

```

apiVersion: apps/v1
kind: Deployment
metadata:
  name: mongodb-deployment
  labels:
    app: mongodb
spec:
  replicas: 1
  selector:
    matchLabels:
      app: mongodb
  template:
    metadata:
      labels:
        app: mongodb
    spec:
      containers:
        - name: mongodb
          image: mongo
          ports:
            - containerPort: 27017
          env:
            - name: MONGO_INITDB_ROOT_USERNAME
              valueFrom:
                secretKeyRef:
                  name: mongodb-secret
                  key: mongodb-root-username
            - name: MONGO_INITDB_ROOT_PASSWORD
              valueFrom:
                secretKeyRef:
                  name: mongodb-secret
                  key: mongodb-root-password

```

```

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apiVersion: v1
kind: Service
metadata:
  name: mongodb-service
spec:
  selector:
    app: mongodb
  ports:
    - name: tcp
      port: 27017
      targetPort: 27017

```

This YAML file defines a Kubernetes deployment and a service for MongoDB.

The `apiVersion: apps/v1` and `kind: Deployment` specify that you are creating a deployment object. The `metadata` field specifies metadata about the deployment, including the name of the deployment, which is `mongodb-deployment` in this case.

The `replicas` field specifies that you want to create 1 replica of the MongoDB container. The `selector` field specifies how the replica should be selected - in this case, it selects the MongoDB container based on the `app: mongodb` label.

The `template` field specifies the specification of the pod to be created for the MongoDB container. The `metadata` field specifies the labels for the pod, which match the `selector` field in the deployment. The `spec` field specifies the container specification for the MongoDB container, including the image to be used, the port to be exposed, and the environment variables `MONGO_INITDB_ROOT_USERNAME` and `MONGO_INITDB_ROOT_PASSWORD`. The values of these environment variables are taken from the `mongodb-secret` secret object using the `secretKeyRef` field.

The `apiVersion: v1` and `kind: Service` indicate that you are creating a Kubernetes service object. The `metadata` field specifies metadata about the service, including the name of the service, which is `mongodb-service` in this case.

The `spec` field specifies the service specification, including the `selector` field, which specifies the labels of the pods that the service should route traffic to. The `ports` field specifies the port to be exposed by the service, along with the target port on the pods. In this case, the service exposes port 27017 and routes traffic to port 27017 on the pods.