

**Team:** DigiNomads

**Members:**

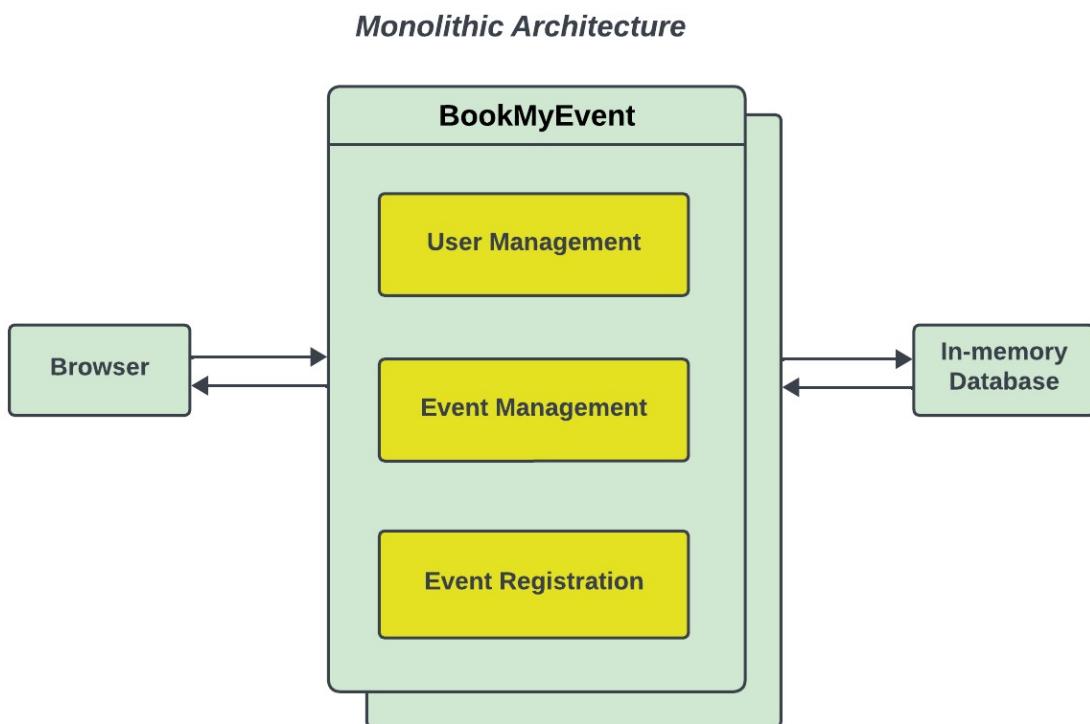
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## Task 1: Create a monolithic containerized application

Github repo: [Event Management Service](#)

Application: This project is a Java and Spring Boot application that allows you to create and manage user, events and registration events through a set of API endpoints. Using these endpoints, you can perform actions like adding, updating, listing, and deleting users, events and registrations. The project follows the MVC architecture, with clear separation of concerns among controllers, services, and repositories.

### Application Design



# Steps for deploying the monolithic application

## 1> Build a docker image

The screenshot shows two terminal sessions in Visual Studio Code:

**Terminal 1 (Top):**

```
chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_1$ sudo docker build -t event-registration-monolithic:latest .
[sudo] password for chaitanya:
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
Install the buildx component to build images with BuildKit:
https://docs.docker.com/buildx/
```

**Terminal 2 (Bottom):**

```
chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_1$ sudo docker images
REPOSITORY          TAG           IMAGE ID            CREATED             SIZE
event-registration-monolithic latest   cfcfbe2d35bc  8 seconds ago   228MB
kindest/node        <none>       89e7dc9f9131  3 months ago    932MB
maven               3-jdk-8-alpine 7445f83cd169  4 years ago     122MB
```

```
Fri Sep 29 10:05:15 AM ent-plt-assgnmnt2 - Visual Studio Code
File Edit Selection View Go Run Terminal Help
TERMINAL OUTPUT DEBUG CONSOLE PORTS PROBLEMS 17
● chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_1$ sudo docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
event-registration-monolithic latest cfcfbcbe2d35bc 39 seconds ago 229MB
kindest/node <none> 89e7dc9f9131 3 months ago 932MB
maven 3-jdk-8-alpine 7445f83cd169 4 years ago 122MB
● chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_1$ sudo docker tag event-registration-monolithic:latest cc600200/event-registration-monolithic:latest
The push refers to repository [docker.io/cc600200/event-registration-monolithic]
64d67683e480: Pushed
9efccf17563e: Pushed
03f6cebcfb2: Mounted from cc600200/event-register-mgmt-m3
ef2be7b555d9: Mounted from cc600200/event-register-mgmt-m3
4d3c6593bz9: Mounted from cc600200/event-register-mgmt-m3
e95a0a961946: Mounted from cc600200/event-register-mgmt-m3
ceaf9e1ebef5: Mounted from cc600200/event-register-mgmt-m3
9b9b7f3d56a0: Mounted from cc600200/event-register-mgmt-m3
f1b5933fe4b5: Mounted from cc600200/event-register-mgmt-m3
latest: digest: sha256:cb7f4a21ee6bef19217le0e0b18e1e43065ea1899d46af83bf21ed93c688d9c size: 2294
○ chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_1$
```

## 2> Create a cluster using kind and pass the created docker image

```
Fri Sep 29 10:22:21 AM chaitanya@chaitanya:~ 
chaitanya@chaitanya:~$ sudo kind create cluster --name event-registration-monolithic
Creating cluster "event-registration-monolithic" ...
✓ Ensuring node image (kindest/node:v1.27.3) 
✓ Preparing nodes 
✓ Writing configuration 
✓ Starting control-plane 
✓ Installing CNI 
✓ Installing StorageClass 
Set kubectl context to "kind-event-registration-monolithic"
You can now use your cluster with:

kubectl cluster-info --context kind-event-registration-monolithic

Thanks for using kind! 😊
chaitanya@chaitanya:~$ sudo kind get clusters
event-registration-monolithic
chaitanya@chaitanya:~$ sudo kind create cluster --name event-registration-microservices
Creating cluster "event-registration-microservices" ...
✓ Ensuring node image (kindest/node:v1.27.3) 
✓ Preparing nodes 
✓ Writing configuration 
✓ Starting control_plane 
✓ Installing CNI 
✓ Installing StorageClass 
Set kubectl context to "kind-event-registration-microservices"
You can now use your cluster with:

kubectl cluster-info --context kind-event-registration-microservices

Thanks for using kind! 😊
chaitanya@chaitanya:~$ sudo kind get clusters
event-registration-microservices
event-registration-monolithic
chaitanya@chaitanya:~$
```

Fri Sep 29 10:42:08 AM ent-plt-assgnmnt2 - Visual Studio Code

```
File Edit Selection View Go Run Terminal Help
TERMINAL OUTPUT DEBUG CONSOLE PORTS PROBLEMS 17
bash - kubernetes configs + ▾ ▷ ... ▾ ▷
● chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_1/kubernetes config$ sudo kubectl apply -f deployment.yaml
deployment.apps/event-register-monolithic created
● chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_1/kubernetes config$ sudo kubectl get deployments
NAME READY UP-TO-DATE AVAILABLE AGE
event-register-monolithic 3/3 3 3 9s
● chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_1/kubernetes config$ sudo kubectl get pods
NAME READY STATUS RESTARTS AGE
event-register-monolithic-f699795df-lpqdz 1/1 Running 0 15s
event-register-monolithic-f699795df-p57q7 1/1 Running 0 15s
event-register-monolithic-f699795df-rg58d 1/1 Running 0 15s
● chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_1/kubernetes config$ sudo kubectl apply -f service.yaml
service/event-register-monolithic-service created
● chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_1/kubernetes config$ sudo kubectl get services
NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE
event-register-monolithic-service NodePort 10.96.52.132 <none> 8080:30080/TCP 7s
kubernetes ClusterIP 10.96.0.1 <none> 443/TCP 19m
● chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_1/kubernetes config$
```

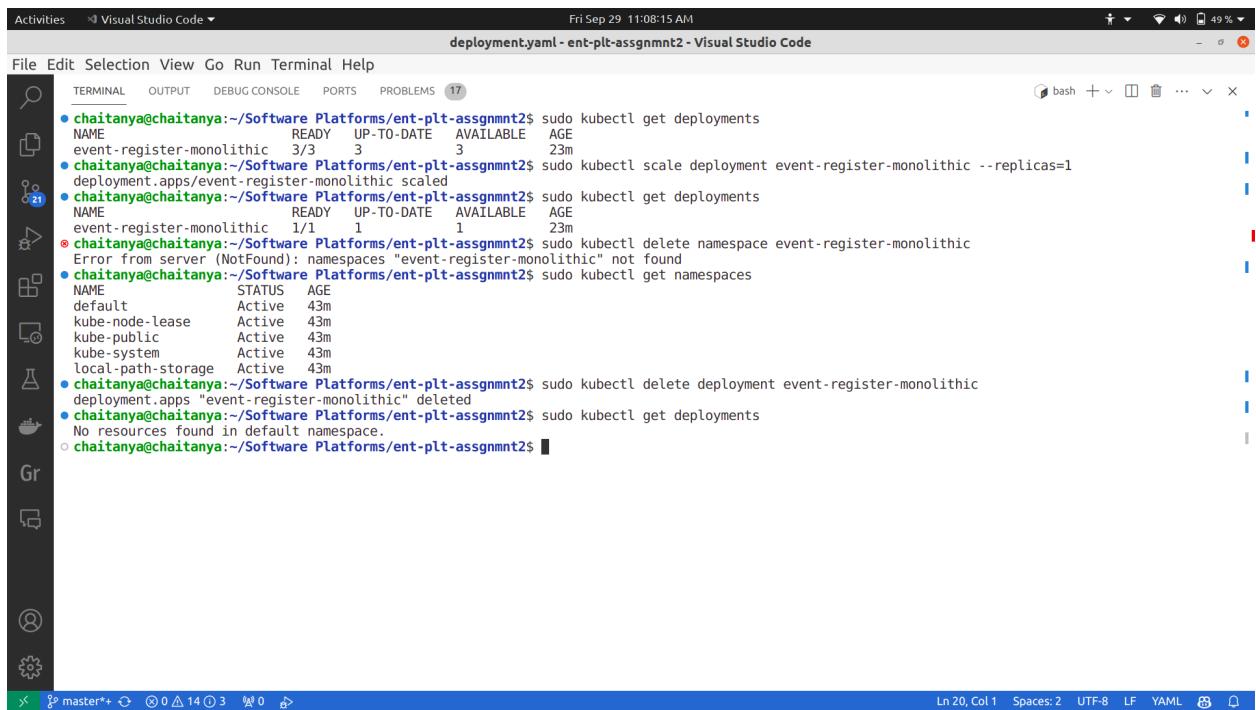
### 3> Check APIs and test the application

Fri Sep 29 10:57:50 AM history.log - ent-plt-assgnmnt2 - Visual Studio Code

```
File Edit Selection View Go Run Terminal Help
TERMINAL OUTPUT DEBUG CONSOLE PORTS PROBLEMS 17
bash + ▾ ▷ ... ▾ ▷
● chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2$ curl --location --request GET 'http://localhost:5001/events' --header 'Accept: application/json' --header 'Content-Type: application/json' --data-raw ''
● chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2$ curl --location --request POST 'http://localhost:5001/event' \
> --header 'Accept: application/json' \
> --header 'Content-Type: application/json' \
> --data-raw '{
  "name" : "SJSU Job Fair",
  "description" : "SJSU Job Fair",
  "dateTime" : "2023-08-05"
}'
{"id":1,"name":"SJSU Job Fair","description":"SJSU Job Fair","dateTime":"2023-08-05T00:00:00.000+00:00"}chaitanya@chaitanya:~/Software Platform
● s/ent-plt-assgnmnt2$ curl --location --request PUT 'http://localhost:5001/event/1' \
> --header 'Accept: application/json' \
> --header 'Content-type: application/json' \
> --data-raw '{
  "name" : "SJSU Job Fair (Updated)",
  "description" : "SJSU Job Fair (Updated)",
  "dateTime" : "2023-08-05"
}'
{"id":1,"name":"SJSU Job Fair (Updated)","description":"SJSU Job Fair (Updated)","dateTime":"2023-08-05T00:00:00.000+00:00"}chaitanya@chaitanya
● ./Software Platforms/ent-plt-assgnmnt2$ curl --location --request DELETE 'http://localhost:5001/event/1' \
> --header 'Accept: application/json' \
> --header 'Content-Type: application/json'
Event deleted successfullychaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2$
```

#### 4> Check the deployment status for the cluster

Reduce replicas to 1



The screenshot shows a Visual Studio Code interface with a terminal window open. The terminal shows a series of commands run by a user named chaitanya on a host named chaitanya. The commands are as follows:

- sudo kubectl get deployments
- sudo kubectl scale deployment event-register-monolithic --replicas=1
- sudo kubectl get deployments
- sudo kubectl delete namespace event-register-monolithic
- sudo kubectl get namespaces
- sudo kubectl delete deployment event-register-monolithic
- sudo kubectl get deployments

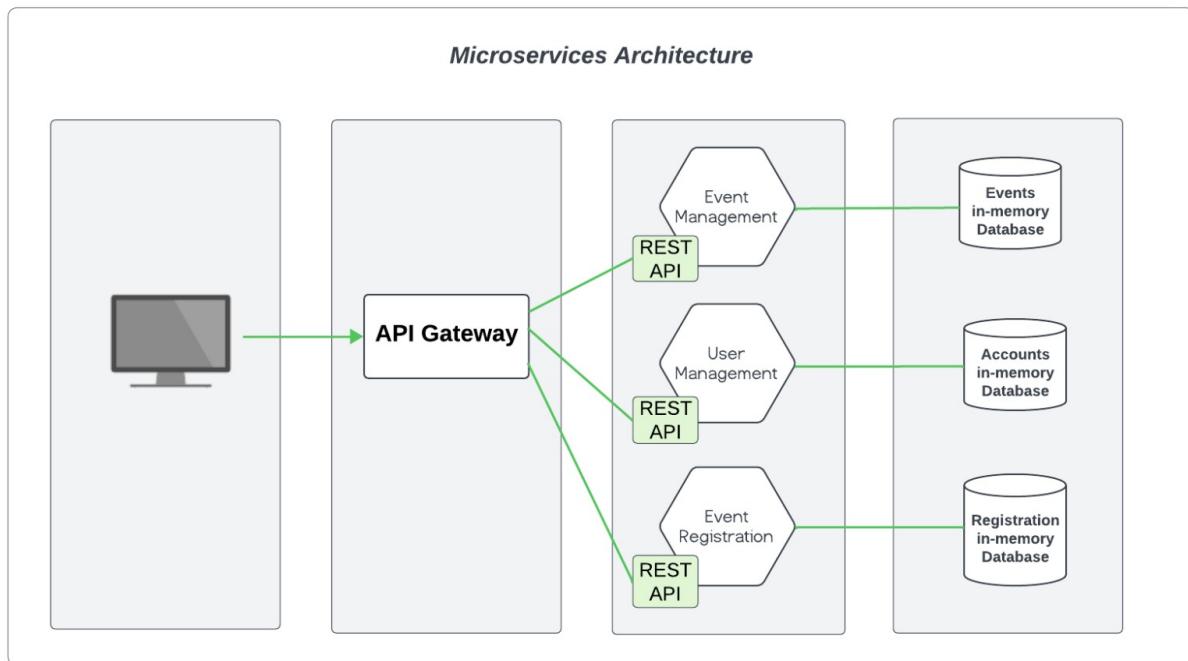
The terminal window has tabs for Activities, Visual Studio Code, and deployment.yaml - ent-plt-assgnmnt2. The status bar at the bottom indicates the file is in YAML format.

## Task 2: Break down the application into Microservices architecture

Github repo: [Event Management Micro-services](#)

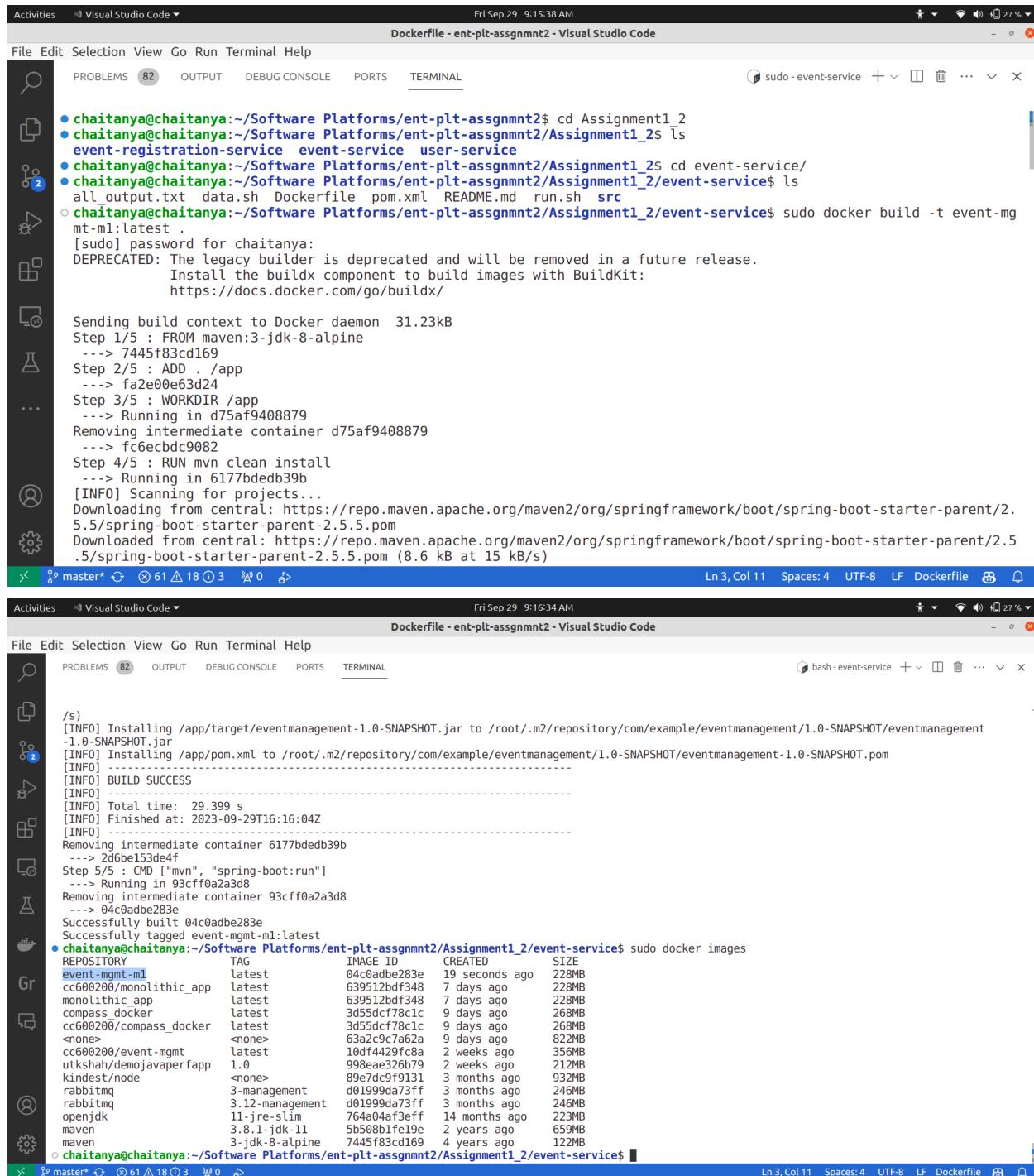
Application: This project is a Java and Spring Boot application that allows you to create and manage user, events and registration events through a set of API endpoints. Using these endpoints, you can perform actions like adding, updating, listing, and deleting users, events, and registrations. The project follows the MVC architecture, with clear separation of concerns among controllers, services, and repositories.

### Application Design



## Steps for deploying the micro-services application:

### 1> Build a docker image for event service



The screenshot shows two instances of Visual Studio Code side-by-side. Both instances have the title "Dockerfile - ent-plt-assgnmnt2 - Visual Studio Code".

The top instance shows the command-line output of a Docker build process:

```
chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2$ cd Assignment1_2
chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2$ ls
event-registration-service event-service user-service
chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2$ cd event-service/
chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/event-service$ ls
all_output.txt data.sh Dockerfile pom.xml README.md run.sh src
chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/event-service$ sudo docker build -t event-mgmt-m1:latest .
[sudo] password for chaitanya:
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
Install the buildx component to build images with BuildKit:
https://docs.docker.com/go/buildx/

Sending build context to Docker daemon 31.23kB
Step 1/5 : FROM maven:3-jdk-8-alpine
--> 7445f83cd169
Step 2/5 : ADD . /app
--> fa2e00e63d24
Step 3/5 : WORKDIR /app
--> Running in d75af9408879
Removing intermediate container d75af9408879
--> fc6ecbd9082
Step 4/5 : RUN mvn clean install
--> Running in 6177bdedb39b
[INFO] Scanning for projects...
Downloading from central: https://repo.maven.apache.org/maven2/org/springframework/boot/spring-boot-starter-parent/2.5.5/spring-boot-starter-parent-2.5.5.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/springframework/boot/spring-boot-starter-parent/2.5.5/spring-boot-starter-parent-2.5.5.pom (8.6 kB at 15 kB/s)
```

The bottom instance shows the command-line output of a Maven build process:

```
/s)
[INFO] Installing /app/target/eventmanagement-1.0-SNAPSHOT.jar to /root/.m2/repository/com/example/eventmanagement/1.0-SNAPSHOT/eventmanagement-1.0-SNAPSHOT.jar
[INFO] Installing /app/pom.xml to /root/.m2/repository/com/example/eventmanagement/1.0-SNAPSHOT/eventmanagement-1.0-SNAPSHOT.pom
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 29.399 s
[INFO] Finished at: 2023-09-29T16:16:04Z
[INFO] -----
Removing intermediate container 6177bdedb39b
--> 2d6be153de4f
Step 5/5 : CMD ["mvn", "spring-boot:run"]
--> Running in 93cff0a2a3d8
Removing intermediate container 93cff0a2a3d8
--> 04c0adbe283e
Successfully built 04c0adbe283e
Successfully tagged event-mgmt-m1:latest
chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/event-service$ sudo docker images
REPOSITORY          TAG      IMAGE ID   CREATED        SIZE
event-mgmt-m1      latest   04c0adbe283e  19 seconds ago  228MB
cc600200/monolithic_app    latest   639512bdf348  7 days ago   228MB
monolithic_app      latest   639512bdf348  7 days ago   228MB
compass_docker      latest   3d55dcf78c1c  9 days ago   268MB
cc600200/compass_docker    latest   3d55dcf78c1c  9 days ago   268MB
<none>              <none>  63a2c9c7a62a  9 days ago   822MB
cc600200/event-mgmt    latest   10df4429f9c8a  2 weeks ago  356MB
utkshah/demojavaperfapp 1.0     998aeae326b79  2 weeks ago  212MB
kindest/node         <none>  89e7dc9f9131  3 months ago  932MB
rabbitmq             3-management  d01999da73ff  3 months ago  246MB
rabbitmq             3.12-management d01999da73ff  3 months ago  246MB
openjdk              11-jre-slim   764a04af3eff  14 months ago  223MB
maven                3.8.1-jdk-11  5b508b1e19e   2 years ago  659MB
maven                3-jdk-8-alpine  7445f83cd169  4 years ago  122MB
```

Both instances show the terminal tab selected at the bottom.

Fri Sep 29 9:18:53 AM Dockerfile - ent-plt-assgnmnt2 - Visual Studio Code

File Edit Selection View Go Run Terminal Help

PROBLEMS 82 OUTPUT DEBUG CONSOLE PORTS TERMINAL

```
● chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/event-service$ sudo docker tag event-mgmt-m1:latest cc600200/event-mgmt-m1:latest
● chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/event-service$ sudo docker login
Authenticating with existing credentials...
WARNING! Your password will be stored unencrypted in /root/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
● chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/event-service$ sudo docker pushcc600200/event-mgmt-m1:latest
docker: 'pushcc600200/event-mgmt-m1:latest' is not a docker command.
See 'docker --help'
● chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/event-service$ sudo docker push cc600200/event-mgmt-m1:latest
The push refers to repository [docker.io/cc600200/event-mgmt-m1]
379844b6c760: Pushed
c1393738abfd: Pushed
03f6cebcfb2: Mounted from cc600200/monolithic_app
ef2be7b55d9: Mounted from cc600200/monolithic_app
4d3c6593b2c9: Mounted from cc600200/monolithic_app
e95a0a961946: Mounted from cc600200/monolithic_app
ceaf9e1ebef5: Mounted from cc600200/monolithic_app
9b9b7f3d56a0: Mounted from cc600200/monolithic_app
f1b5933fe4b5: Mounted from cc600200/monolithic_app
latest: digest: sha256:5f0be0b35cffa84017023d46b62f028ed7ela1e452a456a31aaf573b16ba531 size: 2203
○ chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/event-service$
```

Ln 3, Col 11 Spaces: 4 UTF-8 LF Dockerfile 8 □

## 2> Build a docker image for the user service

Fri Sep 29 9:23:46 AM Dockerfile - ent-plt-assgnmnt2 - Visual Studio Code

File Edit Selection View Go Run Terminal Help

PROBLEMS 28 OUTPUT DEBUG CONSOLE PORTS TERMINAL

```
● chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2$ cd Assignment1_2
● chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2$ ls
event-registration-service event-service user-service
● chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2$ cd user-service/
● chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/user-service$ ls
data.sh pom.xml README.md run.sh src target
○ chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/user-service$ sudo docker build -t user-mgmt-m2:latest .
[sudo] password for chaitanya:
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
Install the buildx component to build images with BuildKit:
https://docs.docker.com/go/buildx/
Sending build context to Docker daemon 46.59kB
Step 1/5 : FROM maven:3-jdk-8-alpine
--> 7445fb83cd169
Step 2/5 : ADD . /app
--> 9e25dbe15456
Step 3/5 : WORKDIR /app
--> Running in d21a79555267
Removing intermediate container d21a79555267
--> 39f23fd1fb47
Step 4/5 : RUN mvn clean install
--> Running in a5369c909ef2
```

Ln 4, Col 1 Spaces: 4 UTF-8 LF Dockerfile 8 □

Fri Sep 29 9:24:35 AM Dockerfile - ent-plt-assgnmnt2 - Visual Studio Code

File Edit Selection View Go Run Terminal Help

PROBLEMS 28 OUTPUT DEBUG CONSOLE PORTS TERMINAL

```
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.0.15/plexus-utils-3.0.15.jar (239 kB at 1.3 MB/s)
[INFO] Installing /app/target/usermanagement-1.0-SNAPSHOT.jar to /root/.m2/repository/com/example/usermanagement/1.0-SNAPSHOT/usermanagement-1.0-SNAPSHOT.jar
[INFO] Installing /app/pom.xml to /root/.m2/repository/com/example/usermanagement/1.0-SNAPSHOT/usermanagement-1.0-SNAPSHOT.pom
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 30.214 s
[INFO] Finished at: 2023-09-29T16:24:17Z
[INFO] -----
Removing intermediate container a5369c909ef2
--> ed0c51e32dab
Step 5/5 : CMD ["mvn", "spring-boot:run"]
--> Running in 625498a121f2
Removing intermediate container 625498a121f2
--> 6c665efa18e8
Successfully built 6c665efa18e8
Successfully tagged user-mgmt-m2:latest
● chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/user-services$ sudo docker images
REPOSITORY          TAG        IMAGE ID       CREATED        SIZE
user-mgmt-m2        latest     6c665efa18e8  14 seconds ago  228MB
cc600200/event-mgmt-m1    latest     04c0adbe283e  8 minutes ago  228MB
event-mgmt-m1        latest     04c0adbe283e  8 minutes ago  228MB
cc600200/monolithic_app    latest     639512bd3f48  7 days ago   228MB
monolithic_app      latest     639512bd3f48  7 days ago   228MB
cc600200/compass_docker    latest     3d55dcfc78c1c 9 days ago   268MB
compass_docker       latest     3d55dcfc78c1c  9 days ago   268MB
<none>              <none>    63a2c9c7a62a  9 days ago   822MB
cc600200/event-mgmt      latest     10df4429fc8a  2 weeks ago  356MB
utkshah/demojavaperfapp 1.0       998aeac326b79  2 weeks ago  212MB
kindest/node          <none>    89e7dc9f9131  3 months ago  932MB
rabbitmq             3-management  d01999da73ff  3 months ago  246MB
rabbitmq             3.12-management d01999da73ff  3 months ago  246MB
openjdk              11-jre-slim   764a04af3eff  14 months ago  223MB
maven                3.8.1-jdk-11  5b50801fe19e  2 years ago   659MB
maven                3-jdk-8-alpine  7445f83cd169  4 years ago   122MB
● chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/user-services$
```

Fri Sep 29 9:28:29 AM Dockerfile - ent-plt-assgnmnt2 - Visual Studio Code

File Edit Selection View Go Run Terminal Help

PROBLEMS 28 OUTPUT DEBUG CONSOLE PORTS TERMINAL

```
● chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/user-services$ sudo docker images
REPOSITORY          TAG        IMAGE ID       CREATED        SIZE
cc600200/user-mgmt-m2    latest     6c665efa18e8  2 minutes ago  228MB
user-mgmt-m2        latest     6c665efa18e8  2 minutes ago  228MB
cc600200/event-mgmt-m1    latest     04c0adbe283e  11 minutes ago  228MB
event-mgmt-m1        latest     04c0adbe283e  11 minutes ago  228MB
cc600200/monolithic_app    latest     639512bd3f48  7 days ago   228MB
monolithic_app      latest     639512bd3f48  7 days ago   228MB
cc600200/compass_docker    latest     3d55dcfc78c1c 9 days ago   268MB
compass_docker       latest     3d55dcfc78c1c  9 days ago   268MB
<none>              <none>    63a2c9c7a62a  9 days ago   822MB
cc600200/event-mgmt      latest     10df4429fc8a  2 weeks ago  356MB
utkshah/demojavaperfapp 1.0       998aeac326b79  2 weeks ago  212MB
kindest/node          <none>    89e7dc9f9131  3 months ago  932MB
rabbitmq             3-management  d01999da73ff  3 months ago  246MB
rabbitmq             3.12-management d01999da73ff  3 months ago  246MB
openjdk              11-jre-slim   764a04af3eff  14 months ago  223MB
maven                3.8.1-jdk-11  5b50801fe19e  2 years ago   659MB
maven                3-jdk-8-alpine  7445f83cd169  4 years ago   122MB
● chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/user-services$ sudo docker tag user-mgmt-m2:latest cc600200/user-mgmt-m2:latest
The push refers to repository [docker.io/cc600200/user-mgmt-m2]
8555886a0fe5: Pushed
01d50da4a6f771: Pushed
03f6cebcbcf2: Mounted from cc600200/event-mgmt-m1
ef2be7b555d9: Mounted from cc600200/event-mgmt-m1
4d3c6593b2c9: Mounted from cc600200/event-mgmt-m1
e95a0a961946: Mounted from cc600200/event-mgmt-m1
ceaf9e1ebef5: Mounted from cc600200/event-mgmt-m1
9b9b7fd56a0: Mounted from cc600200/event-mgmt-m1
f1b5933fe4b5: Mounted from cc600200/event-mgmt-m1
latest: digest: sha256:77dc5914c2868282c1d8816c9d512a43050716e2328df085c7bb2d89c917659f size: 2203
● chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/user-services$
```

### 3> Build a docker image for the event registration service

The screenshot shows two separate instances of Visual Studio Code running on a Windows operating system. Both instances have the title bar "ent-plt-assgnmnt2 - Visual Studio Code".

The top terminal window (Fri Sep 29 9:42:23 AM) displays the command:

```
chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/event-registration-service$ sudo docker build -t event-register-mgmt-m3:late
st .
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
Install the buildx component to build images with BuildKit:
https://docs.docker.com/go/buildx/
```

The bottom terminal window (Fri Sep 29 9:43:12 AM) displays the command:

```
-1.0-SNAPSHOT.jar
[INFO] Installing /app/pom.xml to /root/.m2/repository/com/example/eventregistration/1.0-SNAPSHOT/eventregistration-1.0-SNAPSHOT.pom
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time:  30.038 s
[INFO] Finished at: 2023-09-29T16:42:53Z
[INFO] -----
Removing intermediate container 4e9591ce06f3
-> c6a0012f08e1
Step 5/5 : CMD ["mvn", "spring-boot:run"]
--> Running in abacf99671ad
Removing intermediate container abacf99671ad
-> 2003f1c3be89
Successfully built 2003f1c3be89
Successfully tagged event-register-mgmt-m3:latest
chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/event-registration-service$ sudo docker images
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
event-register-mgmt-m3	latest	2003f1c3be89	10 seconds ago	228MB
cc600200/user-mgmt-m2	latest	6c665efa18e8	18 minutes ago	228MB
user-mgmt-m2	latest	6c665efa18e8	18 minutes ago	228MB
cc600200/event-mgmt-m1	latest	04c0adb283e	27 minutes ago	228MB
event-mgmt-m1	latest	04c0adb283e	27 minutes ago	228MB
cc600200/monolithic_app	latest	639512bdf348	7 days ago	228MB
monolithic_app	latest	639512bdf348	7 days ago	228MB
cc600200/compass_docker	latest	3d55dcf78c1c	9 days ago	268MB
compass_docker	latest	3d55dcf78c1c	9 days ago	268MB
<none>	<none>	63a2c9c7a62a	9 days ago	822MB
cc600200/event-mgmt	latest	10df4429fc8a	2 weeks ago	356MB
utkshah/demojavaperfapp	1.0	998aeac326b79	2 weeks ago	212MB
Kindest/node	<none>	89e7dc9f9131	3 months ago	932MB
rabbitmq	3-management	d01999da73ff	3 months ago	246MB
rabbitmq	3.12-management	d01999da73ff	3 months ago	246MB
openjdk	11-jre-slim	764a04af3eff	14 months ago	223MB
maven	3.8.1-jdk-11	5b508b1fe19e	2 years ago	659MB
maven	3-jdk-8-alpine	7445f83cd169	4 years ago	122MB

Fri Sep 29 9:45:04 AM ent-plt-assgnmnt2 - Visual Studio Code

```
File Edit Selection View Go Run Terminal Help
TERMINAL OUTPUT DEBUG CONSOLE PORTS PROBLEMS 19
chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/event-registration-service$ sudo docker images | grep 'event-register'
event-register-mgmt-m3    latest      2003fc13be89  45 seconds ago  228MB
chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/event-registration-service$ sudo docker tag event-register-mgmt-m3:latest cc600200/event-register-mgmt-m3:latest
The push refers to repository [docker.io/cc600200/event-register-mgmt-m3]
07537a8cf27d: Pushed
1efbcd5f5beaf: Pushed
03f6cebcbf2: Mounted from cc600200/user-mgmt-m2
ef2be7b555d9: Mounted from cc600200/user-mgmt-m2
4d3c6593b2c9: Mounted from cc600200/user-mgmt-m2
e95a0a961946: Mounted from cc600200/user-mgmt-m2
ceaf9e1ebef5: Mounted from cc600200/user-mgmt-m2
9b9b7f73d56a0: Mounted from cc600200/user-mgmt-m2
f1b5933fe4b5: Mounted from cc600200/user-mgmt-m2
latest: digest: sha256:4dad614a120ef65dc37c5e6efb0d848c07634a59a33eeec272bb9364fc6913a size: 2203
chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/event-registration-service$
```

#### 4> Microservice deployment and status

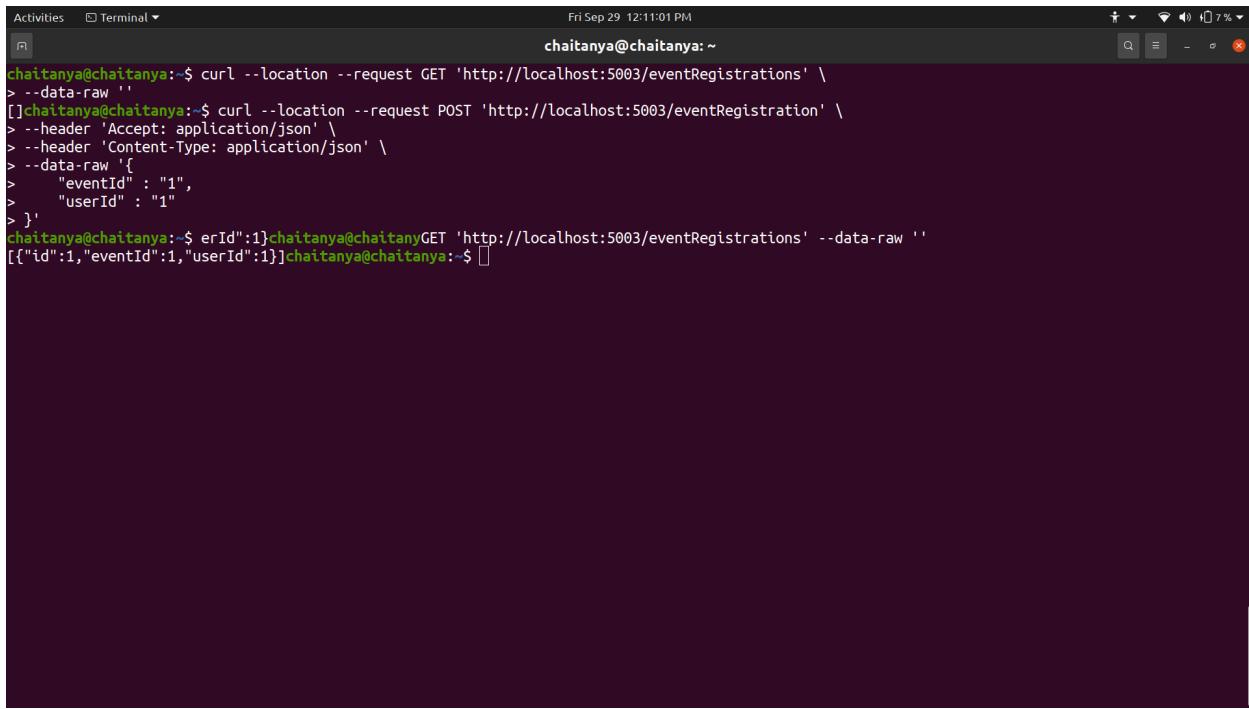
Fri Sep 29 11:55:39 AM service.yaml - ent-plt-assgnmnt2 - Visual Studio Code

```
File Edit Selection View Go Run Terminal Help
TERMINAL OUTPUT DEBUG CONSOLE PORTS PROBLEMS 17
chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/event-registration-service/kubernetes configs$ sudo kubectl get deployments
No resources found in default namespace.
chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/event-registration-service/kubernetes configs$ sudo kubectl get services
NAME        TYPE     CLUSTER-IP   EXTERNAL-IP   PORT(S)   AGE
kubernetes  ClusterIP  10.96.0.1   <none>        443/TCP   92m
chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/event-registration-service/kubernetes configs$ sudo kubectl apply -f deploym
ent.yaml
deployment.apps/event-register-m3-microservice created
deployment.apps/event-mgmt-m1-microservice created
deployment.apps/user-mgmt-m2-microservice created
chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/event-registration-service/kubernetes configs$ sudo kubectl apply -f service
.yaml
service/event-register-m3-service created
service/event-mgmt-m1-service created
service/user-mgmt-m2-service created
chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/event-registration-service/kubernetes configs$ sudo kubectl get services
NAME        TYPE     CLUSTER-IP   EXTERNAL-IP   PORT(S)   AGE
event-mgmt-m1-service  NodePort  10.96.206.240  <none>      8080:30976/TCP  2s
event-register-m3-service  NodePort  10.96.137.127  <none>      8080:30810/TCP  2s
kubernetes  ClusterIP  10.96.0.1   <none>        443/TCP   93m
user-mgmt-m2-service  NodePort  10.96.28.103  <none>      8080:31346/TCP  2s
chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/event-registration-service/kubernetes configs$ sudo kubectl get deployments
NAME        READY  UP-TO-DATE  AVAILABLE  AGE
event-mgmt-m1-microservice  2/2   2          2          15s
event-register-m3-microservice  2/2   2          2          15s
user-mgmt-m2-microservice  2/2   2          2          15s
chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/event-registration-service/kubernetes configs$ sudo kubectl get pods
NAME                               READY  STATUS  RESTARTS  AGE
event-mgmt-m1-microservice-7bf56fdb57-8qvtyl  1/1   Running  0          18s
event-mgmt-m1-microservice-7bf56fdb57-99zfl  1/1   Running  0          18s
event-register-m3-microservice-7bf95c97c9-c7ljc  1/1   Running  0          18s
event-register-m3-microservice-7bf95c97c9-gmhbb  1/1   Running  0          18s
user-mgmt-m2-microservice-654668975c-cb22v  1/1   Running  0          18s
user-mgmt-m2-microservice-654668975c-ntsjl  1/1   Running  0          18s
chaitanya@chaitanya:~/Software Platforms/ent-plt-assgnmnt2/Assignment1_2/event-registration-service/kubernetes configs$
```

## 5> Check APIs and test the application

```
Activities Terminal Fri Sep 29 12:10:49 PM chaitanya@chaitanya:~  
chaitanya@chaitanya:~$ curl --location --request POST 'http://localhost:5002/user' \  
> --header 'Accept: application/json' \  
> --header 'Content-Type: application/json' \  
> --data-raw '{  
>   "name" : "Test Name",  
>   "emailId" : "testmail@sjsu.edu",  
>   "mobileNo" : "1000000"  
> }'  
chaitanya@chaitanya:~$ curl --location --request GET 'http://localhost:5002/users' --header 'Accept: application/json' --header 'Content-Type: application/json'  
[{"id":1,"name":"Test Name","emailId":"testmail@sjsu.edu","mobileNo":1000000}]chaitanya@chaitanya:~$  
chaitanya@chaitanya:~$
```

```
Activities Terminal Fri Sep 29 12:10:59 PM chaitanya@chaitanya:~  
chaitanya@chaitanya:~$ curl --location --request POST 'http://localhost:5000/event' \  
> --header 'Accept: application/json' \  
> --header 'Content-Type: application/json' \  
> --data-raw '{  
>   "name" : "SJSU Job Fair",  
>   "description" : "SJSU Job Fair",  
>   "dateTime" : "2023-08-05"  
> }',  
{"id":1,"name":"SJSU Job Fair","description":"SJSU Job Fair","dateTime":"2023-08-05T00:00:00.000+00:00"}chaitanya@chaitanya:~$  
chaitanya@chaitanya:~$ curl --location --request GET 'http://localhost:5000/events' \  
> --header 'Accept: application/json' \  
> --header 'Content-Type: application/json' \  
> --data-raw '{  
>   "name" : "SJSU Job Fair",  
>   "description" : "SJSU Job Fair",  
>   "dateTime" : "2023-08-05 000000"  
> }',  
[{"id":1,"name":"SJSU Job Fair","description":"SJSU Job Fair","dateTime":"2023-08-05T00:00:00.000+00:00"}]chaitanya@chaitanya:~$  
chaitanya@chaitanya:~$
```



```
Fri Sep 29 12:11:01 PM chaitanya@chaitanya:~  
chaitanya@chaitanya:~$ curl --location --request GET 'http://localhost:5003/eventRegistrations' \  
> --data-raw ''  
[]  
chaitanya@chaitanya:~$ curl --location --request POST 'http://localhost:5003/eventRegistration' \  
> --header 'Accept: application/json' \  
> --header 'Content-Type: application/json' \  
> --data-raw '{  
>   "eventId" : "1",  
>   "userId" : "1"  
> }'  
chaitanya@chaitanya:~$ curl --location --request GET 'http://localhost:5003/eventRegistrations' --data-raw ''  
[{"id":1,"eventId":1,"userId":1}]  
chaitanya@chaitanya:~$
```

### Code Repositories:

We've kept both monolithic and Microservices applications in single repository and it has two subdirectories for monolithic and Microservices respectively. Microservices code is put into 2nd directory and all services code is put into single directory just for simplicity of sharing our code. Kubernetes yaml files are present in respective directories for both monolithic and Microservices.

<https://github.com/mad-utk/ent-plt-assgnmnt2>