**Assignment -3**

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| --- | --- |
| Assignment Date | 12 September 2022 |
| Student Name | Mr. Sompalli Adithya |
| Student Roll Number | 111519104146 |
| Maximum Marks | 2 Marks |

**Kubernetes:**

**dashboard-adminuser.yaml**

|  |
| --- |
| **apiVersion: v1** |
|  | **kind: ServiceAccount** |
|  | **metadata:** |
|  | **name: admin-user** |
|  | **namespace: kubernetes-dashboard** |
|  | **---** |
|  | **apiVersion: v1** |
|  | **kind: Secret** |
|  | **metadata:** |
|  | **name: admin-user-token** |
|  | **namespace: kubernetes-dashboard** |
|  | **annotations:** |
|  | **kubernetes.io/service-account.name: admin-user** |
|  | **type: kubernetes.io/service-account-token** |
|  |  |
|  | **---** |
|  | **apiVersion: rbac.authorization.k8s.io/v1** |
|  | **kind: ClusterRoleBinding** |
|  | **metadata:** |
|  | **name: admin-user** |
|  | **roleRef:** |
|  | **apiGroup: rbac.authorization.k8s.io** |
|  | **kind: ClusterRole** |
|  | **name: cluster-admin** |
|  | **subjects:** |
|  | **- kind: ServiceAccount** |
|  | **name: admin-user** |
|  | **namespace: kubernetes-dashboard** |

**flask\_deployment.yaml**

|  |
| --- |
| **apiVersion: apps/v1** |
|  | **kind: Deployment** |
|  | **metadata:** |
|  | **name: flask-app** |
|  |  |
|  | **spec:** |
|  | **replicas: 3** |
|  | **selector:** |
|  | **matchLabels:** |
|  | **app: flask-app** |
|  | **template:** |
|  | **metadata:** |
|  | **labels:** |
|  | **app: flask-app** |
|  |  |
|  | **spec:** |
|  | **containers:** |
|  | **- name: webpage** |
|  | **image: rajkiranss/flask** |
|  | **imagePullPolicy: Never** |
|  | **ports:** |
|  | **- containerPort: 5000** |
|  | **protocol: TCP** |

**flask\_ingress.yaml**

|  |
| --- |
| **apiVersion: networking.k8s.io/v1** |
|  | **kind: Ingress** |
|  | **metadata:** |
|  | **name: flask-app-ingress** |
|  | **annotations:** |
|  | **kubernetes.io/ingress.class: nginx** |
|  | **nginx.ingress.kubernetes.io/ssl-redirect: "false"** |
|  |  |
|  | **spec:** |
|  | **# ingressClassName: nginx** |
|  | **rules:** |
|  | **- http:** |
|  | **paths:** |
|  | **- backend:** |
|  | **service:** |
|  | **name: flask-app-service** |
|  | **port:** |
|  | **number: 5000** |
|  | **path: /** |
|  | **pathType: Prefix** |

**flask\_service.yaml**

|  |
| --- |
| **apiVersion: v1** |
|  | **kind: Service** |
|  | **metadata:** |
|  | **name: flask-app-service** |
|  | **spec:** |
|  | **type: ClusterIP** |
|  | **ports:** |
|  | **- port: 5000** |
|  | **selector:** |
|  | **app: flask-app** |

**ibm\_deployment.yaml**

|  |
| --- |
| **apiVersion: apps/v1** |
|  | **kind: Deployment** |
|  | **metadata:** |
|  | **name: flask-deploy** |
|  |  |
|  | **spec:** |
|  | **replicas: 3** |
|  | **selector:** |
|  | **matchLabels:** |
|  | **app: flask-deploy** |
|  | **template:** |
|  | **metadata:** |
|  | **labels:** |
|  | **app: flask-deploy** |
|  |  |
|  | **spec:** |
|  | **containers:** |
|  | **- name: web** |
|  | **image: jp.icr.io/webpage/web** |
|  | **imagePullPolicy: Always** |
|  | **ports:** |
|  | **- containerPort: 5000** |
|  | **protocol: TCP** |

**DOCKER FILE**

|  |
| --- |
| **FROM python:3.10.4** |
|  | **WORKDIR /app** |
|  | **COPY requirements.txt ./** |
|  | **RUN pip install -r requirements.txt** |
|  | **COPY . .** |
|  | **EXPOSE 5000** |
|  | **CMD ["python","./app.py"]** |

**app.py**

|  |
| --- |
| **from flask import Flask, render\_template, request, url\_for, flash, redirect** |
|  |  |
|  | **app = Flask(\_\_name\_\_)** |
|  | **app.config['SECRET\_KEY'] = 'df0331cefc6c2b9a5d0208a726a5d1c0fd37324feba25506'** |
|  |  |
|  | **@app.route('/create/', methods=('GET', 'POST'))** |
|  | **def create():** |
|  | **if request.method == 'POST':** |
|  | **title = request.form['title']** |
|  | **content = request.form['content']** |
|  |  |
|  | **if not title:** |
|  | **flash('Title is required!')** |
|  | **elif not content:** |
|  | **flash('Content is required!')** |
|  | **else:** |
|  | **messages.append({'title': title, 'content': content})** |
|  | **name = "Shyam Mohan"** |
|  | **return redirect(url\_for('index', messages=name ))** |
|  |  |
|  | **return render\_template('create.html')** |
|  |  |
|  |  |
|  | **messages = [{'title': 'Message One',** |
|  | **'content': 'Message One Content'},** |
|  | **{'title': 'Message Two',** |
|  | **'content': 'Message Two Content'}** |
|  | **]** |
|  |  |
|  | **@app.route('/')** |
|  | **def index():** |
|  | **return render\_template('index.html', messages=messages)** |
|  |  |
|  |  |
|  |  |
|  | **@app.route('/admin')** |
|  | **def hello\_admin():** |
|  | **return 'Hello Admin'** |
|  |  |
|  | **@app.route('/guest/<guest>')** |
|  | **def hello\_guest(guest):** |
|  | **return 'Hello %s as Guest' % guest** |
|  |  |
|  | **@app.route('/user/<name>')** |
|  | **def hello\_user(name):** |
|  | **if name =='admin':** |
|  | **return redirect(url\_for('hello\_admin'))** |
|  | **else:** |
|  | **return redirect(url\_for('hello\_guest',guest = name))** |
|  |  |
|  | **if \_\_name\_\_ == '\_\_main\_\_':** |
|  | **app.run(host='0.0.0.0', port=5000, debug=True)** |