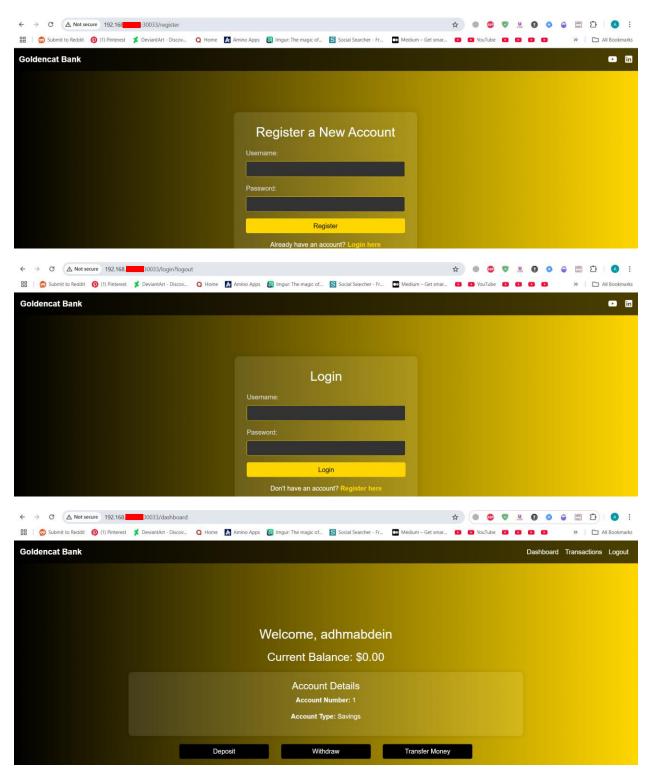
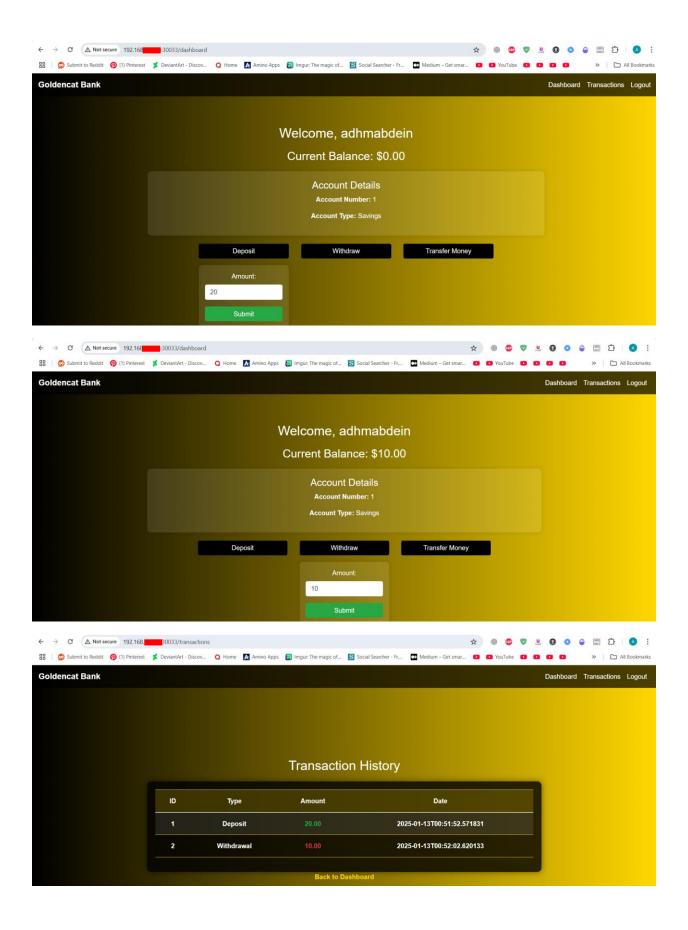
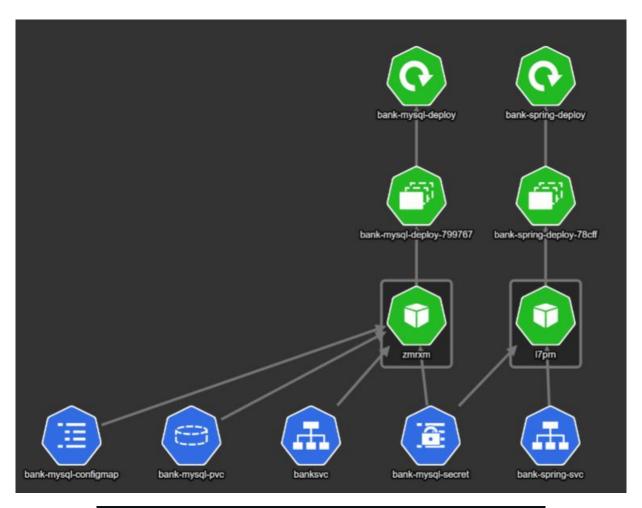
## Spring boot bank (Docker & k8s)







```
FROM maven:3.8.4-openjdk-17-slim

WORKDIR /app

COPY mvnw .

COPY .mvn .mvn

COPY pom.xml .

COPY src ./src

RUN mvn clean package -DskipTests

RUN ls -1 target/

EXPOSE 8080

ENTRYPOINT ["java", "-jar", "target/bankapp-0.0.1-SNAPSHOT.jar"]
```

```
apiVersion: v1
kind: PersistentVolume
metadata:
   name: bank-mysql-pv
spec:
   capacity:
     storage: 2Gi
   accessModes:
   - ReadWriteMany
   hostPath:
     path: "/adhamjenkins"
```

```
apiVersion: v1
kind: PersistentVolumeClaim
metadata:
   name: bank-mysql-pvc
spec:
   volumeName: bank-mysql-pv
   accessModes:
   - ReadWriteMany
   resources:
     requests:
     storage: 2Gi
```

apiVersion: v1

kind: Secret

metadata:

name: bank-mysql-secret

type: Opaque

data:

MYSQL\_PASSWORD: VGVzdEAxMjM=

apiVersion: v1

kind: ConfigMap

metadata:

name: bank-mysql-configmap

data:

MYSQL\_DATABASE: "bankappdb"

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: bank-mysql-deploy
  labels:
    bank: mysql
spec:
  replicas: 1
  selector:
    matchLabels:
     bank: mysql
  template:
    metadata:
     name: bank-mysql-pod
     labels:
       bank: mysql
    spec:
      containers:
        - name: bank-mysql-cont
          image: mysql:8.0
          ports:
            - containerPort: 3306
          env:
            - name: MYSQL_ROOT_PASSWORD
             valueFrom:
               secretKeyRef:
                  name: bank-mysql-secret
                  key: MYSQL_PASSWORD
            - name: MYSQL_DATABASE
              valueFrom:
                configMapKeyRef:
                  name: bank-mysql-configmap
                 key: MYSQL_DATABASE
          volumeMounts:
            - name: bank-vol
              mountPath: /data
      volumes:
        - name: bank-vol
          persistentVolumeClaim:
            claimName: bank-mysql-pvc
```

```
apiVersion: v1
kind: Service
metadata:
   name: banksvc
spec:
   selector:
    bank: mysql
   type: ClusterIP
   ports:
    - protocol: TCP
     port: 3306
     targetPort: 3306
```

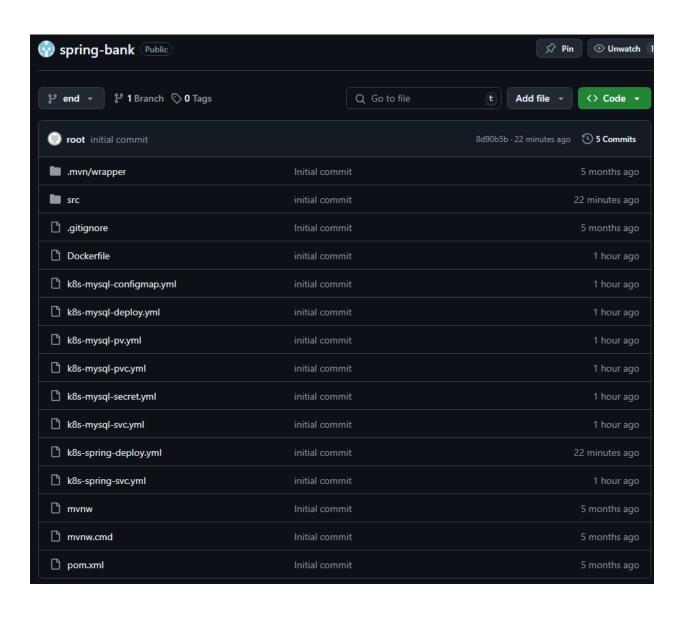
```
apiVersion: apps/v1
kind: Deployment
metadata:
 name: bank-spring-deploy
 labels:
   bank: spring
spec:
 replicas: 1
 selector:
   matchLabels:
     bank: spring
  template:
   metadata:
     name: bank-spring-pod
     labels:
       bank: spring
   spec:
     containers:
       name: bank-spring-cont
         image: adhmabdein/springbank
         ports:
           - containerPort: 8080
           - name: SPRING_DATASOURCE_URL
             value: "jdbc:mysql://banksvc:3306/bankappdb?allowPublicKeyRetrieval=true&useSSL=false"
           - name: SPRING_DATASOURCE_USERNAME
             value: "root"
           - name: SPRING_DATASOURCE_PASSWORD
             valueFrom:
               secretKeyRef:
                 name: bank-mysql-secret
                 key: MYSQL_PASSWORD
```

```
apiVersion: v1
kind: Service
metadata:
   name: bank-spring-svc
spec:
   selector:
    bank: spring
   type: NodePort
   ports:
    - protocol: TCP
        port: 8080
        targetPort: 8080
        nodePort: 30033
```

```
spring.application.name=bankapp
# MySQL Database configuration
spring.datasource.url=jdbc:mysql://banksvc:3306/bankappdb?allowPublicKeyRetrieval=true&useSSL=false

spring.datasource.username=root
spring.datasource.password=Test@123
spring.datasource.driver-class-name=com.mysql.cj.jdbc.Driver

# JPA & Hibernate configuration
spring.jpa.hibernate.ddl-auto=update
spring.jpa.properties.hibernate.dialect=org.hibernate.dialect.MySQL8Dialect
spring.jpa.show-sql=true
```





11 min #7 1 hr 34 min #1 34 sec

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adham@node2:~\$ kubec NAME	ii gei pou	5	READY	STA	THE	RESTARTS	AGE		
bank-mysql-deploy-7997677986-zmrxm					ning	0	13m		
bank-spring-deploy-78cfff5c49-l7prn					ning	0	11m		
food-mysql-deploy-5cd57bf97b-bg674			1/1 Running		ő	6h38m			
food-spring-deploy-586ddcb54d-pf977			1/1 Running 0			6h38m			
adham@node2:~\$ kubectl get deploy									
NAME		P-TO-DA	TF A'	VAILABI	ΙF	AGE			
bank-mysql-deploy	1/1 1		1	• / (1 = / (5)		13m			
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food-mysql-deploy	$\frac{1}{1}$ 1		1			6h38m			
food-spring-deploy	$\frac{1}{1}$ 1		1			6h38m			
	adham@node2:~\$ kubectl get svc								
NAME .	TÝPE		STER-I	Р	EX	ΓERNAL-IP	PORT(S)	AGE	
bank-spring-svc	NodePort	10.	108.		<no< td=""><td>one&gt;</td><td>8080:30033/TCP</td><td>84m</td></no<>	one>	8080:30033/TCP	84m	
banksvc	ClusterI	P 10.	100.		<no< td=""><td>one&gt;</td><td>3306/TCP</td><td>84m</td></no<>	one>	3306/TCP	84m	
crudsvc	ClusterI	P 10.	96.2		<no< td=""><td>one&gt;</td><td>3306/TCP</td><td>6d2h</td></no<>	one>	3306/TCP	6d2h	
food-spring-svc	NodePort	10.	99.5		<no< td=""><td>one&gt;</td><td>8080:30032/TCP</td><td>25h</td></no<>	one>	8080:30032/TCP	25h	
foodsvc	ClusterI	P 10.	110.		<no< td=""><td>one&gt;</td><td>3306/TCP</td><td>26h</td></no<>	one>	3306/TCP	26h	
hotelsvc	ClusterI	P 10.	99.1		<no< td=""><td>one&gt;</td><td>5432/TCP</td><td>4d1h</td></no<>	one>	5432/TCP	4d1h	
k8s-dream-shop-svc	ClusterI		110.		<no< td=""><td>one&gt;</td><td>3306/TCP</td><td>7d3h</td></no<>	one>	3306/TCP	7d3h	
kubernetes	ClusterI		96.0		<no< td=""><td>one&gt;</td><td>443/TCP</td><td>9d</td></no<>	one>	443/TCP	9d	
movie-svc	NodePort		100.		<no< td=""><td>one&gt;</td><td>8080:30013/TCP</td><td>7d9h</td></no<>	one>	8080:30013/TCP	7d9h	
mysql-service-movie	ClusterI		108.		<no< td=""><td>one&gt;</td><td>3306/TCP</td><td>7d9h</td></no<>	one>	3306/TCP	7d9h	
mysqlservice	ClusterI		110.		<no< td=""><td>one&gt;</td><td>3306/TCP</td><td>9d</td></no<>	one>	3306/TCP	9d	
spring-crud-svc	NodePort		106.		<no< td=""><td>one&gt;</td><td>8080:30030/TCP</td><td>6d2h</td></no<>	one>	8080:30030/TCP	6d2h	
spring-dream-svc	NodePort		100.		<no< td=""><td>one&gt;</td><td>9191:30015/TCP</td><td>7d3h</td></no<>	one>	9191:30015/TCP	7d3h	
spring-hotel-deploy	NodePort	10.	107.		<no< td=""><td>one&gt;</td><td>8080:30031/TCP</td><td>4d1h</td></no<>	one>	8080:30031/TCP	4d1h	

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adham@node2:~\$ kube NAME	CTL GET DV CAPACITY	ACCESS MO	DES	RECLAIM POLICY	STATUS	CLAIM	STORAGEC
LASS VOLUMEATTRIB			AGE	NECERIII I OLICI	SIAIOS	CLAIII	STORAGEC
bank-mysql-pv	2Gi	RWX		Retain	Bound	default/bank-mysq	l-pvc
<unset></unset>			86m				
food-mysql-pv	2Gi	RWX		Retain	Bound	default/food-mysq	l-pvc
<unset> mysql-crud-pv</unset>	2Gi	RWX	26h	Retain	Bound	default/mysgl-cru	d pyc
<pre> <urb style="font-size: 150%; color: blue;"> </urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></urb></pre>							

adham@node2:~\$ kubectl	get sed	ret	
NAME	TYPE	DATA	AGE
bank-mysql-secret	0paque	e 1	86m
food-mysql-secret	0paque	e 1	26h
mysql-crud-secret	0paque	e 1	6d2h
mysql-dream-secret	0paque	e 1	7d3h
mysql-movie-secret	0paque	e 1	7d23h
postgres-hotel-secret	0paque	e 1	4d1h
adham@node2:~\$ kubectl	get cm		
NAME	DATA	AGE	
bank-mysql-configmap	1	86m	
food-mysql-configmap	1	26h	
kube-root-ca.crt	1	9d	
adham@node2:~\$ ■			

```
adham@node2:~$ kubectl exec -it bank-mysql-deploy-7997677986-zmrxm -- mysql -u root -pTest@123 bankappdb
mysql: [Warning] Using a password on the command line interface can be insecure.
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 28
Server version: 8.0.40 MySQL Community Server - GPL
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Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
mysql> SHOW DATABASES;
   Database
   bankappdb
   information_schema
   mysql
   performance_schema
   sys
  rows in set (0.01 sec)
mysql> USE bankappdb;
                                                                                                                               Activate Windows
Database changed
```