

# DIARY.COM

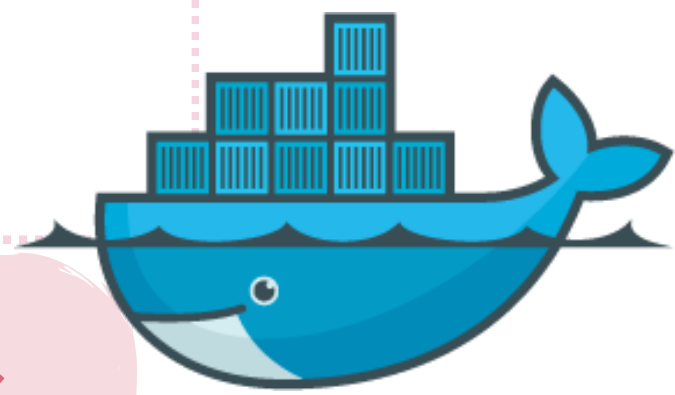
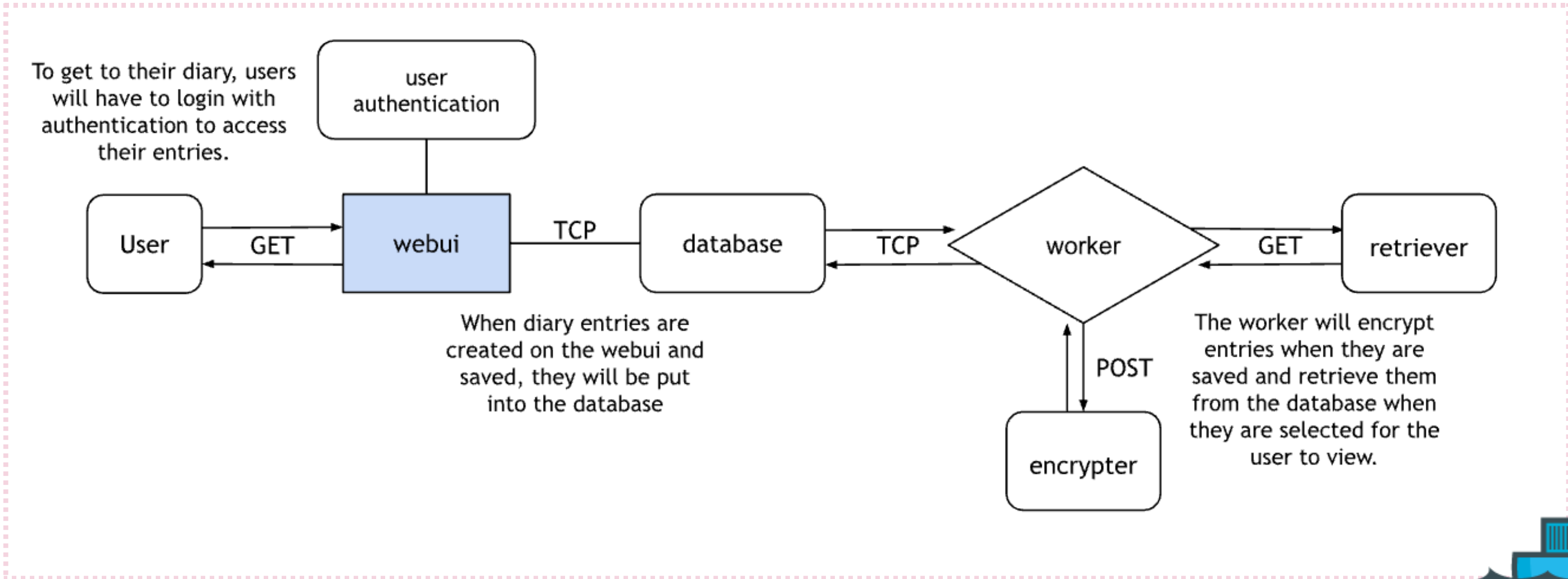


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**PURPOSE:** Diary.com is a cloud-based diary-writing web platform application. The app will allow users to write personal entries to themselves or to share their thoughts with the public via their profile. Entries can be locked with passwords or encryption so that no one but the user can access what they write. Users can also share access with other people via email for collaborative entries.

## Components

The proposed diary application aims to provide users with a secure and collaborative platform for documenting their thoughts and experiences. By utilizing frontend technologies like React.js for responsive UI design and Node.js for efficient backend handling, the system ensures optimal user experience. Real-time collaboration is facilitated using Socket.io, while Nodemailer handles email integration for notifications and sharing. Deployment utilizes Docker for containerization and Kubernetes for orchestration, ensuring scalability and consistency across environments.



## Docker + Kubernetes

- **Frontend Interface:**
  - HTML, JavaScript (React.js)
- **Backend Development:**
  - Node.js
- **Database:**
  - PostgreSQL for entry storage.
- **User Authentication:**
  - LDAP
- **Writing UI:**
  - Draft.js
  - Socket.io
  - Nodemailer

- Dockerfile for postgresQL server to record user entries.
- Docker creates and runs the components for the database
- The image is built with an initialization script

```
# Use official PostgreSQL image as base
FROM postgres:latest

# Set environment variables
ENV POSTGRES_DB=writing_platform
ENV POSTGRES_USER=writing_user
ENV POSTGRES_PASSWORD=writing_password

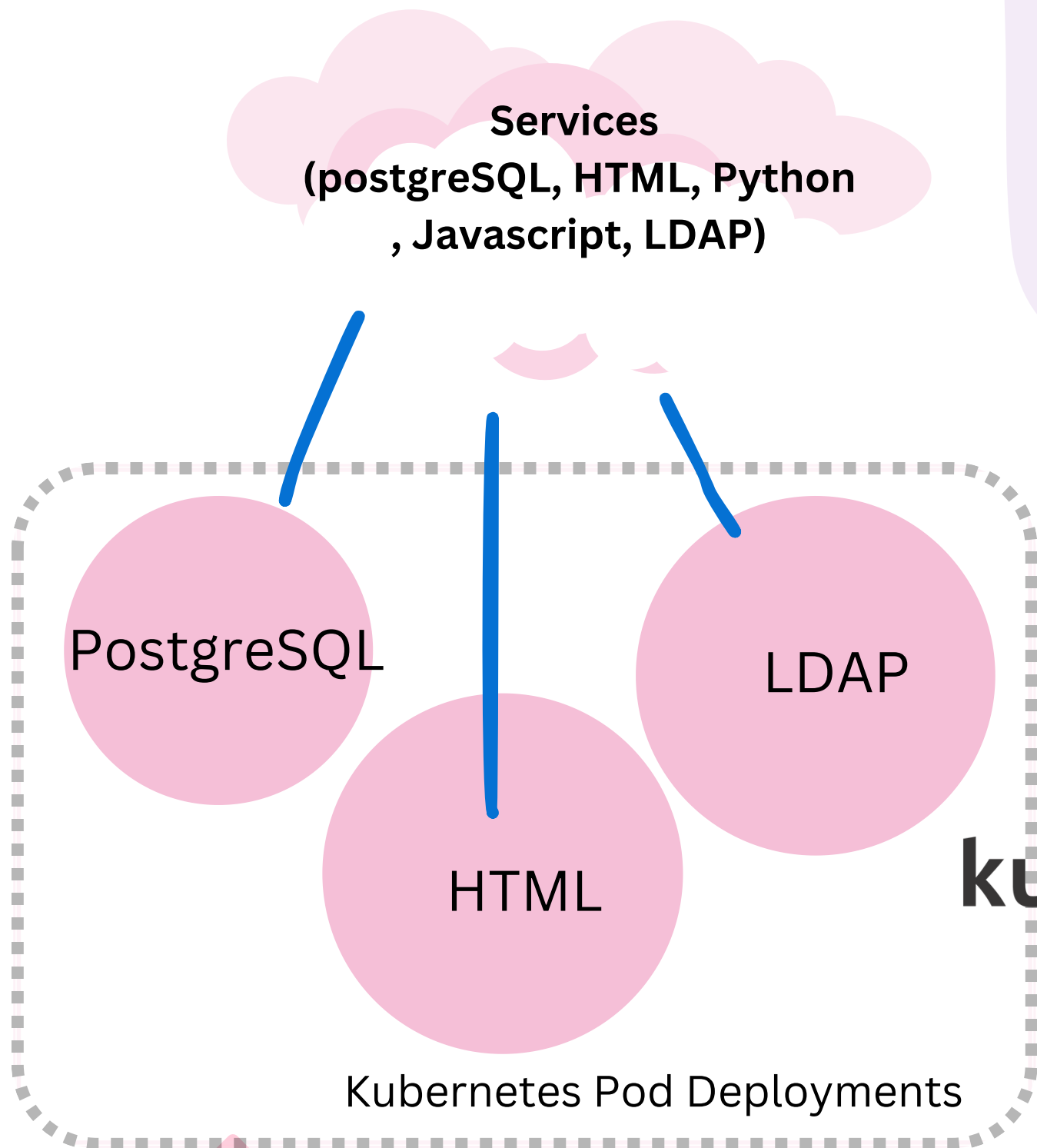
# Copy initialization script
COPY init.sql /docker-entrypoint-initdb.d/
```

```
[Shveta@head:~/postgresQL$ cat postgres_deployment.yml
apiVersion: apps/v1
kind: Deployment
metadata:
  name: postgres-deployment
spec:
  replicas: 1
  selector:
    matchLabels:
      app: postgres
  template:
    metadata:
      labels:
        app: postgres
    spec:
      containers:
        - name: postgres
          image: himashveta/my-postgres-image:latest
          ports:
            - containerPort: 5432
          env:
            - name: POSTGRES_DB
              value: writing_platform
            - name: POSTGRES_USER
              value: writing_user
            - name: POSTGRES_PASSWORD
              value: writing_password
          volumeMounts:
            - name: postgres-persistent-storage
              mountPath: /var/lib/postgresql/data
          volumes:
            - name: postgres-persistent-storage
              persistentVolumeClaim:
                claimName: postgres-pvc
Shveta@head:~/postgresQL$
```

- Deployment yaml file to deploy a postgresQL pod for collecting and storing user's entries, the metadata of entries, etc.
- Pods and Services can be viewed in the Kubernetes Dashboard for issues and optimal performance

## Deployment

Kubernetes Pods + Services



kubernetes

## WebUI

The Login and Entry page as shown below will allow users to sign in with their credentials, or try our website out as a guest user. Once signed in, our website will bring the users to the entry page which allows them to create new entries, save them, and also view their previous entries. To make Diary.com more customizable, users will be able to change the background color and font color to their liking.

### Diary.com

Sign Up

Login

Login as Guest

Login Page for Diary.com

My Diary

Sign Out

Background color:  Font color:

+ New Entry

Entry 1

Entry 2

Entry 3

Entry 4

User's Home Page