1. **Three Tier web application using docker and Kubernetes**

**a)dockers**

Diagram

Description automatically generated

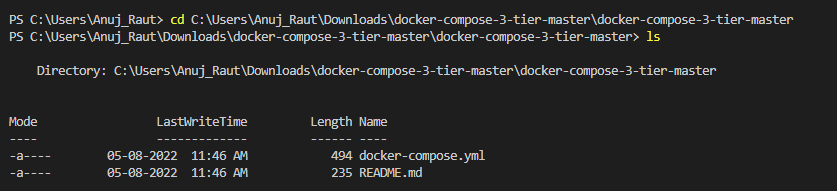
get files from github link

[javahometech/docker-compose-3-tier (github.com)](https://github.com/javahometech/docker-compose-3-tier)

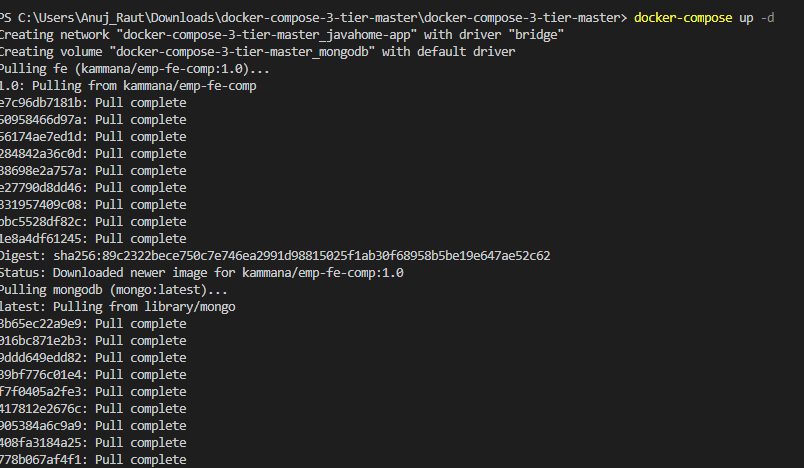
download zip file extract it

In Visual studio save dockers-compose.yml file

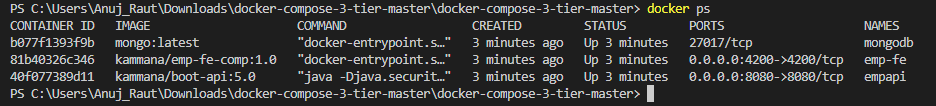
Run cmds in power shell



docker-compose up -d



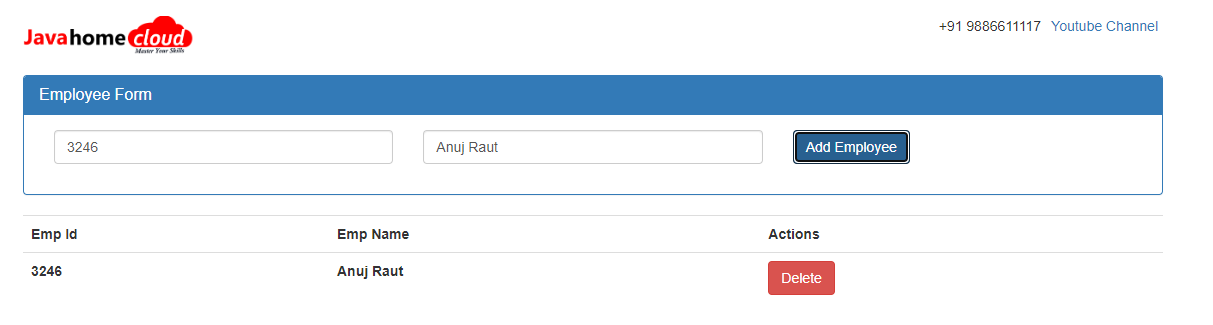
Docker ps



Open the browser

[http://localhost:4200](http://localhost:4200/)

output



**3.Tier Architecture using Kubernetes**

Step 1

Open katacoda in google

Type kubeless

It will start

Step2

Clone below link

git clone <https://github.com/tahashahidalvi/3-tier-kubernetes.git>

ls

Step 3

cd 3-tier-kubernetes

Step 4

kubectl apply -f 3-tier-deployment.yaml

Step 5

kubectl get nodes -o wide

Step 6

kubectl get service

Text

Description automatically generated

Text

Description automatically generated

Go to kubeless UI tab

Graphical user interface, website

Description automatically generated with medium confidence

Copy above port number from get services and paste there

output

Graphical user interface, text, application, email

Description automatically generated

Enter some text and click generate URL AND copy PASTE IN NEXT TAB

Graphical user interface, text, application

Description automatically generated