Gera imagem dbase:1.0

Dockerfile:
FROM mysql:5.7
WORKDIR var/lib/mysql
ENV
MYSQL_ROOT_PASSWORD=Senha123
ENV MYSQL_DATABASE=meubanco
ADD sqlscript.sql /docker-entrypoint-initdb.d
EXPOSE 3306

Sqlscript.sql:
CREATE TABLE mensagens (
    id int,nome varchar(50),
    email varchar(50),
    comentario varchar(100));

INSERT INTO mensagens (id, nome, email,
comentario) VALUES (1,"Teste de
usuario","usuario@teste.com","primeiro
teste");

**Gera imagem:
projetobackend:1.0**

Index.php
INSERT INTO
mensagens(id, nome,
email, comentario)
VALUES ('$id',
'$nome', '$email',
'$comentario')

conexao.php

$servername =
"mysql-connection"

**Arquivos de especificação
YML:**

Dbasedeploy.yml:
Cria container com base na imagem
dbase:1.0 usando o PVC mysql-dados

Deployment.yml
Cria container com base na imagem
projetobackend:1.0

Frontend

Index.html:
Formulário de entrada de dados
Usa jquery+ajax

js.js:
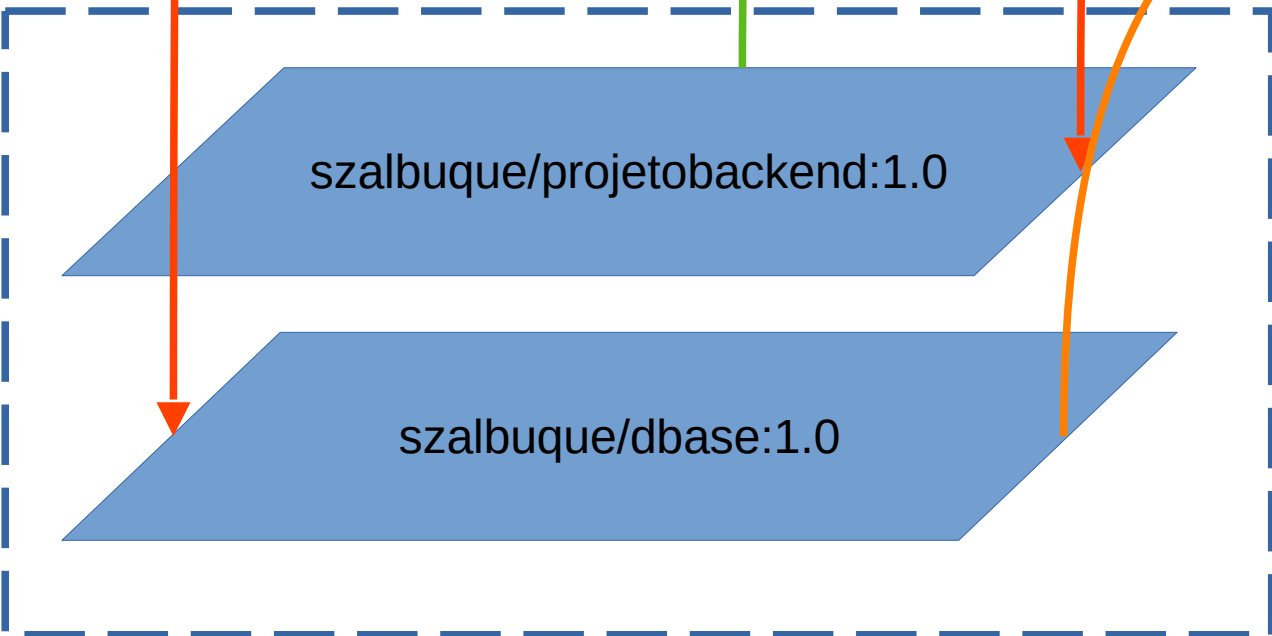$.ajax({
//AQUI ENTRA O IP EXTERNO DO
LOAD BALANCER//

url: "http://34.27.203.41",

type: 'post',
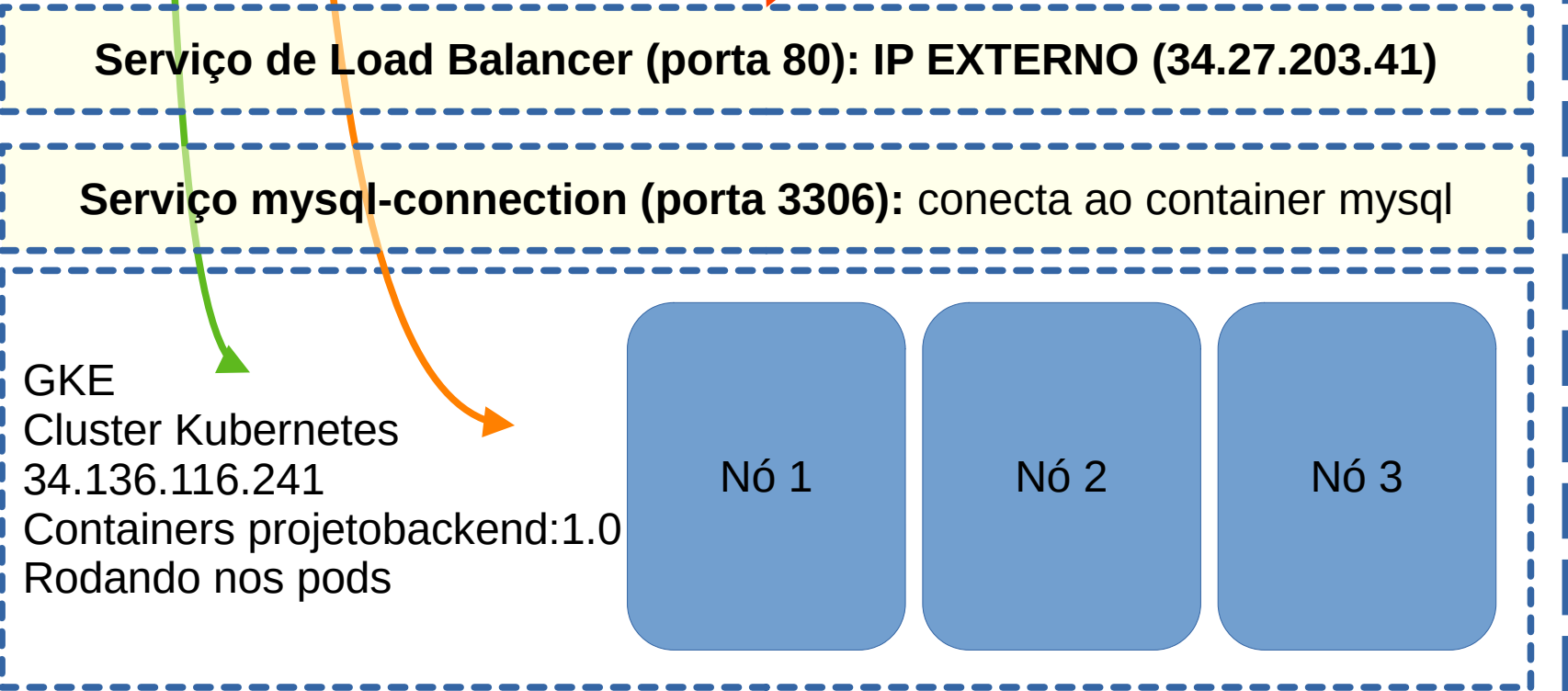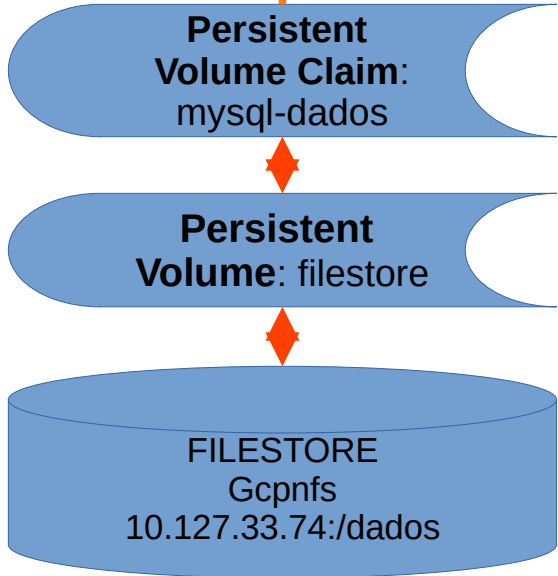data: {nome: txt_nome, comentario:
txt_comentario, email: txt_email},

kubectl apply -f ./deployment.yml

kubectl apply -f ./dbasedeploy.yml

docker build -t szalbuque/projetobackend:1.0 backend/.
docker push szalbuque/projetobackend:1.0

docker build -t szalbuque/dbase:1.0 database/.
docker push szalbuque/dbase:1.0

Docker Hub

szalbuque/projetobackend:1.0

szalbuque/dbase:1.0

Google Cloud

**Persistent
Volume Claim**:
mysql-dados

**Persistent
Volume**: filestore

FILESTORE
Gcpnfs
10.127.33.74:/dados

GKE
Cluster Kubernetes
34.136.116.241
Containers projetobackend:1.0
Rodando nos pods

Serviço de Load Balancer (porta 80): IP EXTERNO (34.27.203.41)

Serviço mysql-connection (porta 3306): conecta ao container mysql

Nó 1

Nó 2

Nó 3

```
Dockerfile (banco de dados):

FROM mysql:5.7
WORKDIR var/lib/mysql
ENV MYSQL_ROOT_PASSWORD=Senha123
ENV MYSQL_DATABASE=meubanco
ADD sqlscript.sql /docker-entrypoint-initdb.d
EXPOSE 3306
```

```
Sqlscript.sql

CREATE TABLE mensagens (
id int,
nome varchar(50),
email varchar(50),
comentario varchar(100)
);

INSERT INTO mensagens (id, nome, email,
comentario) VALUES (1,"Teste de
usuario","usuario@teste.com","primeiro teste");
```

```
Services.yml:


apiVersion: v1
kind: Service
metadata:
  name: php
spec:
  selector:
    app: php
  ports:
    - port: 80
      targetPort: 80
  type: LoadBalancer
---
apiVersion: v1
kind: Service
metadata:
  name: mysql-connection
spec:
  ports:
    - port: 3306
  selector:
    app: mysql
  clusterIP: None
```

```
Dbasedeploy.yml:

# Deployment do banco de dados
apiVersion: apps/v1
kind: Deployment
metadata:
  name: mysql
spec:
  selector:
    matchLabels:
      app: mysql
  template:
    metadata:
      labels:
        app: mysql
    spec:
      containers:
      - image: szalbuque/dbase:1.0
        args:
        - "--ignore-db-dir=lost+found"
        imagePullPolicy: Always
        name: mysql
        ports:
        - containerPort: 3306
          name: mysql
        volumeMounts:
        - name: mysql-dados
          mountPath: /var/lib/mysql
      volumes:
      - name: mysql-dados
        persistentVolumeClaim:
          claimName: mysql-dados
```

```
C:\Users\silviaz\AppData\Local\Google\Cloud SDK>kubectl get pv
NAME        CAPACITY  ACCESS MODES  RECLAIM POLICY  STATUS  CLAIM              STORAGECLASS  REASON  AGE
fileserver  1T        RWX           Retain          Bound   default/mysql-dados                      126m

C:\Users\silviaz\AppData\Local\Google\Cloud SDK>kubectl get pvc
NAME         STATUS  VOLUME      CAPACITY  ACCESS MODES  STORAGECLASS  AGE
mysql-dados  Bound   fileserver  1T        RWX                         121m

C:\Users\silviaz\AppData\Local\Google\Cloud SDK>kubectl get service
NAME              TYPE          CLUSTER-IP  EXTERNAL-IP   PORT(S)        AGE
kubernetes        ClusterIP     10.8.0.1    <none>        443/TCP        4h39m
mysql-connection  ClusterIP     None        <none>        3306/TCP       43m
php               LoadBalancer  10.8.3.70   34.27.203.41  80:32196/TCP   43m

C:\Users\silviaz\AppData\Local\Google\Cloud SDK>kubectl get pods
NAME                  READY  STATUS   RESTARTS  AGE
mysql-66c98c47d-4dm7p  1/1   Running  0         42m
php-5f849ff668-5wqbn   1/1   Running  0         41m
php-5f849ff668-cbmrt   1/1   Running  0         41m
php-5f849ff668-rrss7   1/1   Running  0         41m
php-5f849ff668-vf822   1/1   Running  0         41m
php-5f849ff668-w9wc8   1/1   Running  0         41m
php-5f849ff668-zlll9   1/1   Running  0         41m
```
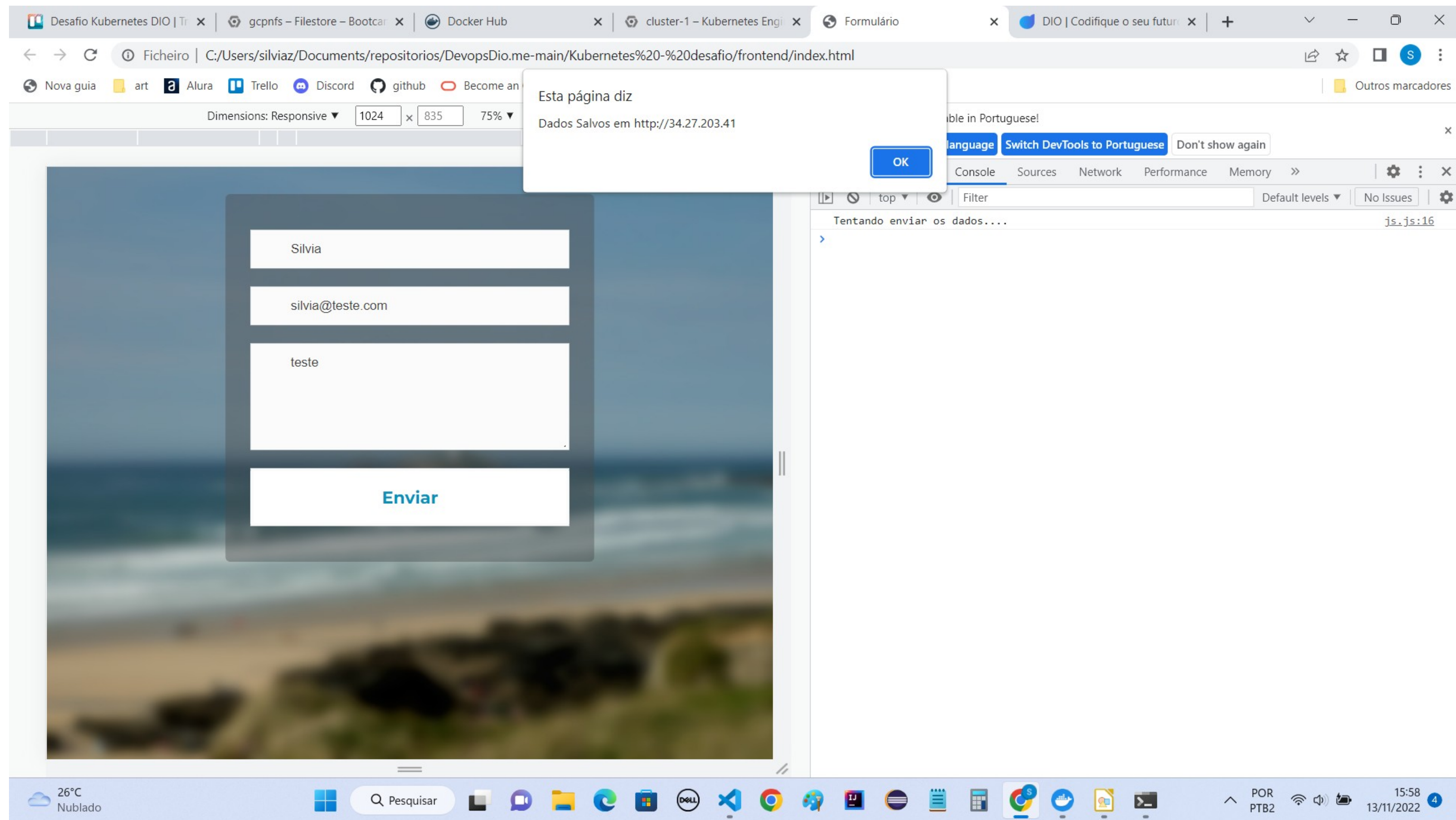
Silvia

silvia@teste.com

teste

Enviar

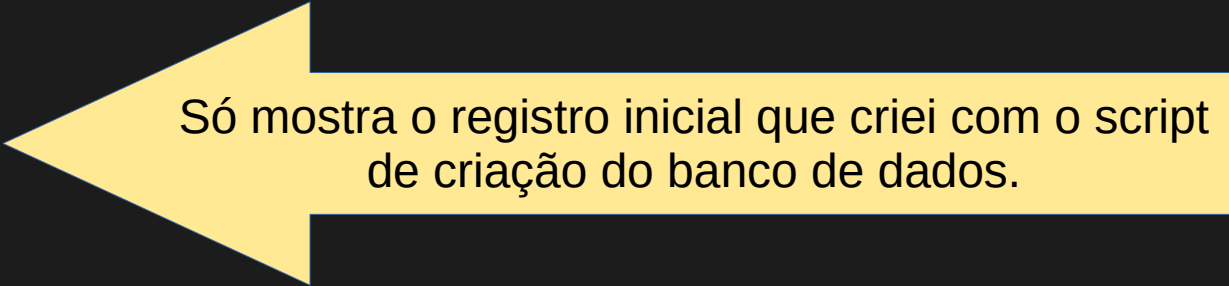Tentando enviar os dados....   js.js:16

```
C:\Users\silviaz\AppData\Local\Google\Cloud SDK>kubectl exec --tty --stdin mysql-66c98c47d-4dm7p /bin/bash
kubectl exec [POD] [COMMAND] is DEPRECATED and will be removed in a future version. Use kubectl exec [POD] -- [COMMAND]
instead.
bash-4.2# mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 4
Server version: 5.7.40 MySQL Community Server (GPL)

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
mysql> use meubanco;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> select * from mensagens;
+------+----------------+------------------+---------------+
| id   | nome           | email            | comentario    |
+------+----------------+------------------+---------------+
|    1 | Teste de usuario | usuario@teste.com | primeiro teste |
+------+----------------+------------------+---------------+
1 row in set (0.00 sec)
```

Só mostra o registro inicial que criei com o script de criação do banco de dados.