Module-4: Orchestration in Docker

Demo Document – 1

edureka!

DEMO-1: Running a Multi-container application using Compose

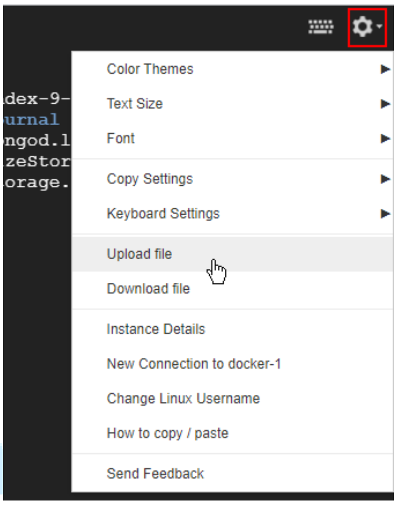
Note: All commands are executed as root.

We will demonstrate this demo using a spring-boot application with a MongoDB backend.

1. Create a new directory in which you can work on your compose application

```
$ mkdir <directoryName>
```

2. Download the spring-boot-mongo.jar application in your system from: https://github.com/edurekacontent/dockerContent
3. Upload the application to your GCP instance



4. Move the application to your working folder

```
$ mv /home/<userName>/spring-boot-mongo.jar /path/to/destination/
```

5. Create and build the Dockerfile to deploy this application

```
FROM lerndevops/openjdk8:alpine

RUN apk update && apk add /bin/sh

RUN mkdir -p /opt/app

ENV PROJECT_HOME /opt/app

COPY spring-boot-mongo.jar $PROJECT_HOME/spring-boot-mongo.jar

WORKDIR $PROJECT_HOME

EXPOSE 8080

CMD ["java", "-Dspring.data.mongodb.uri=mongodb://mongo:27017/spring-mongo","-
Djava.security.egd=file:/dev/./urandom","-jar","./spring-boot-mongo.jar"]
```

```
$ docker build . -t <userName>/<imagename>
```

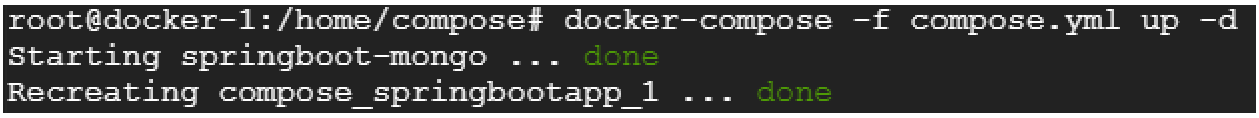
6. Create a data and data-backup directory inside main folder to mount to the db server

7. Now create a compose.yml file to deploy this multi-container application. We are going to use a custom MongoDB image for this project

```
version: '3'
services:
  springbootapp:
    image: edureka01/spring-boot-app:latest
    container_name: springboot
    ports:
      - 8010:8080
    depends_on:
      - mongo
    restart: on-failure
  mongo:
    image: lerndevops/mongo
    container_name: springboot-mongo
    ports:  # for demo/debug purpose only
      - 27017:27017
    volumes:
      - /home/compose/data:/data/db
      - /home/compose/data-bkp:/data/bkp
    restart: always
```

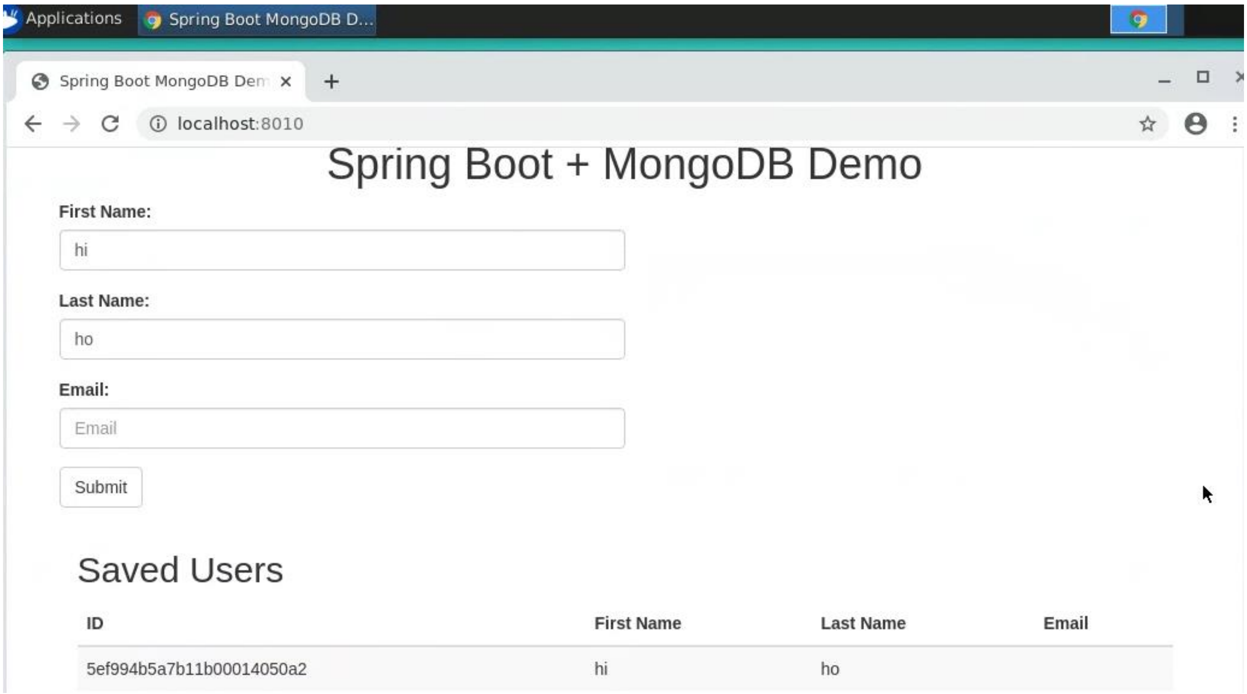
8. Run the docker-compose up command to deploy the application

```
$ docker-compose -f compose.yml up -d
```



```
root@docker-1:/home/compose# docker-compose -f compose.yml up -d
Starting springboot-mongo ... done
Recreating compose_springbootapp_1 ... done
```

9. Check if the application is working on Google Remote Desktop



Spring Boot + MongoDB Demo

First Name: hi

Last Name: ho

Email: Email

Saved Users

ID	First Name	Last Name	Email
5ef994b5a7b11b00014050a2	hi	ho	

Credits: lerndevops for providing the images