5 spec:
6 selector:
7 app: flask-app
8 ports:
9 - protocol: TCP
10 port: 5001
11 targetPort: 5000
12 type: LoadBalancer
PROBLEMS 6
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
Cloud Docker Assignment kubectl apply -f flask-deployment.yaml
kubectl apply -f flask-service.yaml
kubectl apply -f mongodb-deployment.yaml
kubectl apply -f mongodb-service.yaml
kubectl apply -f mongodb-pvc.yaml
deployment.apps/flask-app unchanged
service/flask-service configured
deployment.apps/mongodb unchanged
service/mongodb-service unchanged
persistentvolumeclaim/mongodb-pvc unchanged
Cloud Docker Assignment kubectl get svc
NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE
flask-service LoadBalancer 10.109.236.100 127.0.0.1 5001:30000/TCP 4d22h
kubernetes ClusterIP 10.96.0.1 <none> 443/TCP 4d22h
mongodb-service ClusterIP 10.106.120.47 <none> 27017/TCP 4d22h
Cloud Docker Assignment
zsh
zsh
minikube
Ln 12, Col 21
Spaces: 2
UTF-8
CRLF
YAML

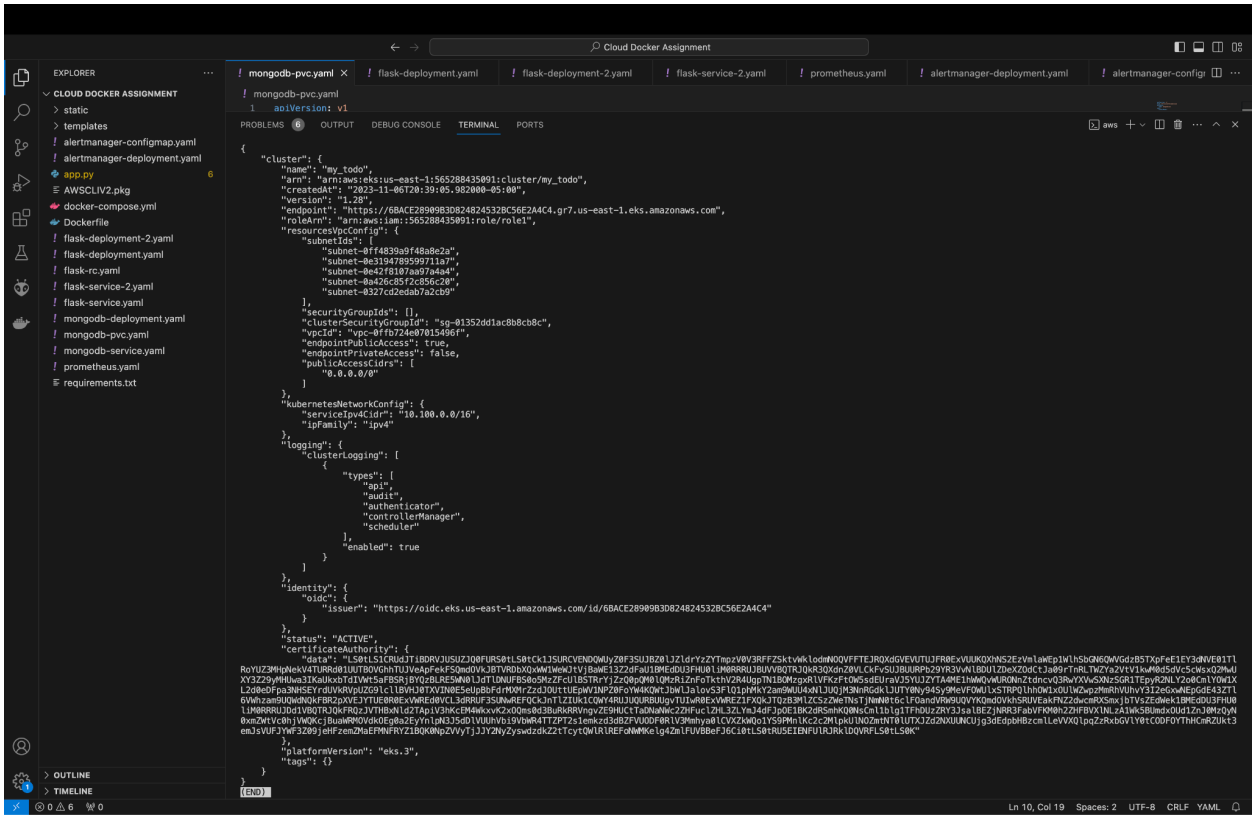
Local host : 5001

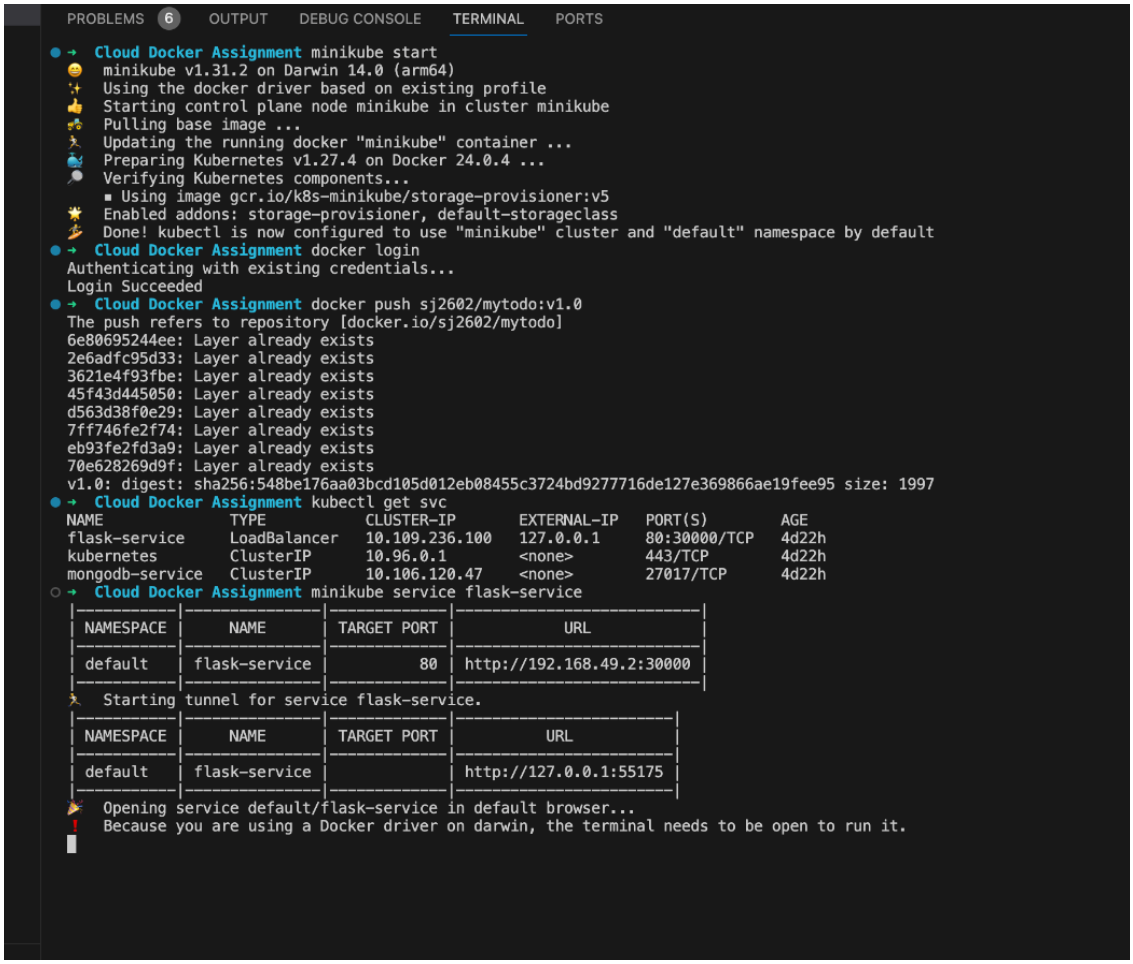


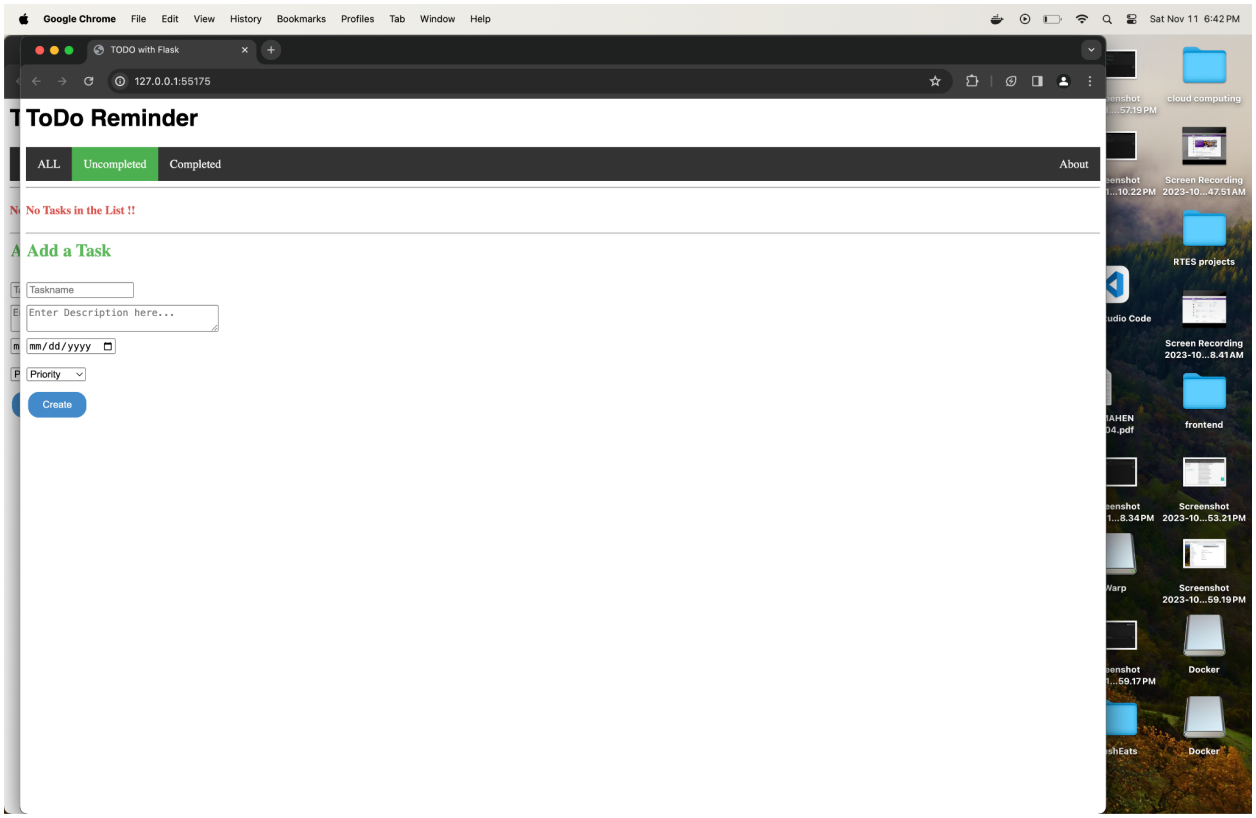
Part 4:

Install aws cli, eksctl, aws-iamauthenticator
Configure AWS in the terminal
Push the image to ECR using the push commands

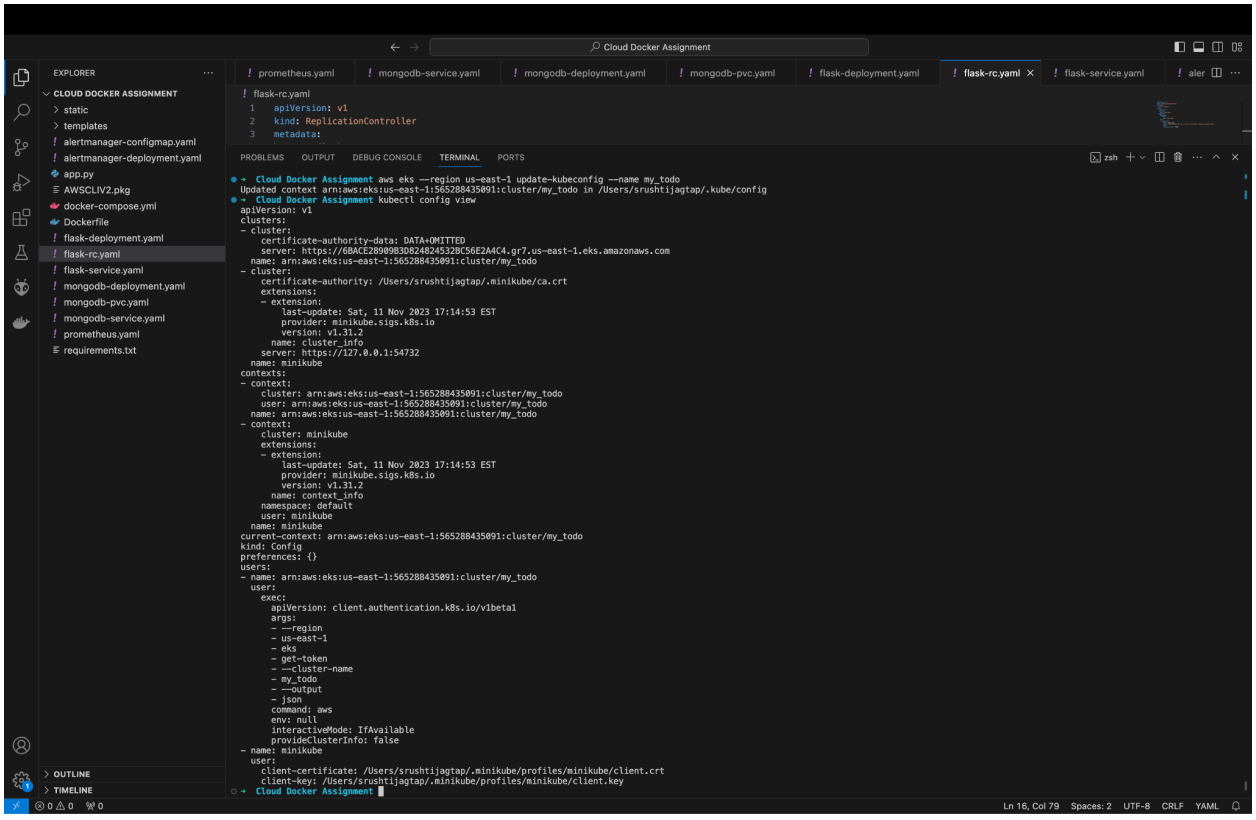

PROBLEMS 6
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
→ Cloud Docker Assignment kubectl apply -f flask-deployment-2.yaml
kubectl apply -f flask-service.yaml
kubectl apply -f mongodb-deployment.yaml
kubectl apply -f mongodb-service.yaml
kubectl apply -f mongodb-pvc.yaml
deployment.apps/flask-app configured
service/flask-service configured
deployment.apps/mongodb created
service/mongodb-service configured
persistentvolumeclaim/mongodb-pvc unchanged
→ Cloud Docker Assignment aws eks describe-cluster --my_todo-name
usage: aws [options] <command> <subcommand> [<subcommand> ...] [parameters]
To see help text, you can run:
aws help
aws <command> help
aws <command> <subcommand> help
aws: error: the following arguments are required: --name
→ Cloud Docker Assignment aws eks describe-cluster --name my_todo
→ Cloud Docker Assignment


Cloud Docker Assignment
EXPLORER
CLOUD DOCKER ASSIGNMENT
static
templates
alertmanager-configmap.yaml
alertmanager-deployment.yaml
app.py
AWSCLiV2.pkg
docker-compose.yml
Dockerfile
flask-deployment-2.yaml
flask-deployment.yaml
flask-rc.yaml
flask-service-2.yaml
flask-service.yaml
mongodb-deployment.yaml
mongodb-pvc.yaml
mongodb-service.yaml
prometheus.yaml
requirements.txt
mongodb-pvc.yaml
flask-deployment.yaml
flask-deployment-2.yaml
flask-service-2.yaml
prometheus.yaml
alertmanager-deployment.yaml
alertmanager-config
apiVersion: v1
PROBLEMS 6
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
aws
"cluster": {
"name": "my_todo",
"arn": "arn:aws:eks:us-east-1:565288435091:cluster/my_todo",
"createdAt": "2023-11-06T20:39:05.982000-05:00",
"version": "1.28",
"endpoint": "https://6BACE28909B3D824824532BC56E2A4C4.gr7.us-east-1.eks.amazonaws.com",
"roleArn": "arn:aws:iam::565288435091:role/role1",
"resourcesVpcConfig": {
"subnetIds": [
"subnet-0ff4839a9f48a8e2a",
"subnet-0e31947895997 11a7",
"subnet-0e42f8107aa97a4a4",
"subnet-0a426c85f2c856c20",
"subnet-0327cd2edab7a2cb9"
],
"securityGroupIds": [],
"clusterSecurityGroupId": "sg-01352dd1ac8b8cb8c",
"vpcId": "vpc-0ffb724e07015496f",
"endpointPublicAccess": true,
"endpointPrivateAccess": false,
"publicAccessCidrs": [
"0.0.0.0/0"
]
},
"kubernetesNetworkConfig": {
"serviceIpv4Cidr": "10.100.0.0/16",
"ipFamily": "ipv4"
},
"logging": {
"clusterLogging": [
{
"types": [
"api",
"audit",
"authenticator",
"controllerManager",
"scheduler"
],
"enabled": true
}
]
},
"identity": {
"oidc": {
"issuer": "https://oidc.eks.us-east-1.amazonaws.com/id/6BACE28909B3D824824532BC56E2A4C4"
}
},
"status": "ACTIVE",
"certificateAuthority": {
"data": "LS0tLS1CRUdJTiBDRVJUSUZJQ0FURS0tLS0tCk1JSURCVENDQWUyZ0F3SUJBZ0lJZldrYzZYTmpzV0V3RFFZSktvWklodmNOQVFFTEJRQXdGVEVUTUJFR0ExVUUKQXhNS2EzVmlaWEp1WlhSbGN6QWVGdzB5TXpFeE1EY3dNVE01Tl
RoYUZ3MHpNekV4TURRd01UUTBOVGhhTUJVeApFekFSQmdOVkJBTVRDbXQxYWW1WeWJtVjBaWE13ZGZdFaU18MEdDU3FHU0liM0RRRUJBUVVBQTRJQkR3QXdnZ0VLCkFvSUJBUURPb29YR3VvNlB0U1ZDeXZ0dCtJa09rTnRLTWZYa2VtV1kwM0d5dVc5cWsxQ2MwU
XY3Z29yMWNwa3IKaUxoTdIVWt5aFBSRjBYQzBLRE5WN01JdTlUNUFBS0o5MzZFcUlBSTRrYjZzQ0pQM01QMzRiZnFoTktnV2R4UggTN1BQMzgxRlVFKzFtOW5sdEUraVJ5YUJZYTA4ME1nWWQyWLRQNnZtdncvQ3RwYXVkSXNzSGRlTEpyR2NLY2o0CnlYOW1X
L2d0eDFpa3NHSEYrdUVkRVpUZG9lclBVHJ0TXVINE5eUpBbFdrMXMrZzdJOUttUEpWV1NP20FoYW4KQWtJbWlJalovS3FlQ1phMkY2am9WUU4xNlJUOjM3NnRGdklJUTY0Ny94Sy9MeVF0WUlxSTRPQlhhOW1xOUlWZwpzMnRhVUhvY3I2eGxwNEpGdE43ZTl
6VWhzam9UQWdNQkFBR2pXVEJYTUE0REExVWRED0VCL3dRRUF3SUNwREFQCkJnTlZIUk1CQWY4RUJUQURBUUgvTUIwR0ExVWREZ1FXQkJTQzB3MlZCSzZWeTNsTjNmN0t6clFOandVRW9UQVYKQmdOVkhSUVEakFNZ2dwcmRXSmxjbTVsZEdWek1BMEdDU3FHU0
ljM0RRRUJDd1VBQTRJQkFRQzJVTHBxNld2TApiV3hKcEM4WkxvK2xOQms0d3BuRkRRVngvZE9HUCtTaDNaNWc2ZHFucldHL3ZLYmJ4dFJpOE1BK2dRSmdxOUd1ZnJ0MzQyN
0xmZWtVcGhjVWOKcjBuaWRMOVdkOEp0aZEyYnlpN3J5dDlVUUhVb19VbW84TTZPT2slemkzd3dBZFU0OFBRlV3Mmhya0lCVXZkWQo1YS9PMnlKc2c2M1pkUlNO2mtNT0lUTXJZd2NXUUNCUjg3dEdpbHBzcmlLeVVXQlpqZzRxbGVlY0tCODFOYThNCmRZUkt3
emJsVUFJYWF3Z09jeHFzemZMaEFMNFRY21BQK0NpZVVyTjJJY2NyZyswdzdkZ2tCcytQWlRlREFoNWMKelg4ZmlFUVBBeFJ6Ci0tLS0tRU5EIENFUlRJRk1DQVRFLS0tLS0K"
},
"platformVersion": "eks.3",
"tags": {}
}
}
(END)
OUTLINE
TIMELINE
Ln 10, Col 19
Spaces: 2
UTF-8
CRLF
YAML

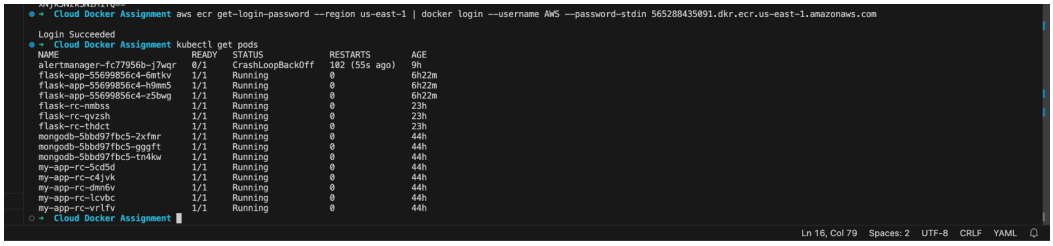

PROBLEMS 6
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
Cloud Docker Assignment minikube start
minikube v1.31.2 on Darwin 14.0 (arm64)
Using the docker driver based on existing profile
Starting control plane node minikube in cluster minikube
Pulling base image ...
Updating the running docker "minikube" container ...
Preparing Kubernetes v1.27.4 on Docker 24.0.4 ...
Verifying Kubernetes components...
▪ Using image gcr.io/k8s-minikube/storage-provisioner:v5
Enabled addons: storage-provisioner, default-storageclass
Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
Cloud Docker Assignment docker login
Authenticating with existing credentials...
Login Succeeded
Cloud Docker Assignment docker push sj2602/mytodo:v1.0
The push refers to repository [docker.io/sj2602/mytodo]
6e80695244ee: Layer already exists
2e6adfc95d33: Layer already exists
3621e4f93fbe: Layer already exists
45f43d445050: Layer already exists
d563d38f0e29: Layer already exists
7ff746fe2f74: Layer already exists
eb93fe2fd3a9: Layer already exists
70e628269d9f: Layer already exists
v1.0: digest: sha256:548be176aa03bcd105d012eb08455c3724bd9277716de127e369866ae19fee95 size: 1997
Cloud Docker Assignment kubectl get svc
NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE
flask-service LoadBalancer 10.109.236.100 127.0.0.1 80:30000/TCP 4d22h
kubernetes ClusterIP 10.96.0.1 <none> 443/TCP 4d22h
mongodb-service ClusterIP 10.106.120.47 <none> 27017/TCP 4d22h
Cloud Docker Assignment minikube service flask-service
| NAMESPACE | NAME | TARGET PORT | URL |
| default | flask-service | 80 | http://192.168.49.2:30000 |
Starting tunnel for service flask-service.
| NAMESPACE | NAME | TARGET PORT | URL |
| default | flask-service | | http://127.0.0.1:55175 |
Opening service default/flask-service in default browser...
Because you are using a Docker driver on darwin, the terminal needs to be open to run it.



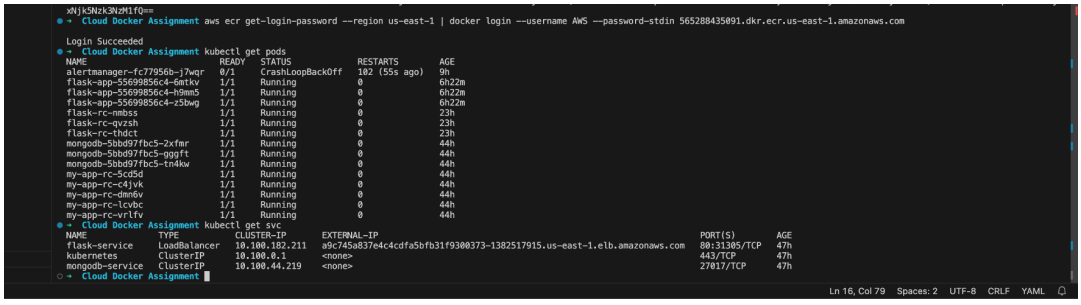
aws eks --region us-east-1 update-kubeconfig --name my_todo



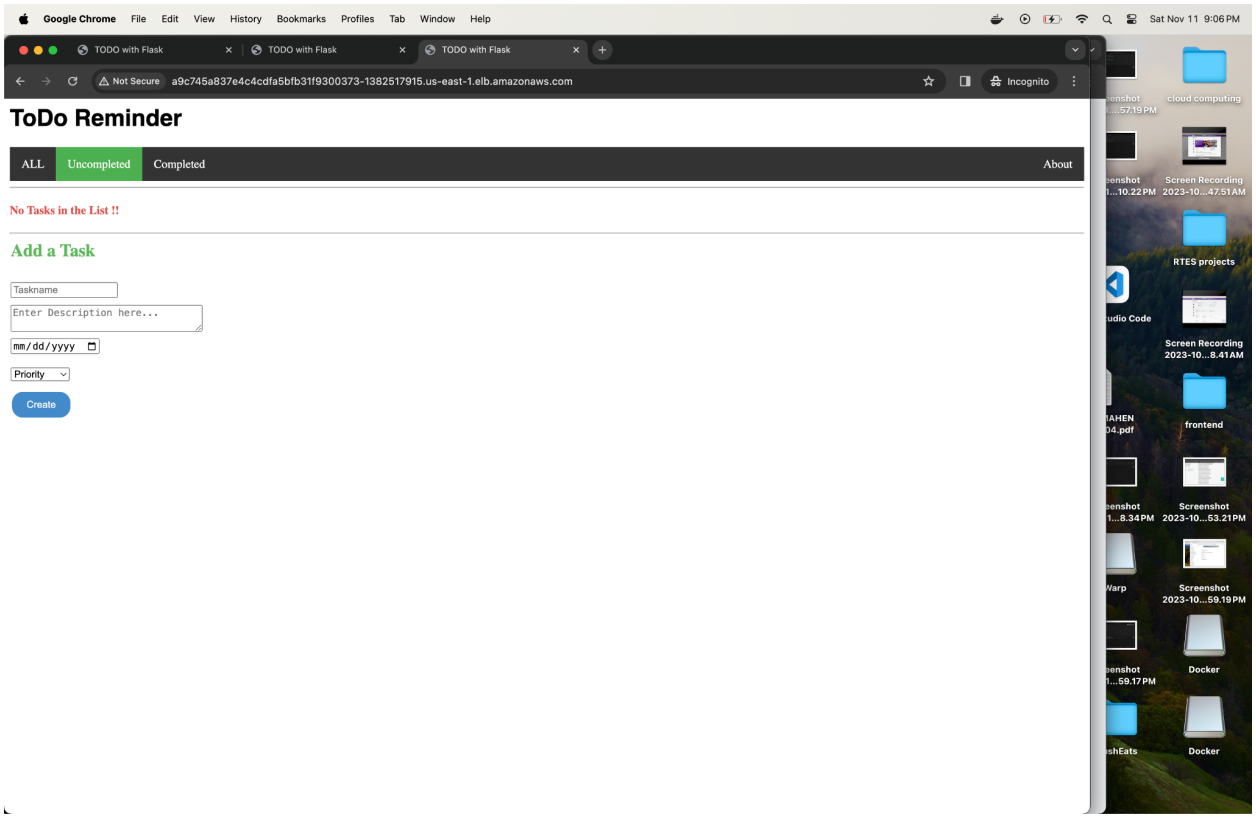
Deploy all the yaml files and check the pods



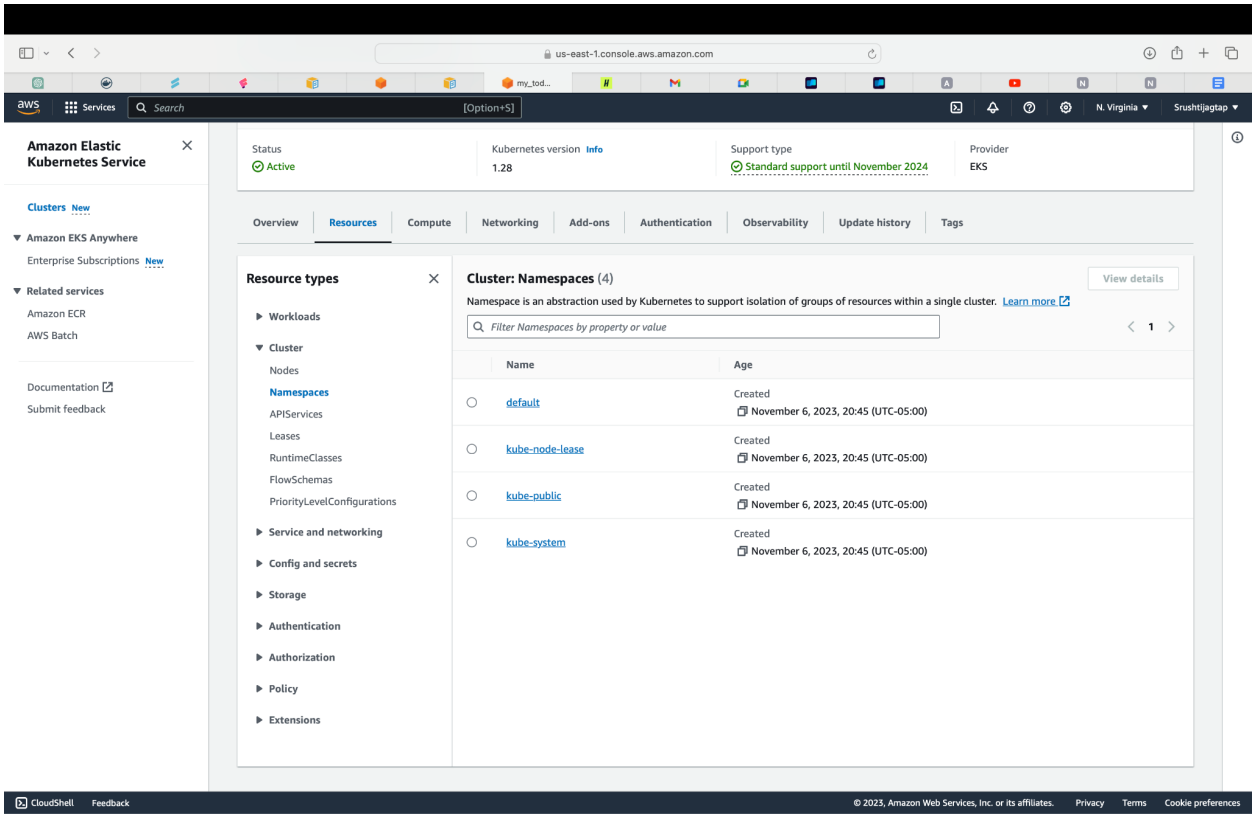
Get the services .



The website runs of the external ip address which we got from the command kubectl get services . hence our website is hosted .



Configure settings of EKS and ECR.


us-east-1.console.aws.amazon.com
aws
Services
Search
[Option+S]
N. Virginia
Srushtijagtap
Amazon Elastic Kubernetes Service
Clusters New
Amazon EKS Anywhere
Enterprise Subscriptions New
Related services
Amazon ECR
AWS Batch
Documentation
Submit feedback
Status
Active
Kubernetes version Info
1.28
Support type
Standard support until November 2024
Provider
EKS
Overview
Resources
Compute
Networking
Add-ons
Authentication
Observability
Update history
Tags
Resource types
Workloads
Cluster
Nodes
Namespaces
APIServices
Leases
RuntimeClasses
FlowSchemas
PriorityLevelConfigurations
Service and networking
Config and secrets
Storage
Authentication
Authorization
Policy
Extensions
Cluster: Namespaces (4)
View details
Namespace is an abstraction used by Kubernetes to support isolation of groups of resources within a single cluster. Learn more
Filter Namespaces by property or value
Name
Age
default
Created
November 6, 2023, 20:45 (UTC-05:00)
kube-node-lease
Created
November 6, 2023, 20:45 (UTC-05:00)
kube-public
Created
November 6, 2023, 20:45 (UTC-05:00)
kube-system
Created
November 6, 2023, 20:45 (UTC-05:00)
CloudShell
Feedback
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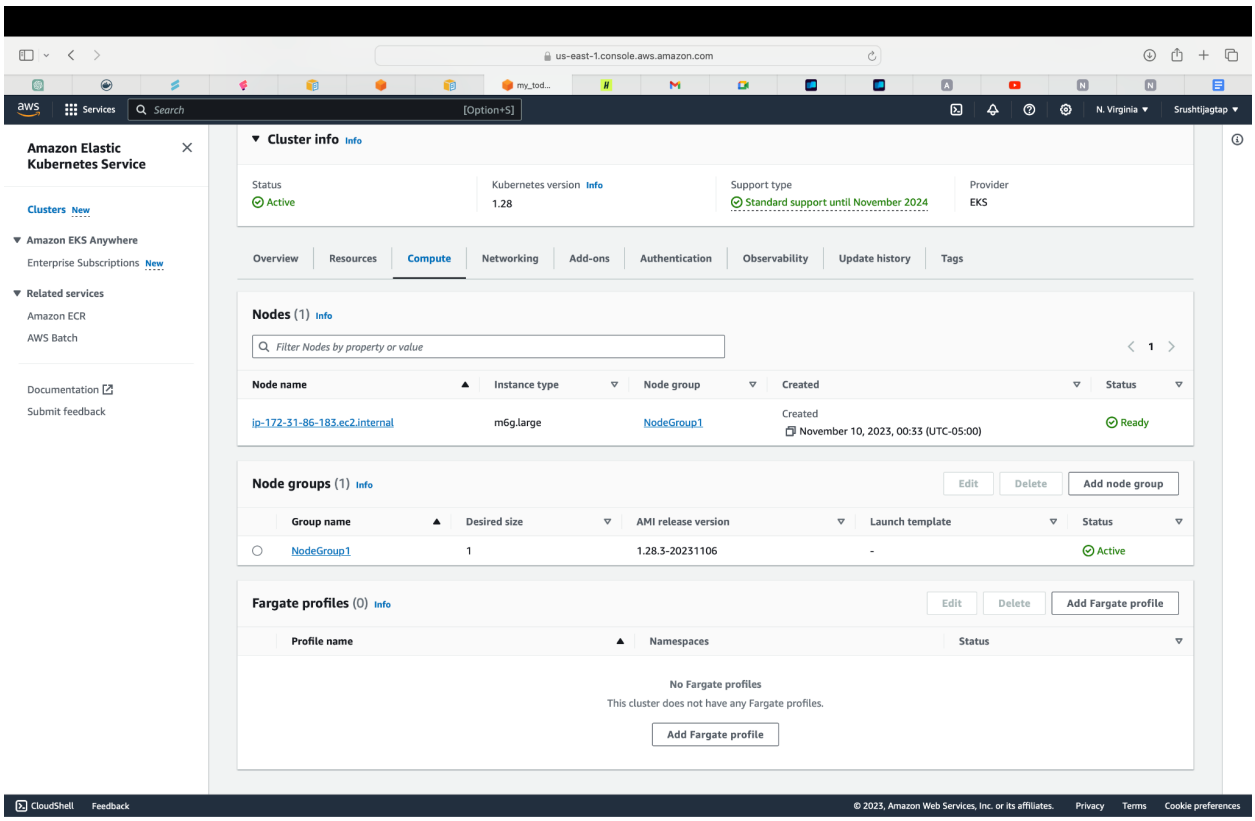
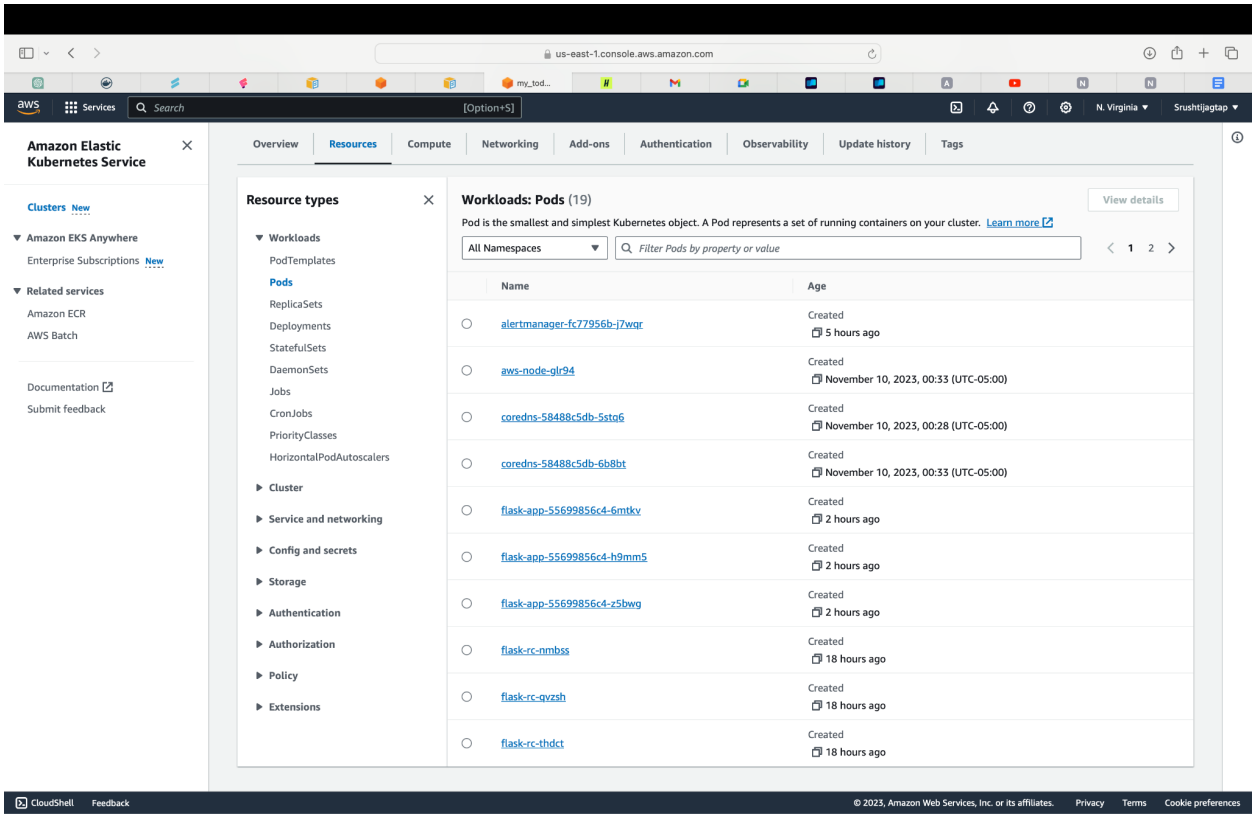
Privacy
Terms
Cookie preferences


us-east-1.console.aws.amazon.com
aws
Services
Search
[Option+S]
N. Virginia
Srushtijagtap
Amazon Elastic Kubernetes Service
Clusters New
Amazon EKS Anywhere
Enterprise Subscriptions New
Related services
Amazon ECR
AWS Batch
Documentation
Submit feedback
Cluster info Info
Status
Active
Kubernetes version Info
1.28
Support type
Standard support until November 2024
Provider
EKS
Overview
Resources
Compute
Networking
Add-ons
Authentication
Observability
Update history
Tags
Nodes (1) Info
Filter Nodes by property or value
Node name
Instance type
Node group
Created
Status
ip-172-31-86-183.ec2.internal
m6g.large
NodeGroup1
Created
November 10, 2023, 00:33 (UTC-05:00)
Ready
Node groups (1) Info
Edit
Delete
Add node group
Group name
Desired size
AMI release version
Launch template
Status
NodeGroup1
1
1.28.3-20231106
-
Active
Fargate profiles (0) Info
Edit
Delete
Add Fargate profile
Profile name
Namespaces
Status
No Fargate profiles
This cluster does not have any Fargate profiles.
Add Fargate profile
CloudShell
Feedback
© 2023, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences


us-east-1.console.aws.amazon.com
aws
Services
Search
[Option+S]
N. Virginia
Srushtijagtap
Amazon Elastic Kubernetes Service
Clusters New
Amazon EKS Anywhere
Enterprise Subscriptions New
Related services
Amazon ECR
AWS Batch
Documentation
Submit feedback
Overview
Resources
Compute
Networking
Add-ons
Authentication
Observability
Update history
Tags
Resource types
Workloads
PodTemplates
Pods
ReplicaSets
Deployments
StatefulSets
DaemonSets
Jobs
CronJobs
PriorityClasses
HorizontalPodAutoscalers
Cluster
Service and networking
Config and secrets
Storage
Authentication
Authorization
Policy
Extensions
Workloads: Pods (19)
View details
Pod is the smallest and simplest Kubernetes object. A Pod represents a set of running containers on your cluster. Learn more
All Namespaces
Filter Pods by property or value
1
2
Name
Age
alertmanager-fc77956b-j7wqr
Created 5 hours ago
aws-node-glr94
Created November 10, 2023, 00:33 (UTC-05:00)
coredns-58488c5db-5stq6
Created November 10, 2023, 00:28 (UTC-05:00)
coredns-58488c5db-6b8bt
Created November 10, 2023, 00:33 (UTC-05:00)
flask-app-55699856c4-6mtkv
Created 2 hours ago
flask-app-55699856c4-h9mm5
Created 2 hours ago
flask-app-55699856c4-z5bwg
Created 2 hours ago
flask-rc-nmbss
Created 18 hours ago
flask-rc-qvzsh
Created 18 hours ago
flask-rc-thdct
Created 18 hours ago
CloudShell
Feedback
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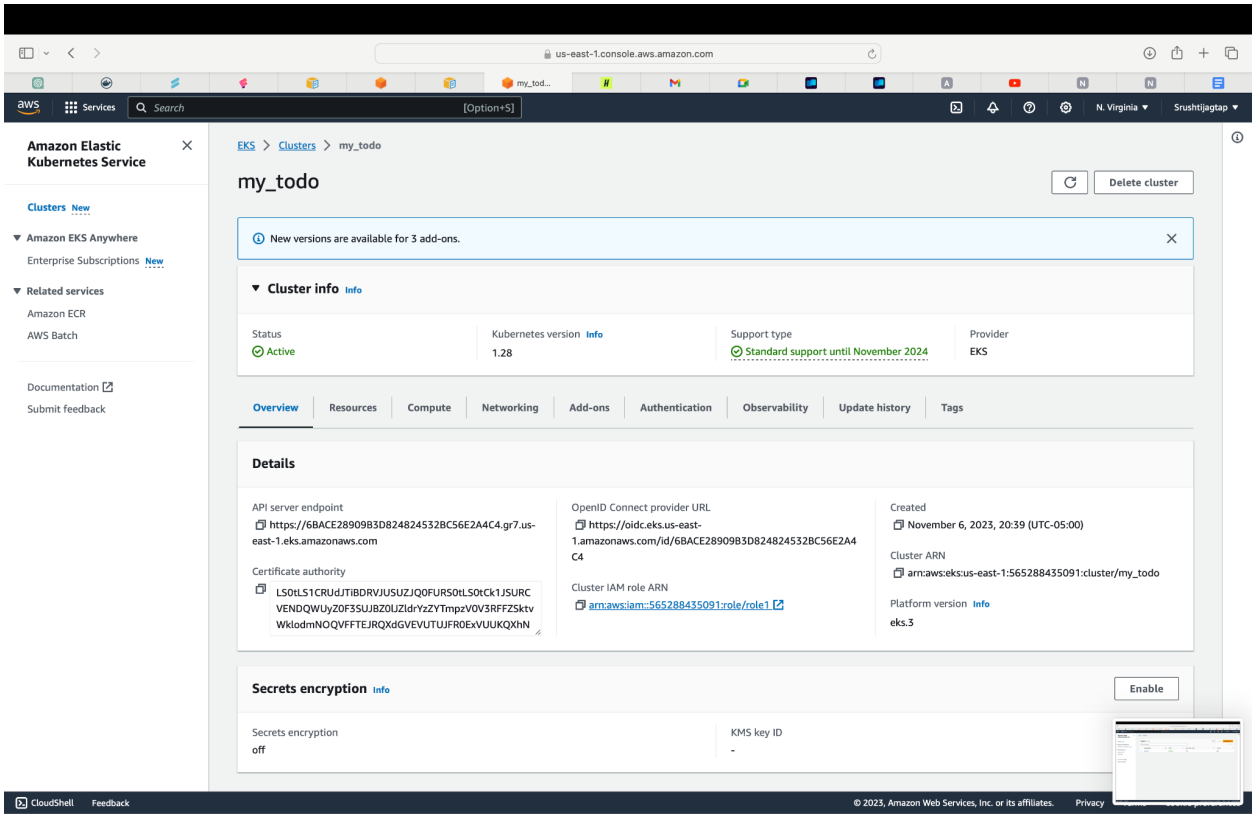
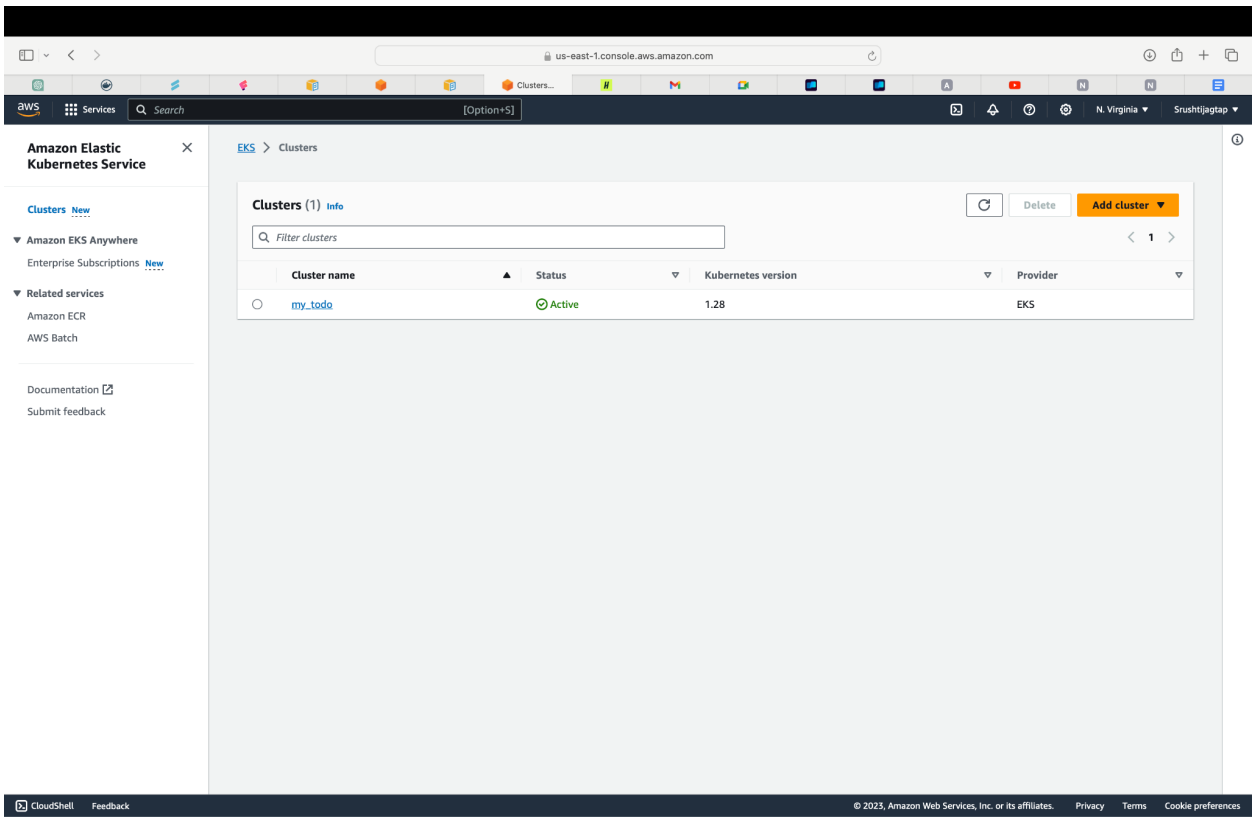
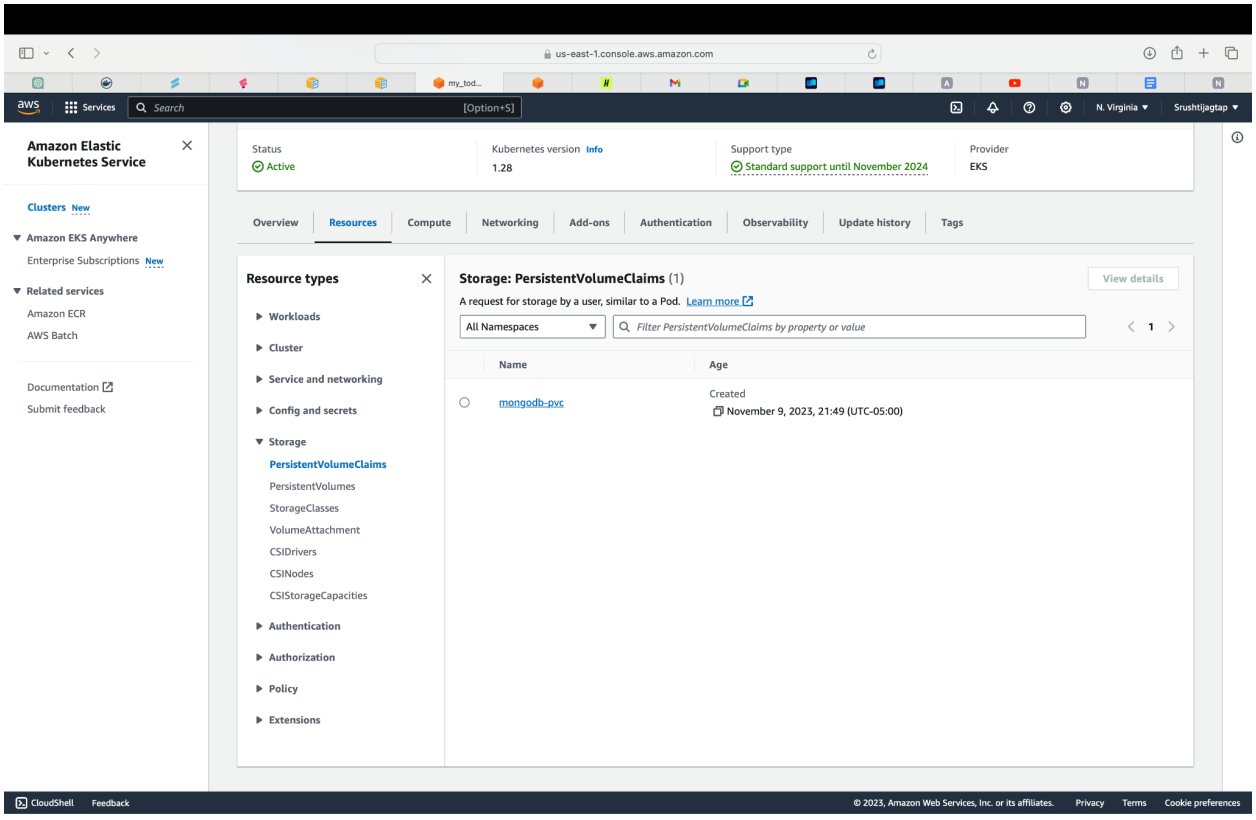


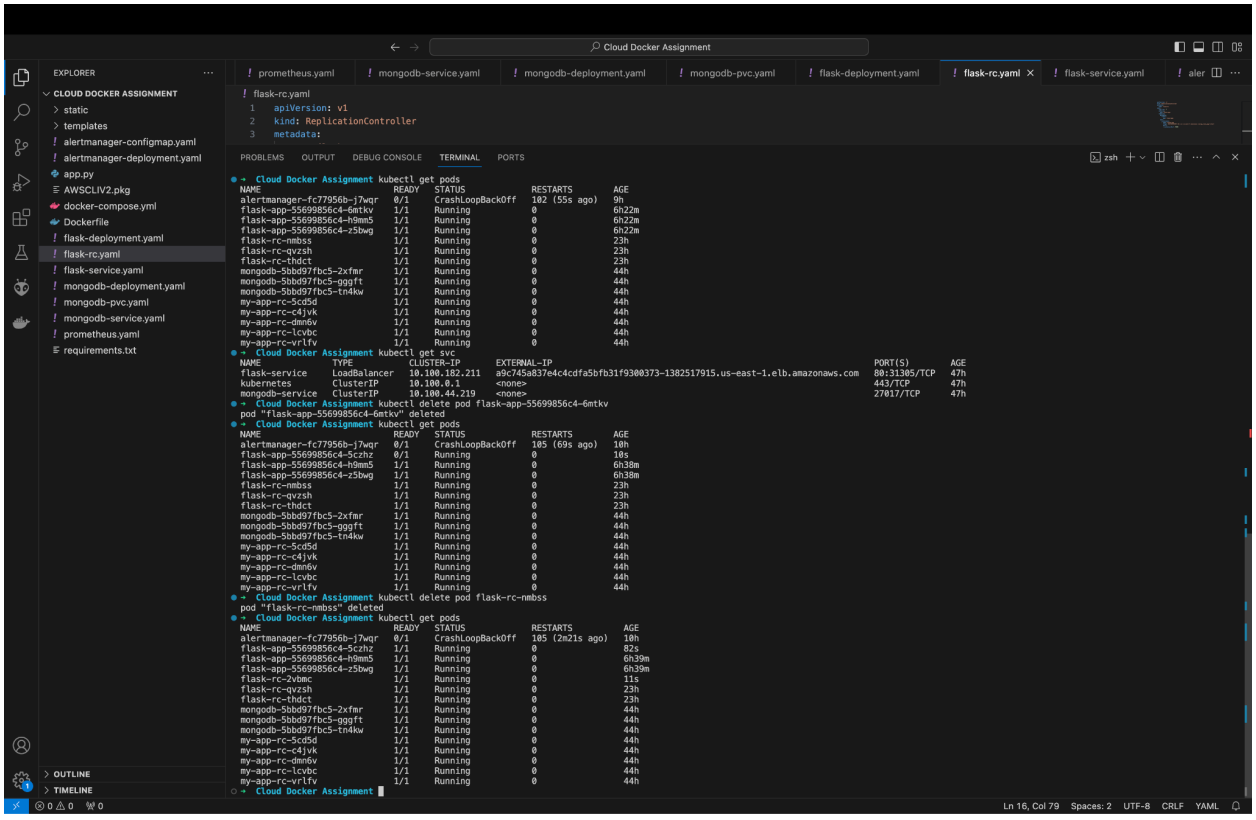


Config setting showing pvc



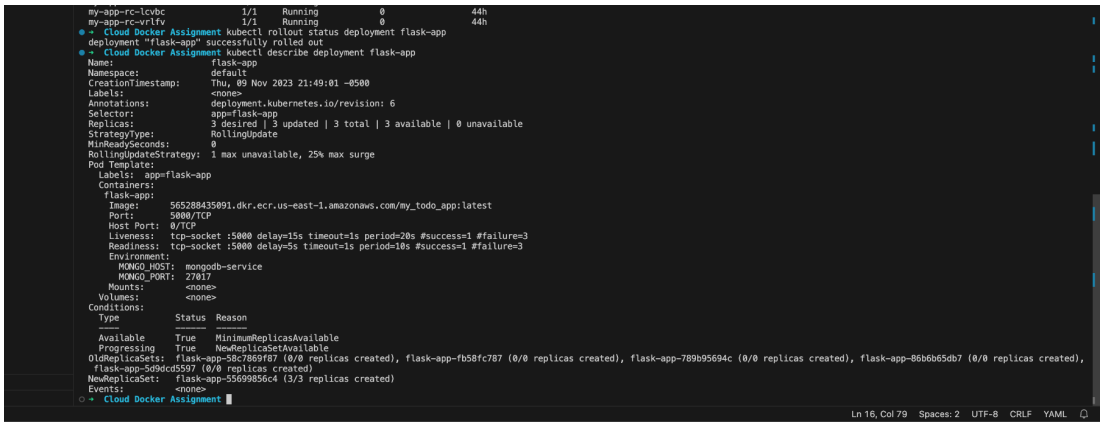
Part 5 :

Create a ReplicationController configuration file (flask-rc.yaml).
Apply the Replication Controller “kubectl apply -f flask-rc.yaml”
We can test it by deleting one of the pods and it recreates it.



Part 6:

Update the code to have a rolling update strategy.
Deploy the flask-deployment.yaml
Push a new updated image to ECR
Use the updated image from ECR and update the deployment.
Run the command to check if the rollout was successful.
It will output deployment “flask-app” successfully rolled out.
You can also run “kubectl describe deployment flask-app” to check if the application is scaling up and down.



Part 7 :

Made the changes on the livenessProbe so that pods will have and error and the new pods will be formed when there is an error. Hence we gave the port value as 5001.

`livenessProbe`: A liveness probe is used to check if the container is alive and healthy. It checks if the container can establish a TCP connection on port 5001. If the container fails the liveness probe, Kubernetes will restart it.

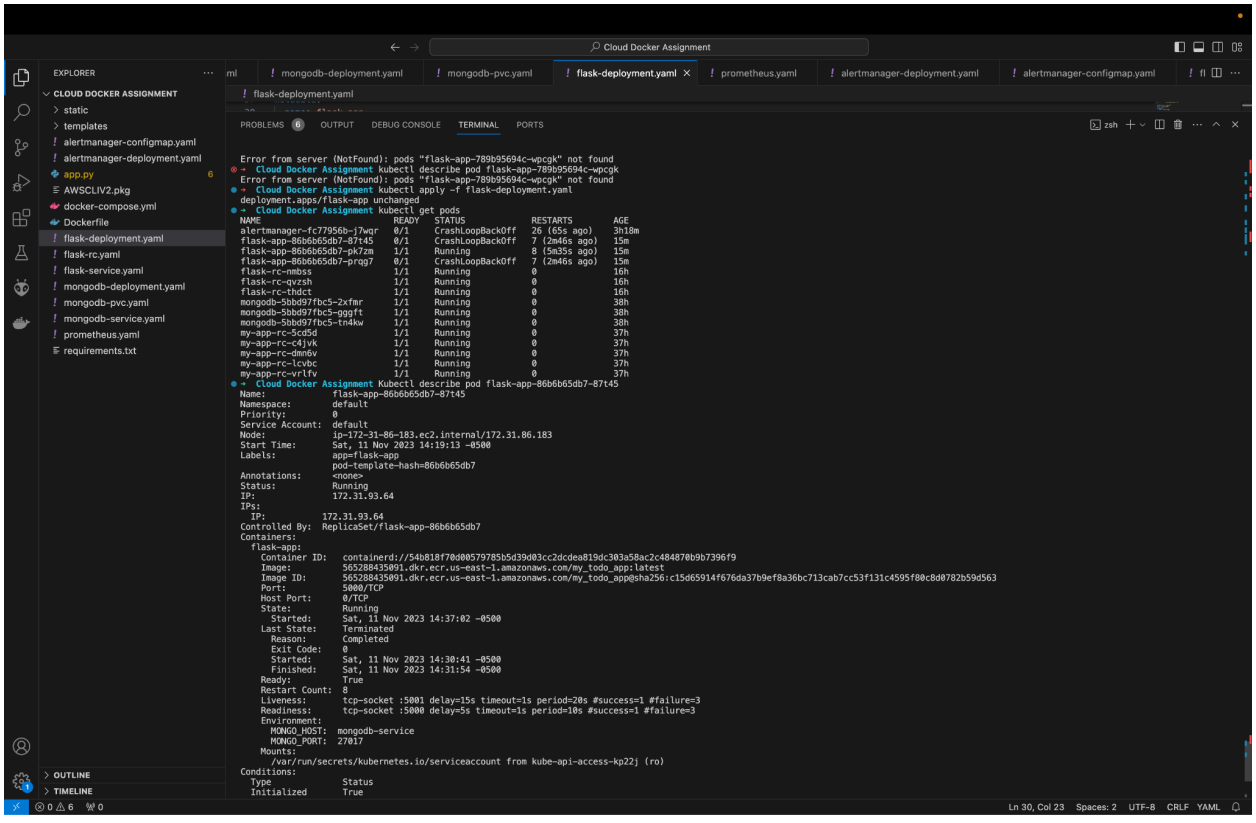
- `tcpSocket`: This is the type of probe, and it checks for a TCP connection.
- `initialDelaySeconds`: Specifies the number of seconds to wait before starting liveness probes.
- `periodSeconds`: Specifies how often to perform the liveness probe.

- `readinessProbe`: A readiness probe checks if the container is ready to receive traffic. It checks if the container can establish a TCP connection on port 5000. If the container fails the readiness probe, it won't receive incoming traffic.
  - `tcpSocket`: This is the type of probe, and it checks for a TCP connection.
  - `initialDelaySeconds`: Specifies the number of seconds to wait before starting readiness probes.
  - `periodSeconds`: Specifies how often to perform the readiness probe.

The last screenshot explain the pod shows warning , unhealthy , the killing and then backoff . Hence we have configured the pods and monitored the health of pods using kubectl.

```
# apiVersion: apps/v1
# kind: Deployment
# metadata:
# name: flask-app
# spec:
# replicas: 3
# strategy:
# type: RollingUpdate
# rollingUpdate:
# maxUnavailable: 1
# selector:
# matchLabels:
# app: flask-app
# template:
# metadata:
# labels:
# app: flask-app
# spec:
# containers:
# - name: flask-app
```

```
# image: 565288435091.dkr.ecr.us-east-1.amazonaws.com/my_todo_app:latest
# ports:
# - containerPort: 5000
# env:
# - name: MONGO_HOST
# value: mongodb-service
# - name: MONGO_PORT
# value: "27017"
# livenessProbe:
# tcpSocket:
# port: 5001
# initialDelaySeconds: 15
# periodSeconds: 20
# readinessProbe:
# tcpSocket:
# port: 5000
# initialDelaySeconds: 5
# periodSeconds: 10
```

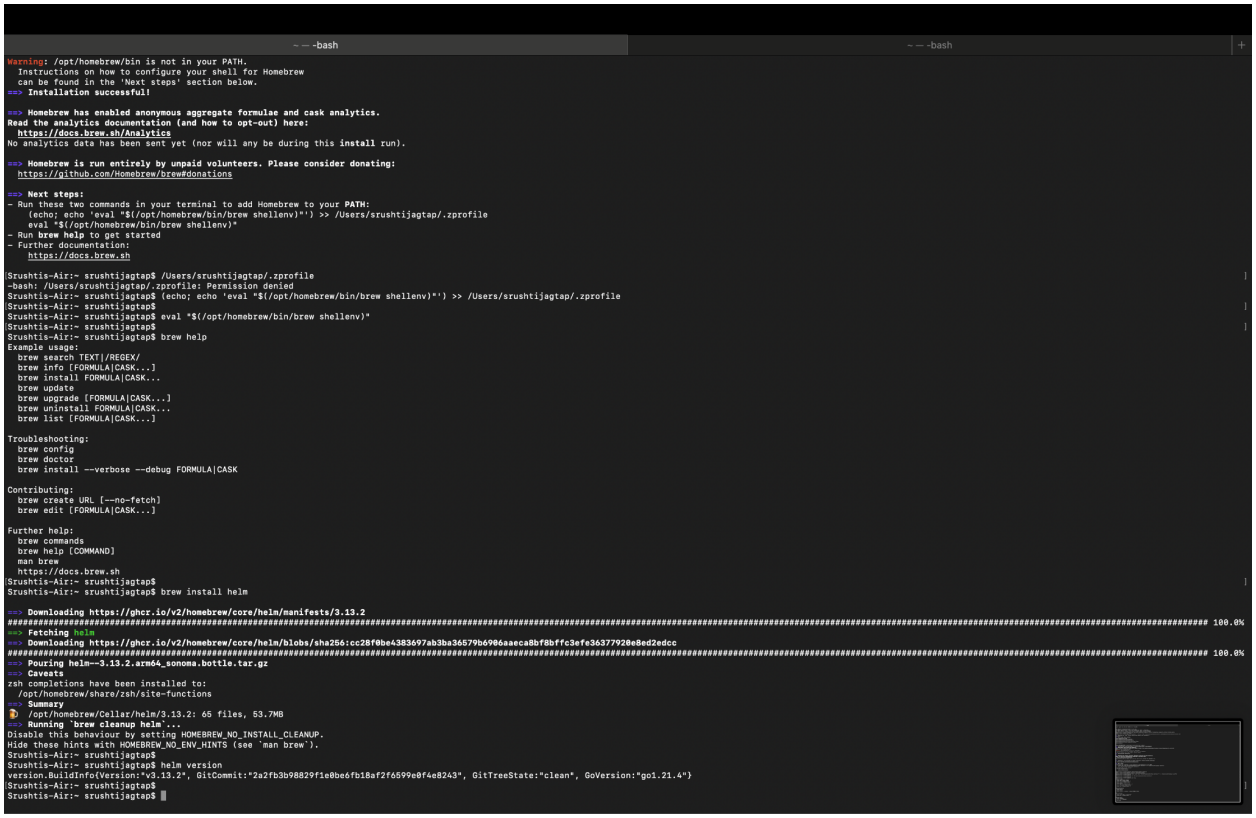


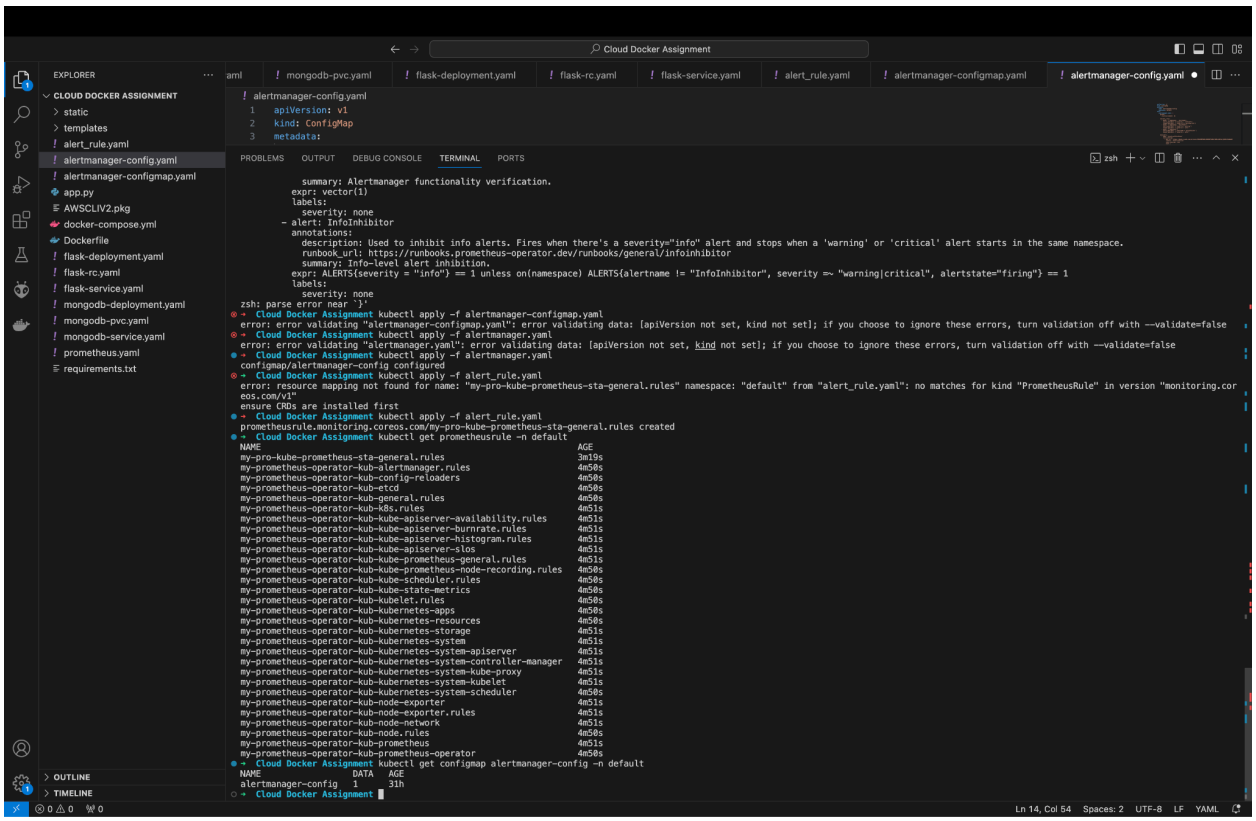
```
PROBLEMS 6   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS

      /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-kp22j (ro)
Conditions:
  Type              Status
  Initialized       True
  Ready             True
  ContainersReady   True
  PodScheduled      True
Volumes:
  kube-api-access-kp22j:
    Type:                    Projected (a volume that contains injected data from multiple sources)
    TokenExpirationSeconds:  3607
    ConfigMapName:           kube-root-ca.crt
    ConfigMapOptional:       <nil>
    DownwardAPI:             true
QoS Class:                   BestEffort
Node-Selectors:              <none>
Tolerations:                 node.kubernetes.io/not-ready:NoExecute op=Exists for 300s
                             node.kubernetes.io/unreachable:NoExecute op=Exists for 300s

Events:
  Type     Reason     Age                  From               Message
  ----     ------     ----                 ----               -------
  Normal   Scheduled  18m                  default-scheduler  Successfully assigned default/flask-app-86b6b65db7-87t45 to ip-172-31-86-183.ec2.internal
  Normal   Pulled     18m                  kubelet            Successfully pulled image "565288435091.dkr.ecr.us-east-1.amazonaws.com/my_todo_app:latest" in 2.383s (2.383s includ
ing waiting)
  Normal   Pulled     17m                  kubelet            Successfully pulled image "565288435091.dkr.ecr.us-east-1.amazonaws.com/my_todo_app:latest" in 137ms (137ms includin
g waiting)
  Normal   Created    16m (x3 over 18m)    kubelet            Created container flask-app
  Normal   Started    16m (x3 over 18m)    kubelet            Started container flask-app
  Normal   Pulled     16m                  kubelet            Successfully pulled image "565288435091.dkr.ecr.us-east-1.amazonaws.com/my_todo_app:latest" in 154ms (154ms includin
g waiting)
  Warning  Unhealthy  15m (x9 over 17m)    kubelet            Liveness probe failed: dial tcp 172.31.93.64:5001: connect: connection refused
  Normal   Killing    15m (x3 over 17m)    kubelet            Container flask-app failed liveness probe, will be restarted
  Normal   Pulling    13m (x6 over 18m)    kubelet            Pulling image "565288435091.dkr.ecr.us-east-1.amazonaws.com/my_todo_app:latest"
  Warning  BackOff    3m4s (x37 over 12m)  kubelet            Back-off restarting failed container flask-app in pod flask-app-86b6b65db7-87t45_default(d69d47f1-6264-46f9-98cd-14f
67cec6fed)
→  Cloud Docker Assignment kubectl apply -f flask-deployment.yaml

Ln 7, Col 12   Spaces: 2   UTF-8   CRLF   YAML
```

Part 8 :

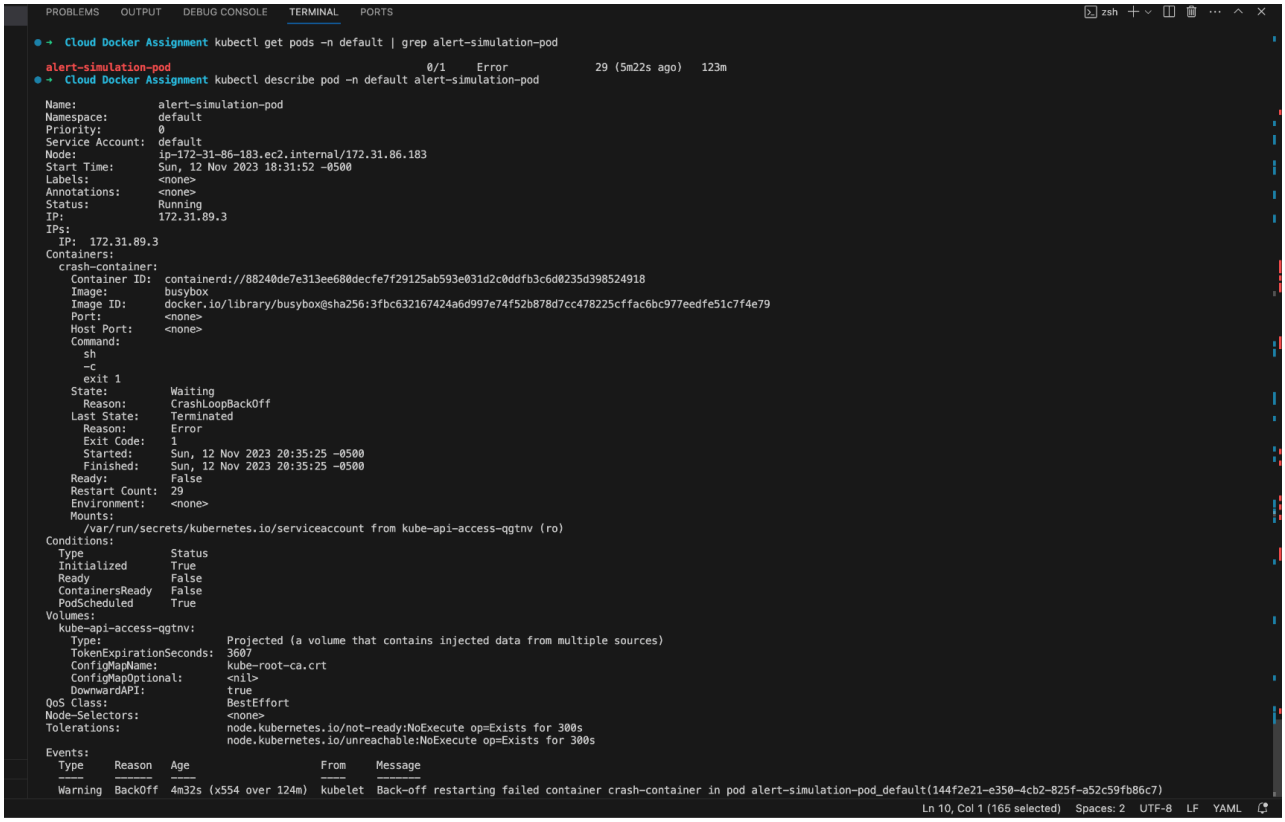
Installed helm , prometheus .

```
~ — -bash                                                    ~ — -bash

Last login: Sun Nov 12 18:03:44 on ttys001

The default interactive shell is now zsh.
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208050.
Srushtis-Air:~ srushtijagtap$ helm repo add prometheus-community https://prometheus-community.github.io/helm-charts
-bash: helm: command not found
Srushtis-Air:~ srushtijagtap$ /bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install.sh)"
==> Checking for `sudo` access (which may request your password)...
Password:
==> This script will install:
/opt/homebrew/bin/brew
/opt/homebrew/share/doc/homebrew
/opt/homebrew/share/man/man1/brew.1
/opt/homebrew/share/zsh/site-functions/_brew
/opt/homebrew/etc/bash_completion.d/brew
/opt/homebrew

Press RETURN/ENTER to continue or any other key to abort:
==> /usr/bin/sudo /usr/sbin/chown -R srushtijagtap:admin /opt/homebrew
==> Downloading and installing Homebrew...
HEAD is now at d3d51d344 Merge pull request #16206 from Homebrew/dependabot/bundler/Library/Homebrew/unf_ext-0.0.9
Updated 1 tap (homebrew/core).
Warning: /opt/homebrew/bin is not in your PATH.
  Instructions on how to configure your shell for Homebrew
  can be found in the 'Next steps' section below.
==> Installation successful!

==> Homebrew has enabled anonymous aggregate formulae and cask analytics.
Read the analytics documentation (and how to opt-out) here:
  https://docs.brew.sh/Analytics
No analytics data has been sent yet (nor will any be during this install run).

==> Homebrew is run entirely by unpaid volunteers. Please consider donating:
  https://github.com/Homebrew/brew#donations

==> Next steps:
- Run these two commands in your terminal to add Homebrew to your PATH:
    (echo; echo 'eval "$(/opt/homebrew/bin/brew shellenv)"') >> /Users/srushtijagtap/.zprofile
    eval "$(/opt/homebrew/bin/brew shellenv)"
- Run brew help to get started
- Further documentation:
    https://docs.brew.sh

Srushtis-Air:~ srushtijagtap$ /Users/srushtijagtap/.zprofile
-bash: /Users/srushtijagtap/.zprofile: Permission denied
Srushtis-Air:~ srushtijagtap$ (echo; echo 'eval "$(/opt/homebrew/bin/brew shellenv)"') >> /Users/srushtijagtap/.zprofile
Srushtis-Air:~ srushtijagtap$
Srushtis-Air:~ srushtijagtap$ eval "$(/opt/homebrew/bin/brew shellenv)"
Srushtis-Air:~ srushtijagtap$
Srushtis-Air:~ srushtijagtap$ brew help
Example usage:
  brew search TEXT|/REGEX/
  brew info [FORMULA|CASK...]
  brew install FORMULA|CASK...
  brew update
  brew upgrade [FORMULA|CASK...]
  brew uninstall FORMULA|CASK...
  brew list [FORMULA|CASK...]

Troubleshooting:
  brew config
  brew doctor
  brew install --verbose --debug FORMULA|CASK

Contributing:
  brew create URL [--no-fetch]
  brew edit [FORMULA|CASK...]

Further help:
  brew commands
  brew help [COMMAND]
  man brew
```

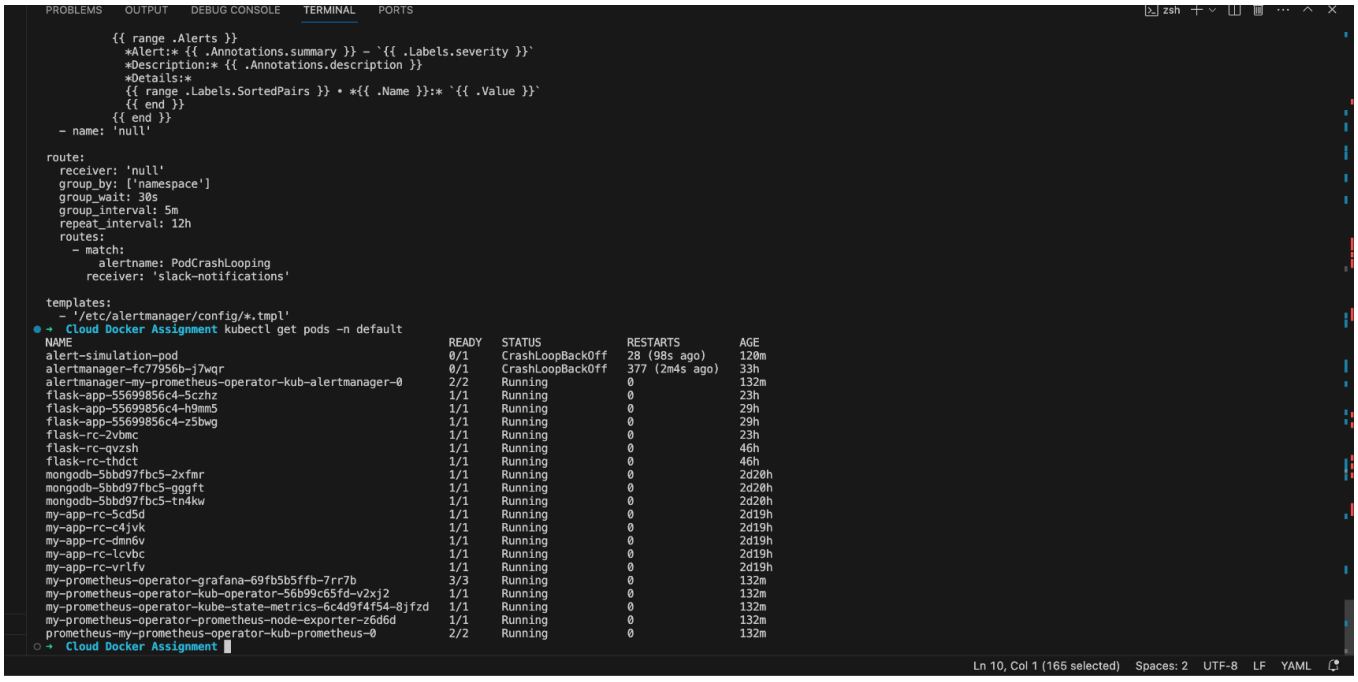




Made a separate pod so that it shows error and triggers the system .

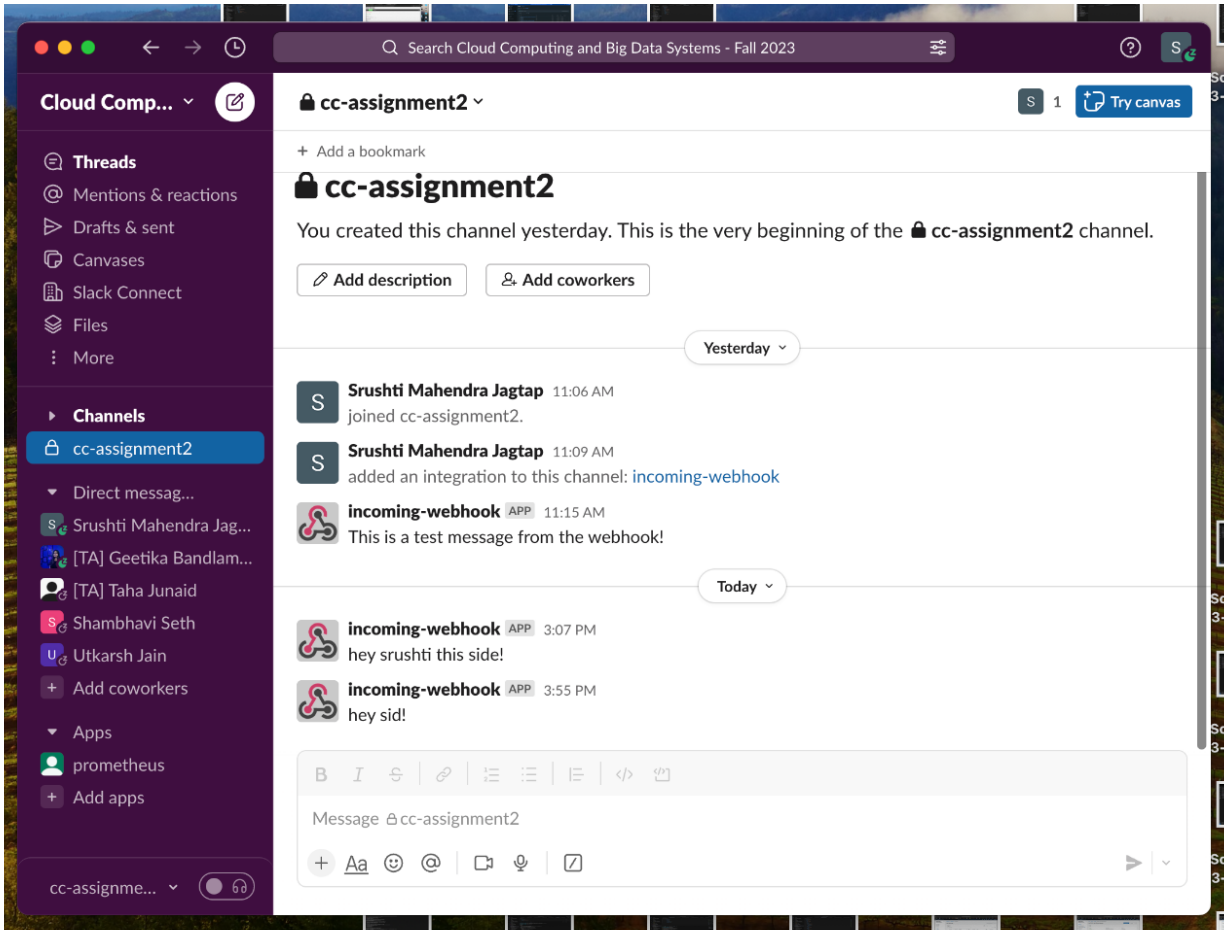


```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS                                                    zsh

● → Cloud Docker Assignment kubectl get pods -n default | grep alert-simulation-pod

alert-simulation-pod                                              0/1     Error             29 (5m22s ago)   123m
● → Cloud Docker Assignment kubectl describe pod -n default alert-simulation-pod

Name:             alert-simulation-pod
Namespace:        default
Priority:         0
Service Account:  default
Node:             ip-172-31-86-183.ec2.internal/172.31.86.183
Start Time:       Sun, 12 Nov 2023 18:31:52 -0500
Labels:           <none>
Annotations:      <none>
Status:           Running
IP:               172.31.89.3
IPs:
  IP:  172.31.89.3
Containers:
  crash-container:
    Container ID:  containerd://88240de7e313ee680decfe7f29125ab593e031d2c0ddfb3c6d0235d398524918
    Image:         busybox
    Image ID:      docker.io/library/busybox@sha256:3fbc632167424a6d997e74f52b878d7cc478225cffac6bc977eedfe51c7f4e79
    Port:          <none>
    Host Port:     <none>
    Command:
      sh
      -c
      exit 1
    State:          Waiting
      Reason:       CrashLoopBackOff
    Last State:     Terminated
      Reason:       Error
      Exit Code:    1
      Started:      Sun, 12 Nov 2023 20:35:25 -0500
      Finished:     Sun, 12 Nov 2023 20:35:25 -0500
    Ready:          False
    Restart Count:  29
    Environment:    <none>
    Mounts:
      /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-qgtnv (ro)
Conditions:
  Type              Status
  Initialized       True
  Ready             False
  ContainersReady   False
  PodScheduled      True
Volumes:
  kube-api-access-qgtnv:
    Type:                    Projected (a volume that contains injected data from multiple sources)
    TokenExpirationSeconds:  3607
    ConfigMapName:           kube-root-ca.crt
    ConfigMapOptional:       <nil>
    DownwardAPI:             true
QoS Class:                   BestEffort
Node-Selectors:              <none>
Tolerations:                 node.kubernetes.io/not-ready:NoExecute op=Exists for 300s
                             node.kubernetes.io/unreachable:NoExecute op=Exists for 300s

Events:
  Type     Reason   Age                    From     Message
  ----     ------   ----                   ----     -------
  Warning  BackOff  4m32s (x554 over 124m)  kubelet  Back-off restarting failed container crash-container in pod alert-simulation-pod_default(144f2e21-e350-4cb2-825f-a52c59fb86c7)

                                                                  Ln 10, Col 1 (165 selected)  Spaces: 2  UTF-8  LF  YAML
```

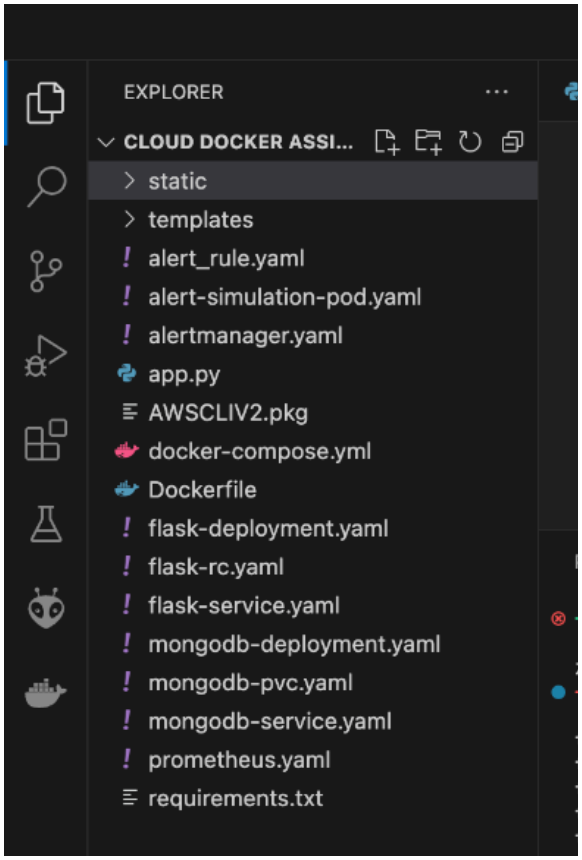


```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS                                                    zsh

          {{ range .Alerts }}
            *Alert:* {{ .Annotations.summary }} - `{{ .Labels.severity }}`
            *Description:* {{ .Annotations.description }}
            *Details:*
            {{ range .Labels.SortedPairs }} • *{{ .Name }}:* `{{ .Value }}`
            {{ end }}
          {{ end }}
  - name: 'null'

route:
  receiver: 'null'
  group_by: ['namespace']
  group_wait: 30s
  group_interval: 5m
  repeat_interval: 12h
  routes:
    - match:
        alertname: PodCrashLooping
      receiver: 'slack-notifications'

templates:
  - '/etc/alertmanager/config/*.tmpl'
● → Cloud Docker Assignment kubectl get pods -n default
NAME                                                     READY   STATUS             RESTARTS         AGE
alert-simulation-pod                                     0/1     CrashLoopBackOff   28 (98s ago)     120m
alertmanager-fc77956b-j7wqr                              0/1     CrashLoopBackOff   377 (2m4s ago)   33h
alertmanager-my-prometheus-operator-kub-alertmanager-0   2/2     Running            0                132m
flask-app-55699856c4-5czhz                               1/1     Running            0                23h
flask-app-55699856c4-h9mm5                               1/1     Running            0                29h
flask-app-55699856c4-z5bwg                               1/1     Running            0                29h
flask-rc-2vbmc                                           1/1     Running            0                23h
flask-rc-qvzsh                                           1/1     Running            0                46h
flask-rc-thdct                                           1/1     Running            0                46h
mongodb-5bbd97fbc5-2xfmr                                 1/1     Running            0                2d20h
mongodb-5bbd97fbc5-gggft                                 1/1     Running            0                2d20h
mongodb-5bbd97fbc5-tn4kw                                 1/1     Running            0                2d20h
my-app-rc-5cd5d                                          1/1     Running            0                2d19h
my-app-rc-c4jvk                                          1/1     Running            0                2d19h
my-app-rc-dmn6v                                          1/1     Running            0                2d19h
my-app-rc-lcvbc                                          1/1     Running            0                2d19h
my-app-rc-vrlfv                                          1/1     Running            0                2d19h
my-prometheus-operator-grafana-69fb5b5ffb-7rr7b          3/3     Running            0                132m
my-prometheus-operator-kub-operator-56b99c65fd-v2xj2     1/1     Running            0                132m
my-prometheus-operator-kube-state-metrics-6c4d9f4f54-8jfzd   1/1     Running            0                132m
my-prometheus-operator-prometheus-node-exporter-z6d6d    1/1     Running            0                132m
prometheus-my-prometheus-operator-kub-prometheus-0       2/2     Running            0                132m
○ → Cloud Docker Assignment

                                                                  Ln 10, Col 1 (165 selected)  Spaces: 2  UTF-8  LF  YAML
```

Made slack channel and webhook . The slack channel can be accessed via terminal and we can send text messages there .


Search Cloud Computing and Big Data Systems - Fall 2023
Cloud Comp...
cc-assignment2
Try canvas
Add a bookmark
Threads
Mentions & reactions
Drafts & sent
Canvases
Slack Connect
Files
More
Channels
cc-assignment2
Direct messag...
Srushti Mahendra Jag...
[TA] Geetika Bandlam...
[TA] Taha Junaid
Shambhavi Seth
Utkarsh Jain
Add coworkers
Apps
prometheus
Add apps
cc-assignme...
cc-assignment2
You created this channel yesterday. This is the very beginning of the cc-assignment2 channel.
Add description
Add coworkers
Yesterday
Srushti Mahendra Jagtap 11:06 AM
joined cc-assignment2.
Srushti Mahendra Jagtap 11:09 AM
added an integration to this channel: incoming-webhook
incoming-webhook APP 11:15 AM
This is a test message from the webhook!
Today
incoming-webhook APP 3:07 PM
hey srushti this side!
incoming-webhook APP 3:55 PM
hey sid!
Message cc-assignment2

Total files :



Flask deployment and service files . I have updated part 6 and part 7 for rolling update and health monitoring in deployment file itself .
Flask rc is for replication controller .
mongo db deployment , pvc and service files
Prometheus file
Alert-simulation-pod for purposefully causing alert
Alert rule and alertmanager file for part 8 .