DELIVERABLE 4 DEPLOYMENT

COPD Diagnosis & Management App - Project Deployment

Term: Fall 2019

Team Name: Cyberlife

Project: #48 COPD Identify & Manage 2

Team Details

Team Members:

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Quick Description of Application

This is an application that would help patients self-diagnose their COPD symptoms as well as manage their health indicators. Once a high risk of COPD is diagnosed in the app, the patients could choose to make appointments with their doctors and manage these appointments. There is also a daily health record function available for patients so they can manage their health status. Last but not least, a learning section is launched to educate COPD patients and provide suggestions on their daily exercises.

Deployment Details

Drone configuration

Namespace

The global namespace is defined in *values.yaml*.

```
global:
  namespace: copd-identify-manage-2
```

Back-end application configuration

In *.drone.yml*, *environment* defines to build the back-end application in production mode and make swagger active.

```
environment:
    SPRING_PROFILES_ACTIVE: prod,swagger
```

The docker file *web-dockerfile* shown below defines the steps to build the back-end application by Maven and sets the entrypoint of the container.

```
FROM maven:3.6-jdk-8 as builder

RUN mkdir -p /web
WORKDIR /web

COPY ./web /web

# RUN mvn clean spring-boot:run -Dspring-boot.run.profiles=prod
RUN mvn clean package -Dspring-boot.run.profiles=prod

ENTRYPOINT ["java","-Djava.security.egd=file:/dev/./urandom","-
jar","/web/target/copdmanage-0.0.1-SNAPSHOT.jar"]
```

In *values.yaml*, the configuration information of the back-end application is shown below.

```
backend:
  name: cim2backend
  port: 80
  replicaCount: 1
  proxy:
    incomingPath: /cim2web/
    containerPath: "/"
  image:
    repository: build.hdap.gatech.edu/cim-web
    tag: latest
    pullPolicy: Always
  env:
    SPRING_PROFILES_ACTIVE: prod,swagger
```

Front-end application configuration

The docker file *app-dockerfile* shown below defines the steps to build the front-end application by Node.js.

```
FROM node:12.13.0 as builder

RUN mkdir -p /app
WORKDIR /app

COPY ./app /app
RUN rm -rf node_modules
RUN rm -f package-lock.json

RUN npm install
RUN npm run build
```

In *values.yaml*, the configuration information of the front-end application is shown below.

```
frontend:
  name: cim2frontend
  port: 80
  replicaCount: 1
  proxy:
    incomingPath: /cim2app/
    containerPath: "/"
  image:
    repository: build.hdap.gatech.edu/cim-app
    tag: latest
    pullPolicy: Always
```

Load balancer configuration

Load balancer is defined in the docker file *app-dockerfile* shown below and configured with customized *default.conf*.

```
FROM nginx:1.17.4
COPY --from=builder ./app/dist /usr/share/nginx/html/
COPY ./nginx/default.conf /etc/nginx/conf.d
```

Database configuration

In *values.yaml*, the configuration information of the database is shown below.

```
database:
  name: cim2database
  port: 5432
  replicaCount: 1
  image:
    repository: postgres
    tag: latest
    pullPolicy: Always
```

Link to drone.yml

https://github.gatech.edu/gt-cs6440-hit-fall2019/COPD-Identify-Manage-2/blob/master/.drone.yml

Link to values.yaml

https://github.gatech.edu/gt-cs6440-hit-fall2019/COPD-Identify-Manage-2/blob/master/values.yaml

Link to any other deployment files

https://github.gatech.edu/gt-cs6440-hit-fall2019/COPD-Identify-Manage-2/tree/master/Deliverable%204%20Deployment/Deployment%20File

Github Repository

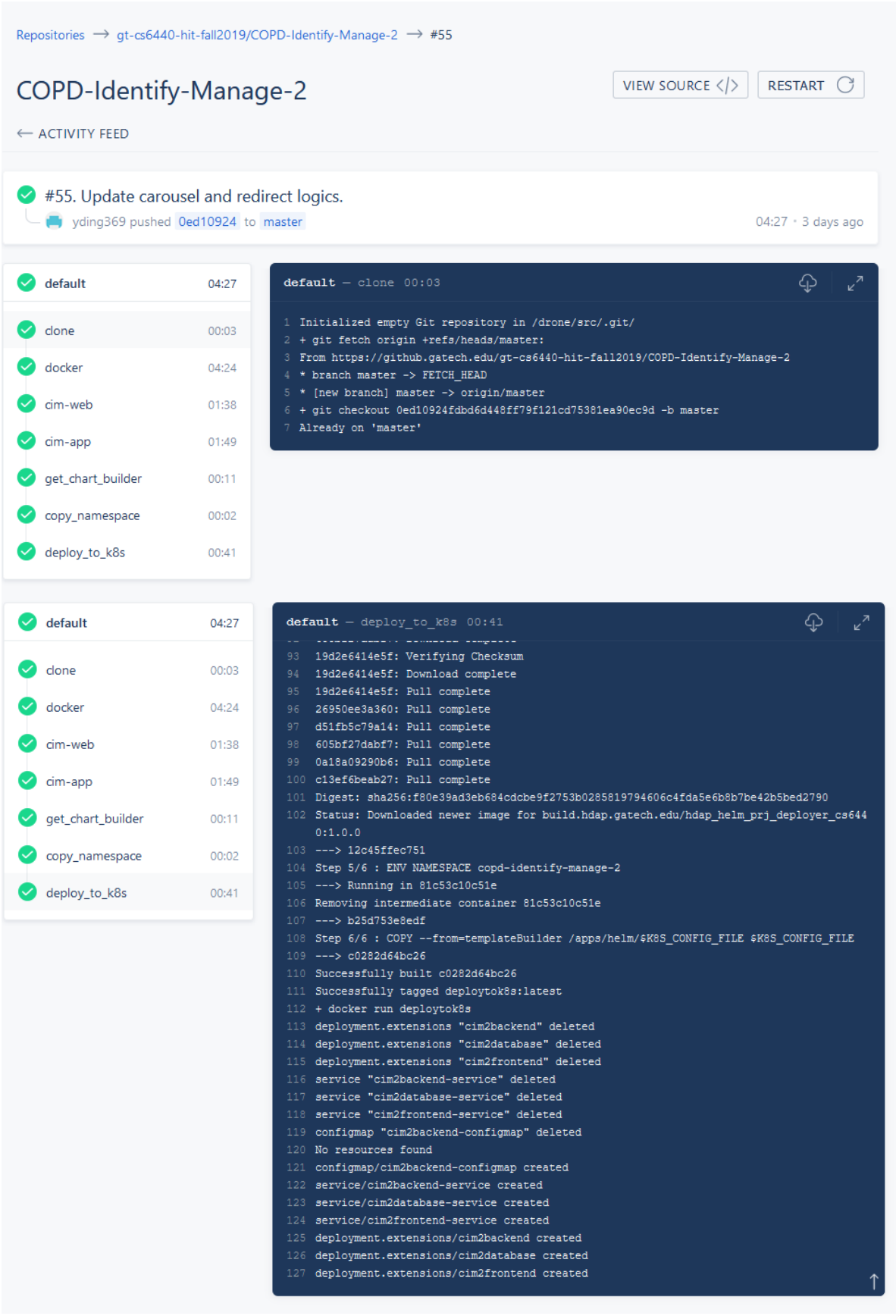
Link: https://github.gatech.edu/gt-cs6440-hit-fall2019/COPD-Identify-Manage-2/tree/master/Deliverable%204%20Deployment

Branch: master

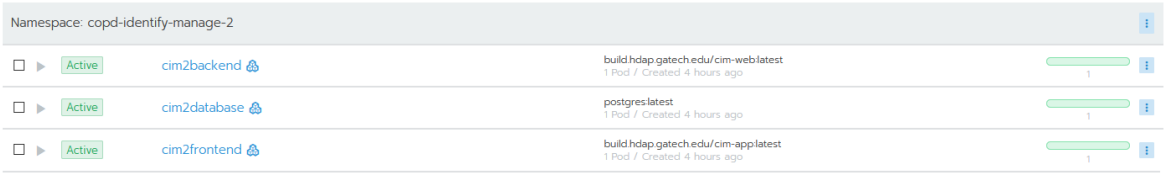
Final Commit ID: 1025df72040241fcf7582a6f5a2ca649440ee3ef

Deployed Application

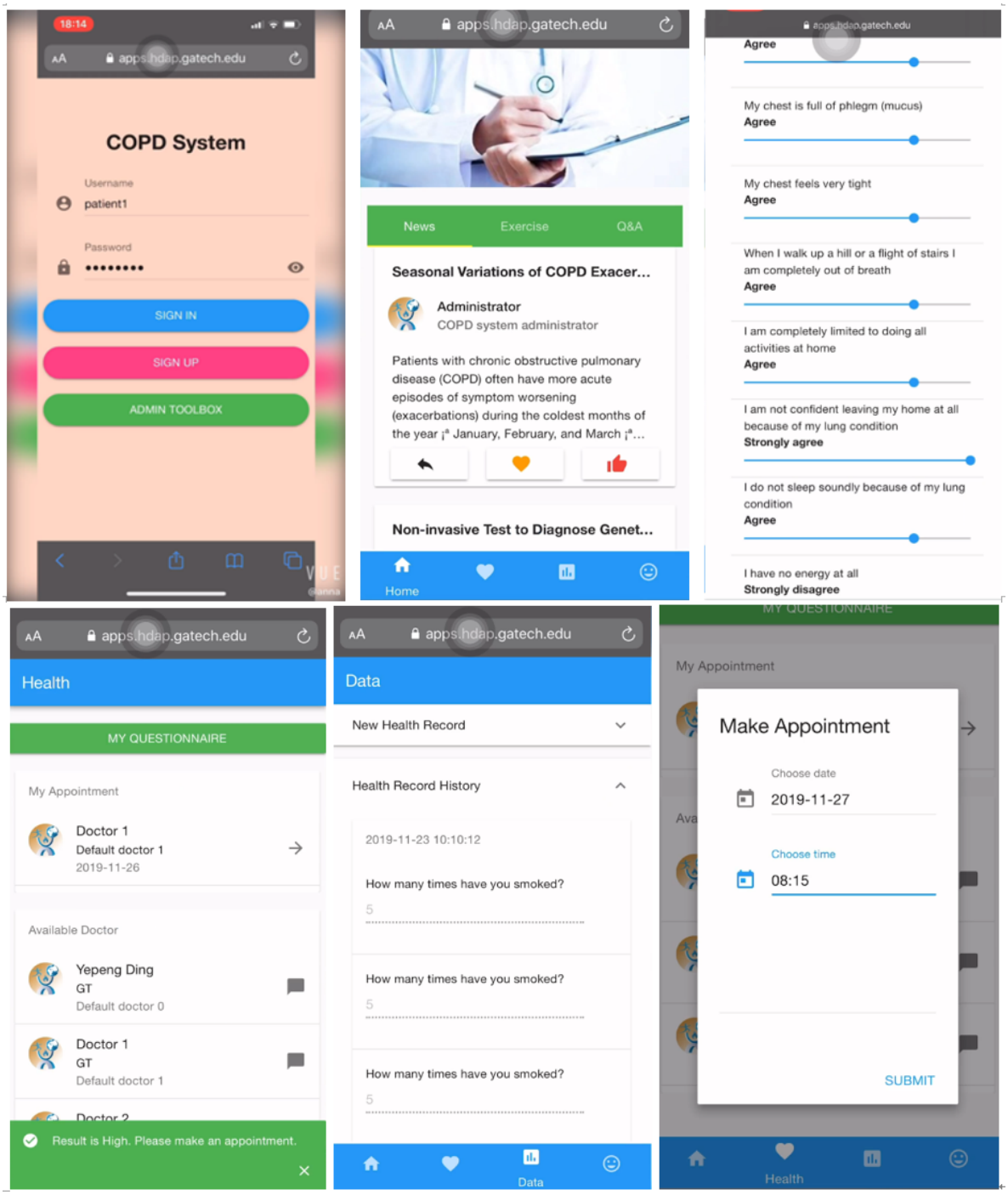
Drone Build Logs Screenshot



Rancher Container Running Screenshot



Application Screenshot (Running)



Steps to run app and login information

The app link on HDAP is here: https://apps.hdap.gatech.edu/cim2app/

Login user name and password for patients:

Username	Password
patient	patient
patient1	patient1
patient2	patient2

Once logged in, the four buttons below would guide the user to "Main Page: patient education", "COPD self-diagnosis survey and doctor reservation", "Health Record Management" and "Setting".

Login user name for doctors:

Username	Password
doctor	doctor
doctor1	doctor1
doctor2	doctor2

In the doctor portal, after clicking on the second button, the doctors can see reservations from patients.

The admin box on the front page is for publishing new articles.