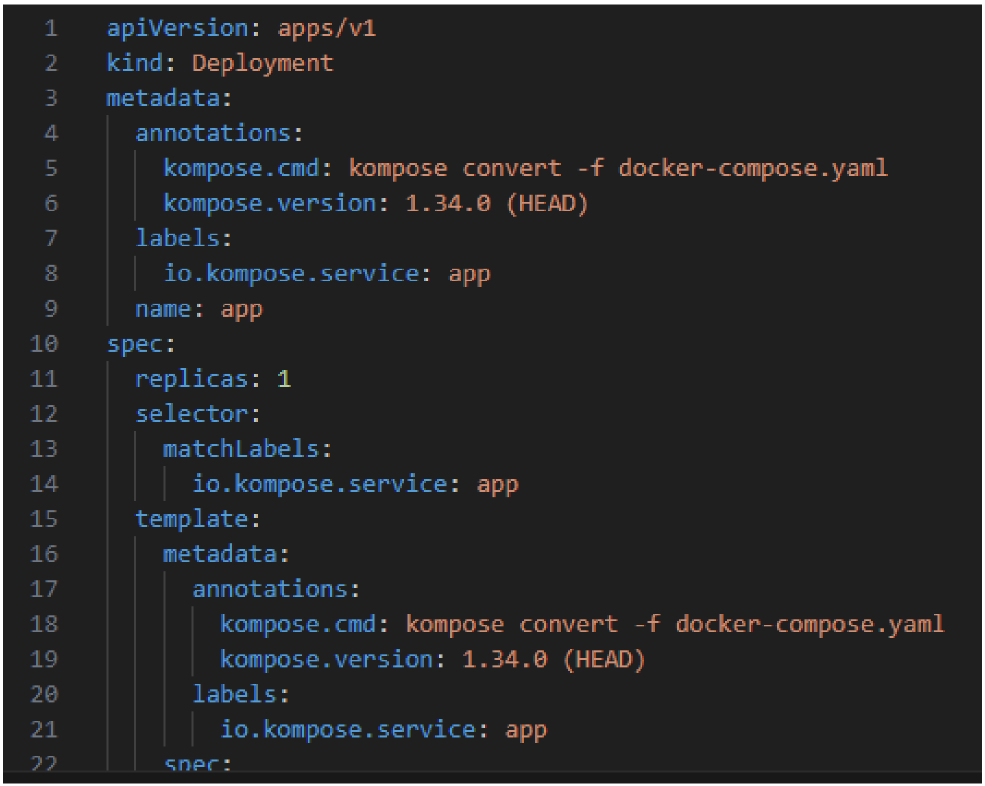
DESAFÍO 11

Institución: Educación IT
Alumno: Becchero Mariano
Objetivo: Luego del trabajo realizado en el sprint anterior y por el aporte que realizamos para mejorar la experiencia de desarrollo nuestro equipo nos encargó, transformar los servicios de docker-compose en un manifiesto de kubernetes, para eso debemos contemplar realizar el deployment de la misma aplicación y hacer que esta se conecte con su propia base de datos.

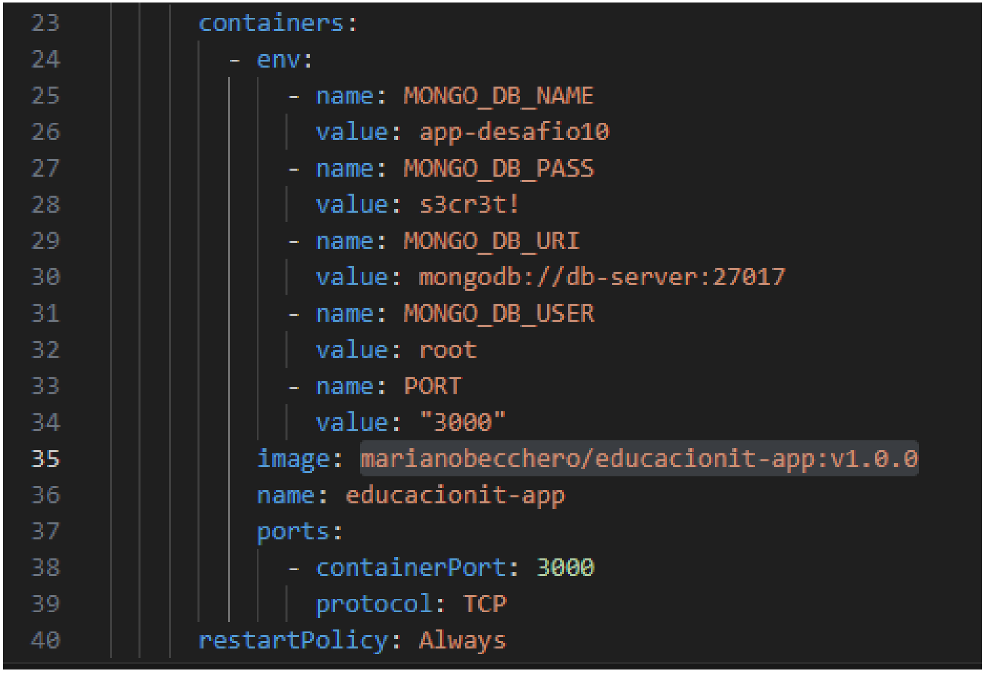
GUÍA DE PASOS

1- A partir del proyecto desarrollado en el desafío 10, vamos a crear los manifiestos de Kubernetes

app-deployment.yaml

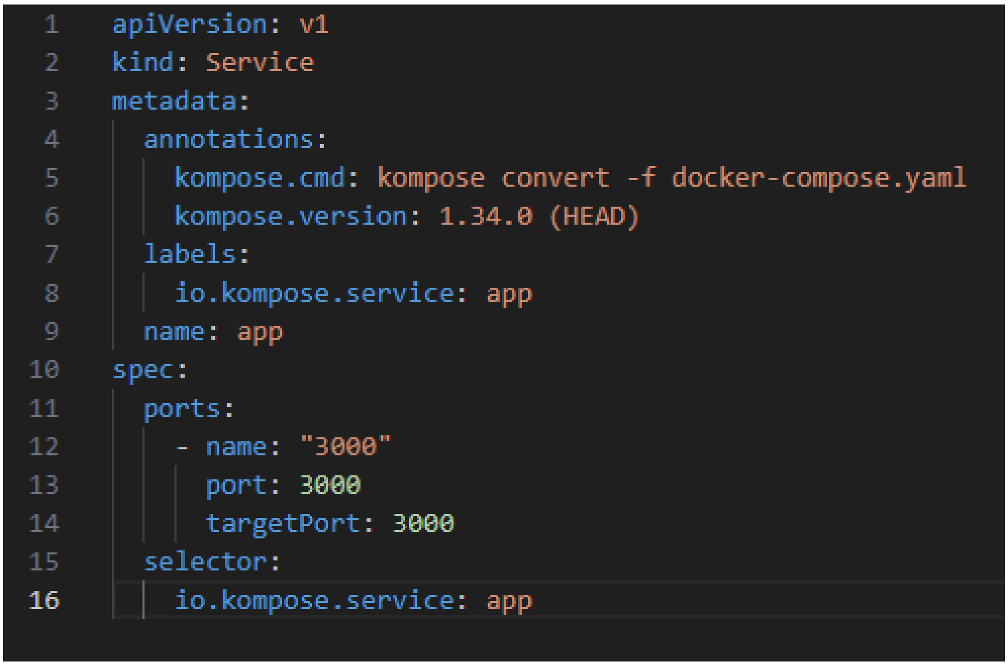


```yaml
apiVersion: apps/v1
kind: Deployment
metadata:
  annotations:
    kompose.cmd: kompose convert -f docker-compose.yaml
    kompose.version: 1.34.0 (HEAD)
  labels:
    io.kompose.service: app
  name: app
spec:
  replicas: 1
  selector:
    matchLabels:
      io.kompose.service: app
  template:
    metadata:
      annotations:
        kompose.cmd: kompose convert -f docker-compose.yaml
        kompose.version: 1.34.0 (HEAD)
      labels:
        io.kompose.service: app
    spec:
```



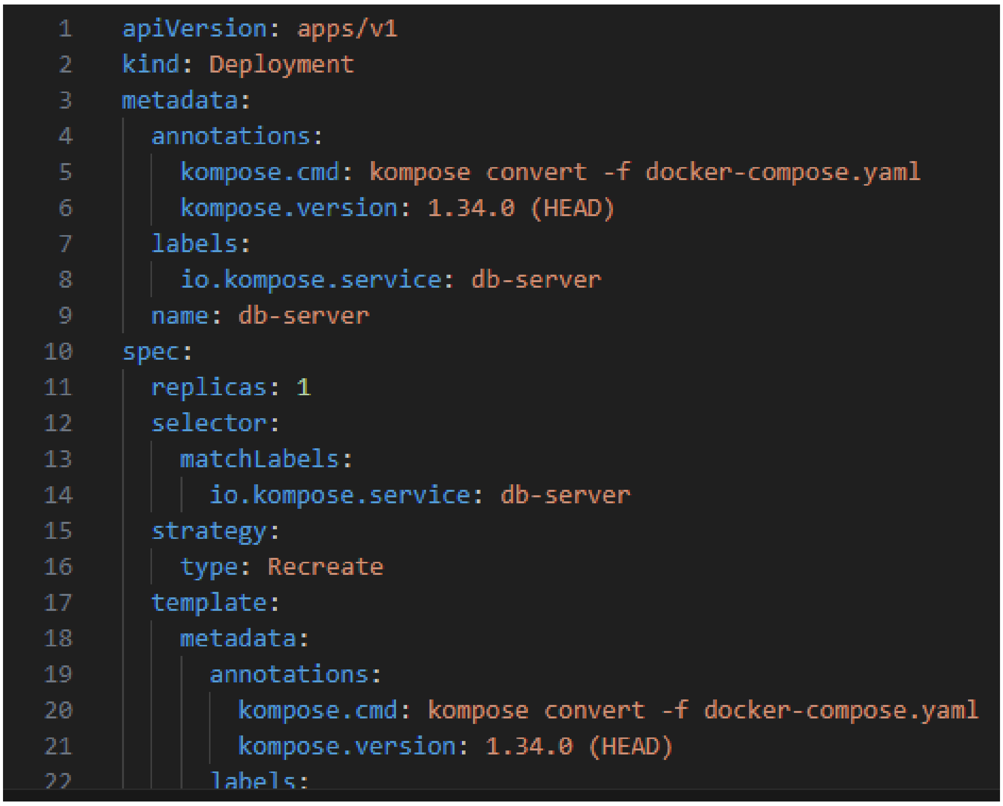
```yaml
      containers:
        - env:
            - name: MONGO_DB_NAME
              value: app-desafio10
            - name: MONGO_DB_PASS
              value: s3cr3t!
            - name: MONGO_DB_URI
              value: mongodb://db-server:27017
            - name: MONGO_DB_USER
              value: root
            - name: PORT
              value: "3000"
          image: marianobecchero/educacionit-app:v1.0.0
          name: educacionit-app
          ports:
            - containerPort: 3000
              protocol: TCP
      restartPolicy: Always
```

app-service.yaml

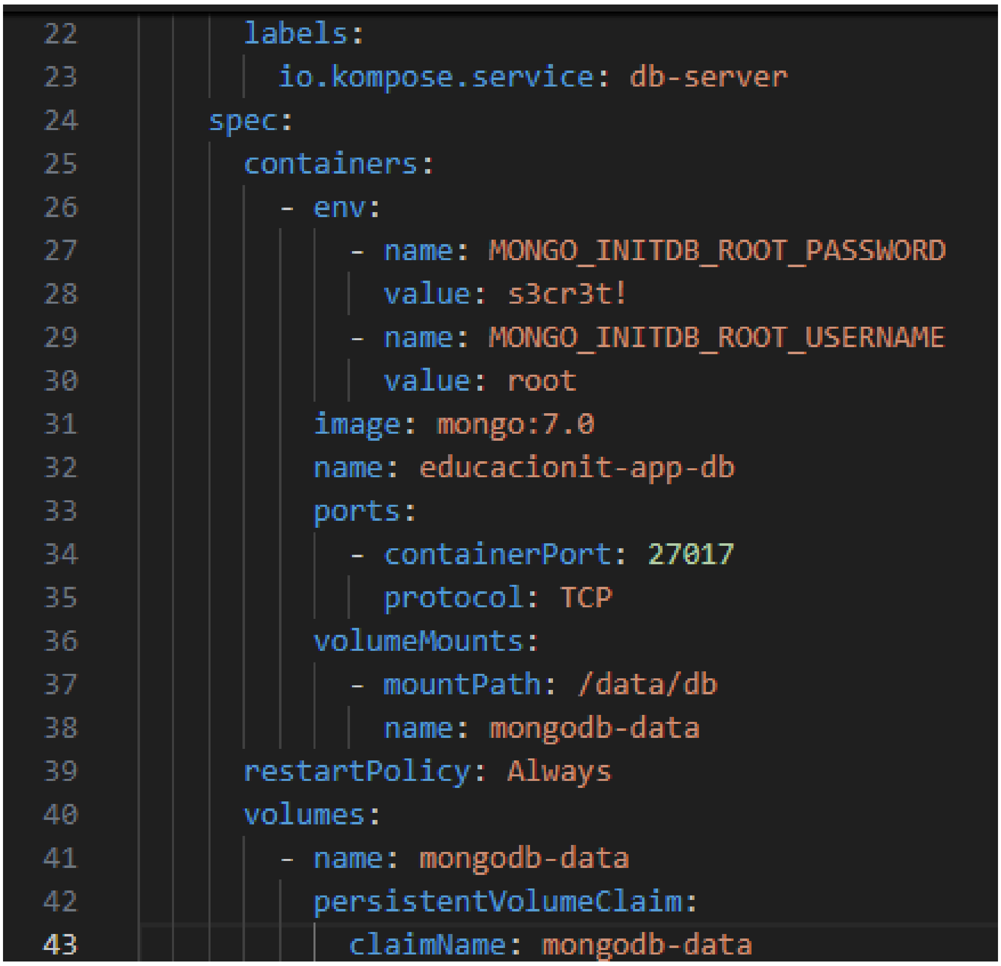


```yaml
apiVersion: v1
kind: Service
metadata:
  annotations:
    kompose.cmd: kompose convert -f docker-compose.yaml
    kompose.version: 1.34.0 (HEAD)
  labels:
    io.kompose.service: app
  name: app
spec:
  ports:
    - name: "3000"
      port: 3000
      targetPort: 3000
  selector:
    io.kompose.service: app
```

db-server-deployment.yaml

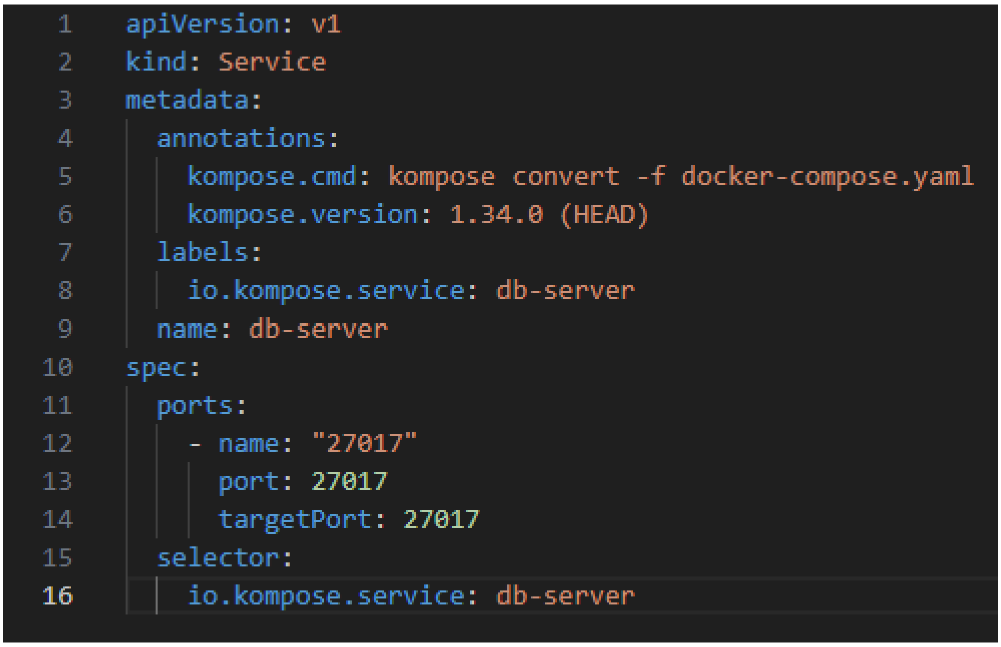


```yaml
apiVersion: apps/v1
kind: Deployment
metadata:
  annotations:
    kompose.cmd: kompose convert -f docker-compose.yaml
    kompose.version: 1.34.0 (HEAD)
  labels:
    io.kompose.service: db-server
  name: db-server
spec:
  replicas: 1
  selector:
    matchLabels:
      io.kompose.service: db-server
  strategy:
    type: Recreate
  template:
    metadata:
      annotations:
        kompose.cmd: kompose convert -f docker-compose.yaml
        kompose.version: 1.34.0 (HEAD)
      labels:
```



```yaml
      labels:
        io.kompose.service: db-server
    spec:
      containers:
        - env:
            - name: MONGO_INITDB_ROOT_PASSWORD
              value: s3cr3t!
            - name: MONGO_INITDB_ROOT_USERNAME
              value: root
          image: mongo:7.0
          name: educacionit-app-db
          ports:
            - containerPort: 27017
              protocol: TCP
          volumeMounts:
            - mountPath: /data/db
              name: mongodb-data
      restartPolicy: Always
      volumes:
        - name: mongodb-data
          persistentVolumeClaim:
            claimName: mongodb-data
```

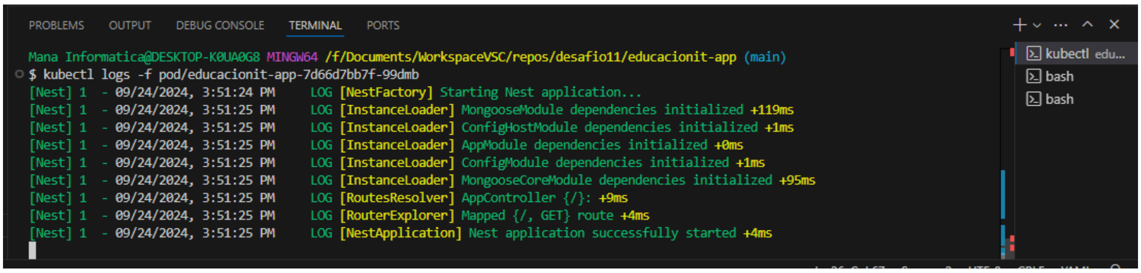
db-server-service.yaml



```yaml
apiVersion: v1
kind: Service
metadata:
  annotations:
    kompose.cmd: kompose convert -f docker-compose.yaml
    kompose.version: 1.34.0 (HEAD)
  labels:
    io.kompose.service: db-server
  name: db-server
spec:
  ports:
    - name: "27017"
      port: 27017
      targetPort: 27017
  selector:
    io.kompose.service: db-server
```

2- Una vez desarrollados los manifiestos, los desplegamos en nuestro cluster con las siguientes instrucciones:
kubectl apply -f app-deployment.yaml
kubectl apply -f app-service.yaml
kubectl apply -f db-server-deployment.yaml
kubectl apply -f db-server-service.yaml

3- Ya desplegados los manifiestos, vemos los logs del pod de app-deployment.yaml y observamos que se está ejecutando perfectamente.



```
Mana Informatica@DESKTOP-K0UA0G8 MINGW64 /f/Documents/WorkspaceVSC/repos/desafio11/educacionit-app (main)
$ kubectl logs -f pod/educacionit-app-7d66d7bb7f-99dmb
[Nest] 1  - 09/24/2024, 3:51:24 PM     LOG [NestFactory] Starting Nest application...
[Nest] 1  - 09/24/2024, 3:51:25 PM     LOG [InstanceLoader] MongooseModule dependencies initialized +119ms
[Nest] 1  - 09/24/2024, 3:51:25 PM     LOG [InstanceLoader] ConfigHostModule dependencies initialized +1ms
[Nest] 1  - 09/24/2024, 3:51:25 PM     LOG [InstanceLoader] AppModule dependencies initialized +0ms
[Nest] 1  - 09/24/2024, 3:51:25 PM     LOG [InstanceLoader] ConfigModule dependencies initialized +1ms
[Nest] 1  - 09/24/2024, 3:51:25 PM     LOG [InstanceLoader] MongooseCoreModule dependencies initialized +95ms
[Nest] 1  - 09/24/2024, 3:51:25 PM     LOG [RoutesResolver] AppController {/}: +9ms
[Nest] 1  - 09/24/2024, 3:51:25 PM     LOG [RouterExplorer] Mapped {/, GET} route +4ms
[Nest] 1  - 09/24/2024, 3:51:25 PM     LOG [NestApplication] Nest application successfully started +4ms
```