Docker exercise

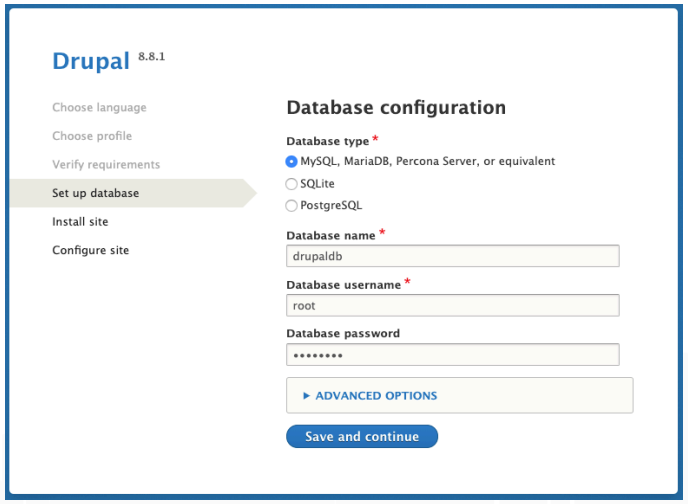
- https://github.com/joneconsulting/cloud-computing/tree/master/04.Docker/lab
- Docker compose lab x 2
  - Lab1 → drupal(https://www.drupal.com) service를 Docker compose 파일로 작성
  - Lab2 → drupal image 파일을 생성하는 Dockerfile 생성하고, 생성된 Dockerfile을 이용하여 Docker compose 파일 작성

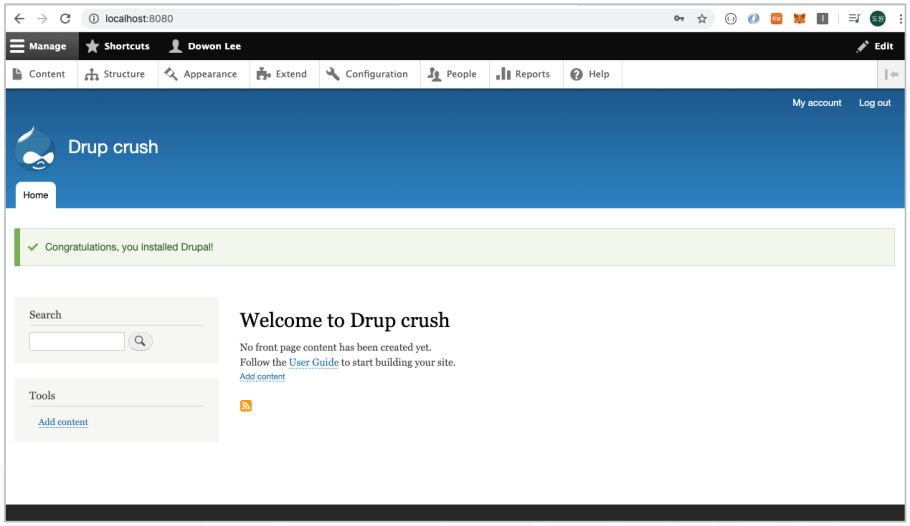
- Docker swarm lab x 1
  - 교재 4장의 docker-compose.yml 파일을 이용하여 Docker swarm 구성
  - Worker01, Worker02, Worker03의 Node에 아래 내용 구축
    - *volume x 1* (db-data,target=/var/lib/postgresql/data)
    - *networks x 2* (frontend, backend)
    - *services x 5* (voting-app, redis, db, worker, result-app)
    - *stack x 1* (my-vote-app)

Docker Compose – LAB1

- Write Compose file for ***DRUPAL service*** (https://www.drupal.com/)
  - Build a basic compose file for a ***Drupal content management system*** website. Docker Hub is your friend :)
  - Use the ***drupal image*** along with the ***mysql image***
  - Use ports to expose Drupal on ***8080*** so you can ***localhost:8080***
  - Be sure to set ***MYSQL_ROOT_PASSWORD*** for mysql
  - Walk though ***Drupal setup via browser***

  - Tip: Drupal assumes DB is localhost, but it's ***service name***
  - Extra Credit: Use ***volumes*** to store ***Drupal unique data***



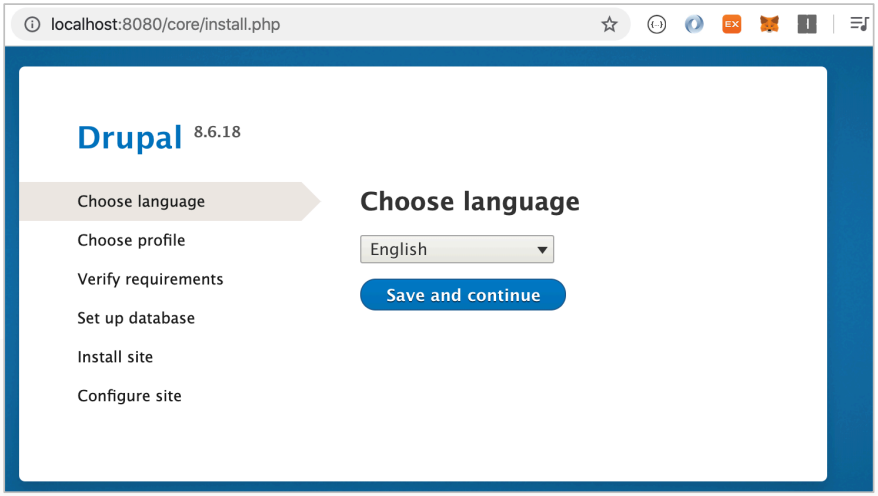


Docker Compose – LAB2

- Write Compose file with Dockerfile
  - Building ***custom drupal*** image for local testing
  - Start with Compose file from ***previous assignment*** (LAB1)
  - Make your ***Dockerfile*** and ***docker-compose.yml*** in dir compose-assignment-2
  - Use the ***drupal image*** along with the ***mysql image*** as before
  - Use README.md in that dir for details

```
▶ docker image ls
REPOSITORY                          TAG                 IMAGE ID            CREATED             SIZE
custom-drupal                       latest              84c2650021e3        6 hours ago         480MB
edowon0623/hello                    latest              a9e48add24c9        2 days ago          163MB
```

```
 dowon@DOWON-MacBook ▶ ~/Desktop/Work/docker/drupal/compose-assignment-2
▶ ls -al
total 24
drwxr-xr-x  5 dowon  staff   160  1 16 01:49 .
drwxr-xr-x  4 dowon  staff   128  1 16 01:34 ..
-rw-r--r--  1 dowon  staff   300  1 16 01:46 Dockerfile
-rw-r--r--  1 dowon  staff  3611  1 16 01:45 README.MD
-rw-r--r--  1 dowon  staff   602  1 16 01:55 docker-compose.yml
```



Docker Swarm – LAB3

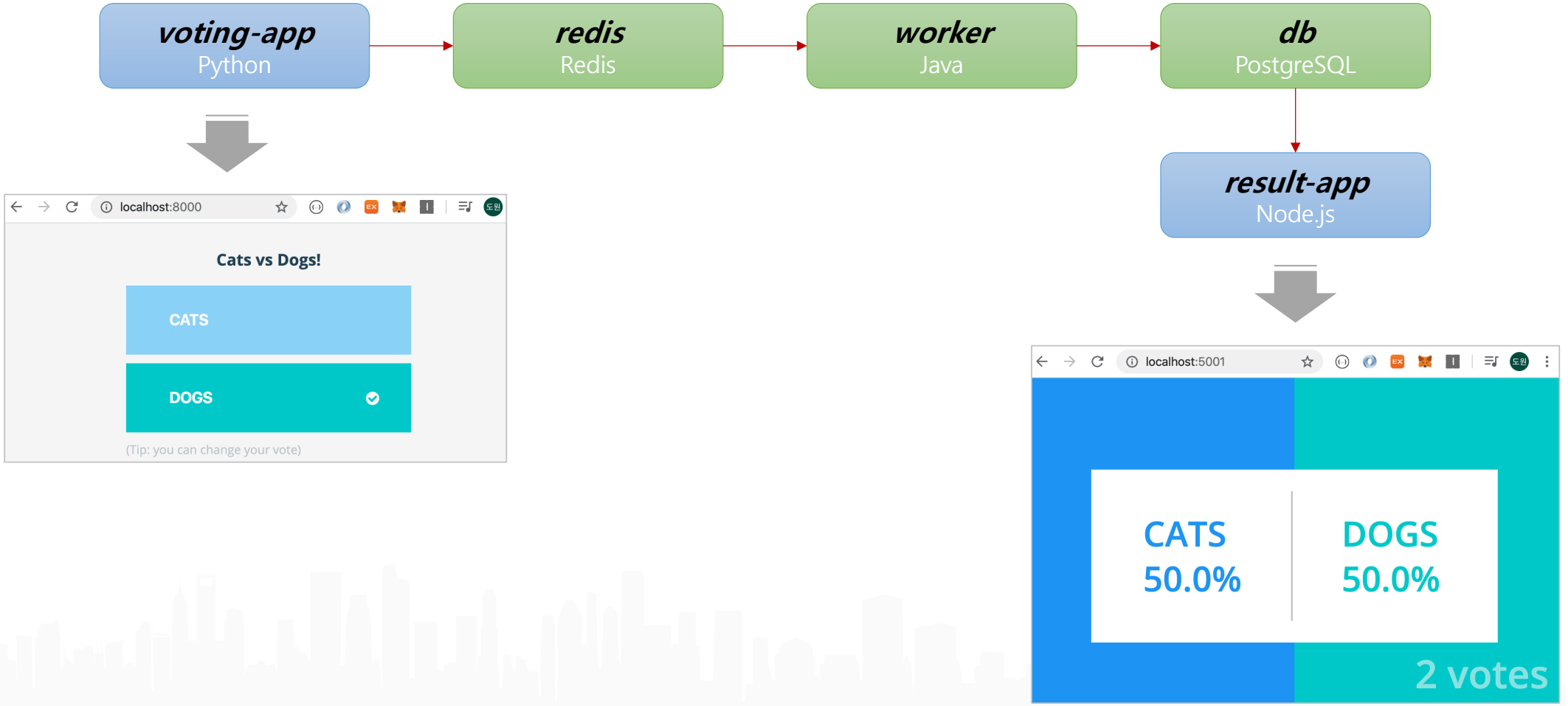
- Create Voting App with multi services
  - Everything is using Docker Hub images, so no data needed on Swarm
  - Using Docker's Distributed ***Voting App***
  - use ***swarm-app-1*** directory in our course repo for
    - To set swarm, execute the following file in ***swarm-app-1*** folder.
    - ***docker-compose.yml***
      - We have already used this yaml file in Chapter 4 of our book.
  - requirements
    - We create a stack and services, you need to create a ***yaml file*** like ***todo_app.yml***
      - *volume x 1* (db-data,target=/var/lib/postgresql/data)
      - *networks x 2* (frontend, backend)
      - *services x 5* (voting-app, redis, db, worker, result-app)
      - *stack x 1* (my-vote-app)
  - Create the commands needed, spin up services, and test app
  - To vote, access the following URL
    - http://localhost:8000/
  - To see the results, access the following URL
    - http://localhost:5001/

- bretfisher/examplevotingapp_vote
- bretfisher/examplevotingapp_worker:java
- bretfisher/examplevotingapp_result
- redis:3.2
- postgres:9.4

using images from https://hub.docker.com

Docker Swarm – LAB3

- Create Voting App with multi services



Docker Swarm – LAB3

- Create Voting App with multi services