KUBERNETES

Deployment.html

```
apiVersion:
  apps/v1kind:
  Deployment
  metadata:
   name: flask-app
  spec:
   replicas:
   3selector:
    matchLabels:
     app: flask-
     app
   template:
    metadata
    :labels:
       app: flask-app
spec:
      containers:
       - name: webpage
        image:
        Assignment/flask
        imagePullPolicy: Never
        ports:
         - containerPort:
          5000protocol: TCP
```

service.yaml

```
apiVersion: v1
kind: Service
metadata:
    name: flask-app-
servicespec:
    type:
    ClusterIP
    ports:
    - port:
    5000
    selector:
    app: flask-app
```

base.html

```
<style>
       .message {
         padding:
         10px;margin:
         5px;
         background-color: #656362
       }
       h1{
         color: #1d78cd;
       nav a {
         color: #1d78cd;
         font-size: 25px;
         margin-left:
         50px;
         text-decoration: none;
         text-transform: uppercase;
       }
       .alert {
         padding: 20px;
         margin: 5px;
         color:
         #977c30;
         background-color: #dda1ae;
       .button {
   background-color:#977c30; /* red
   */border: none;
   color: white;
   padding: 16px
   32px;text-align:
   center;
```

```
text-decoration:
 none; display: inline-
 block; font-size:
 16px; margin: 4px
 2px;
 transition-duration:
 0.4s; cursor: pointer;
.button1 {
 background-color:
 white; color: black;
 border-radius: 10px;
 border: 2px solid
 #036523;
.button1:hover {
 background-color:
 #00971e;color: rgb(47, 41,
 51);
input[type=text],textarea
 {width: 50%;
 padding: 12px
 20px;margin: 8px
 0;
 box-sizing: border-
 box;border: 2px solid;
 border-radius: 4px;
  </style>
</head>
```

```
<body>
  <nav>
    <a href="#">Home</a>
    <a href="{{ url_for('index') }}">FlaskApp</a>
    <a href="{{ url_for('create') }}">Create</a>
  </nav>
  <hr>
  <div class="content">
    {% for message in get_flashed_messages() %}
       <div class="alert">{{ message }}</div>
    {% endfor %}
    {% block content %} {% endblock %}
  </div>
</body>
</html>
create.html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title> FlaskApp</title>
  <style>
    .message {
       padding:
       10px;margin:
       5px;
       background-color: #656362
```

```
}
   h1{
      color: #1d78cd;
   }
   nav a {
      color: #1d78cd;
      font-size: 25px;
     margin-left:
      50px;
      text-decoration: none;
      text-transform: uppercase;
   }
   .alert {
      padding: 20px;
      margin: 5px;
      color:
      #977c30;
     background-color: #dda1ae;
   .button {
background-color:#977c30; /* red
*/border: none;
color: white;
padding: 16px
32px;text-align:
center;
text-decoration:
none; display: inline-
block; font-size:
16px; margin: 4px
2px;
transition-duration: 0.4s;
```

```
cursor: pointer;
.button1 {
 background-color:
 white; color: black;
 border-radius: 10px;
 border: 2px solid
 #036523;
}
.button1:hover {
 background-color:
 #00971e;color: rgb(47, 41,
 51);
input[type=text],textarea
 {width: 50%;
 padding: 12px
 20px;margin: 8px
 0;
 box-sizing: border-
 box;border: 2px solid;
 border-radius: 4px;
  </style>
</head>
<body>
   <nav>
     <a href="#">Home</a>
     <a href="{{ url_for('index') }}">FlaskApp</a>
     <a href="{{ url_for('create') }}">Create</a>
```

```
</nav>
  <hr>
  <div class="content">
    {% for message in get_flashed_messages() %}
      <div class="alert">{{ message }}</div>
    {% endfor %}
    {% block content %} {% endblock %}
  </div>
</body>
</html>
index.html
{% extends 'base.html' %}
{% block content %}
  <h1 style="text-align: center;">WELCOME!</h1>
  <h1> {% block title %} <span style="color: rgb(29, 11, 166);">WRITE
YOUR MESSAGES</span> {% endblock %}</h1>
  {% for message in messages %}
    <div class='message'>
       <h3><span style="color: rgb(255, 255, 255);">TITLE: </span>
{{ message['title'] }}</h3>
      <span style="color: rgb(255, 255, 255);">MESSAGE:
</span>{{ message['content'] }}
    </div>
   {% endfor %}
{% endblock %}
```

```
PS C:\Windows\system32> docker pull hello-world
Using default tag: latest
latest: Pulling from library/hello-world
Digest: sha256:e18f0a777aefabe047a671ab3ec3eed05414477c951ab1a6f352a06974245fe7
Status: Image is up to date for hello-world:latest
docker.io/library/hello-world:latest
PS C:\Windows\system32>
```

Dockerfile

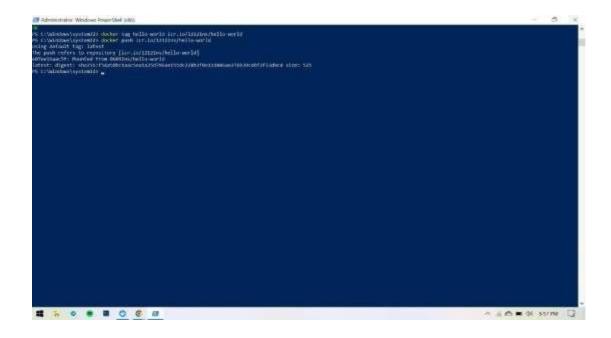
```
FROM python:3.10-
buster WORKDIR

/app

COPY . .

RUN pip install --no-cache-dir -r

requirements.txt CMD ["ibm_db2", "--
bind", "0.0.0.0:5000", "app:app"]
```



Create a Kubernetes cluster in IBM cloud and deploy hello world image or jobportal image and also expose the same app to run in nodeport.

