

TUGAS AKHIR

1. Cek instalasi docker dan docker compose di node

```
root@centos-tugasakhir muhammad_aulia_rahman68]# rpm -qa | grep docker
docker-compose-1.18.0-4.el7.noarch
docker-client-1.13.1-162.git64e9980.el7.centos.x86_64
python3-dockerpty-0.4.1-18.el7.noarch
python3-docker-2.6.1-3.el7.noarch
docker-common-1.13.1-162.git64e9980.el7.centos.x86_64
docker-1.13.1-162.git64e9980.el7.centos.x86_64
[[root@centos-tugasakhir muhammad_aulia_rahman68]# rpm -qa | grep docker-compose
docker-compose-1.18.0-4.el7.noarch
```
2. Clone dari project sebelumnya

```
mmad_aulia_rahman68@centos-tugasakhir ~]$ git clone https://gitlab.com/muhammadyaqin/laravel5_sample.git tugasakhir
ng into 'tugasakhir'...
e: Enumerating objects: 7547. done.
```
3. Install package yang belum di intall dan cek versi secara keseluruhan

```
[[root@centos-tugasakhir muhammad_aulia_rahman68]# php -v
PHP 7.2.31 (cli) (built: Jun  9 2020 08:18:32) ( NTS )
```
4. Sesuai kan dengan env database yang mau di buat

```
DB_CONNECTION=mysql
DB_HOST=127.0.0.1
DB_PORT=3306
DB_DATABASE=tugasakhir
DB_USERNAME=tugasakhir
DB_PASSWORD=tugasakhir2020
```
5. Generate php untuk mendapatkan key

```
> pnp artisan key:generate
Application key [uscTrTimcnYrwlH1mDmXaKlIMKAzLpp2] set successfully.
```
6. Generate table db

```
[muhammad_aulia_rahman68@instance-1 students]$ php artisan make:migration create_students_table --create=students
Created Migration: 2020_07_11_141259_create_students_table
```
7. Buat dockerfile

```

# Pull docker image of php 7.2
FROM php:7.2
# Unlock php banned-list & allow additional php module
RUN rm /etc/apt/preferences.d/no-debian-php
# Allow services from starting automatically
RUN echo "exit 0" > /usr/sbin/policy-rc.d
# Install other dependencies (nginx, mysql)
RUN apt update && apt install nginx -y
RUN apt install net-tools mariadb-server php-mysql -y
RUN apt install php-fpm -y
# Set owner of directory to www-data
RUN chown -R www-data:www-data /var/www/html
# Set working directory
WORKDIR /var/www/html
# Set environment variable to populate database
ENV MYSQL_DATABASE=tugasakhir
ENV MYSQL_USER=tugasakhir
ENV MYSQL_PASSWORD=tugasakhir2020
# Set default action when starting a container
CMD service mysql start && service php7.3-fpm start && nginx -g "daemon off;"
# Expose internal port 80 to docker host
EXPOSE 80

```

8. Buat docker compose

```

version: "3"
services:
  # service_name
  web:
    # build Dockerfile on current directory
    build: .
    # Link local directory to docker volume
    volumes:
      # script for db automation
      - ./init-db:/var/www/html/init-db
      # laravel code
      - ./students:/var/www/html/
      # virtualhost
      - ./conf/nginx/default.conf:/etc/nginx/sites-enabled/default
      # php-fpm config
      - ./conf/php/www.conf:/etc/php/7.3/fpm/pool.d/www.conf
    ports:
      # external-port : internal-port
      - "4000:80"
  # Set default network to bridge
  networks:
    default:
      driver: bridge

```

9. Buat konfigurasi init db

```
# Initialize database for laravel
mysql -e "CREATE DATABASE ${MYSQL_DATABASE} /*!40100 DEFAULT CHARACTER SET utf8 */;"
# Create additional mysql user with privileges
mysql -e "CREATE USER ${MYSQL_USER}@localhost IDENTIFIED BY '${MYSQL_PASSWORD}';"
mysql -e "GRANT ALL PRIVILEGES ON ${MYSQL_DATABASE}.* TO '${MYSQL_USER}'@'localhost';"
mysql -e "FLUSH PRIVILEGES;"
# Replace default .env file with new db-name, username & password
sed -i "s/DB_DATABASE=homestead/DB_DATABASE=${MYSQL_DATABASE}/g" .env
sed -i "s/DB_USERNAME=homestead/DB_USERNAME=${MYSQL_USER}/g" .env
sed -i "s/DB_PASSWORD=secret/DB_PASSWORD=${MYSQL_PASSWORD}/g" .env
# Do database migration
php7.3 artisan migrate
```

10. Masukan grup ke docker

```
[[muhammad_aulia_rahman68@instance-1 students]$ sudo groupadd docker
[[muhammad_aulia_rahman68@instance-1 students]$ sudo gpasswd -a username docker
gpasswd: user 'username' does not exist
[[muhammad_aulia_rahman68@instance-1 students]$ sudo gpasswd -a muhammad_aulia_rahman68 docker
Menambahkan pengguna muhammad_aulia_rahman68 ke grup docker
```

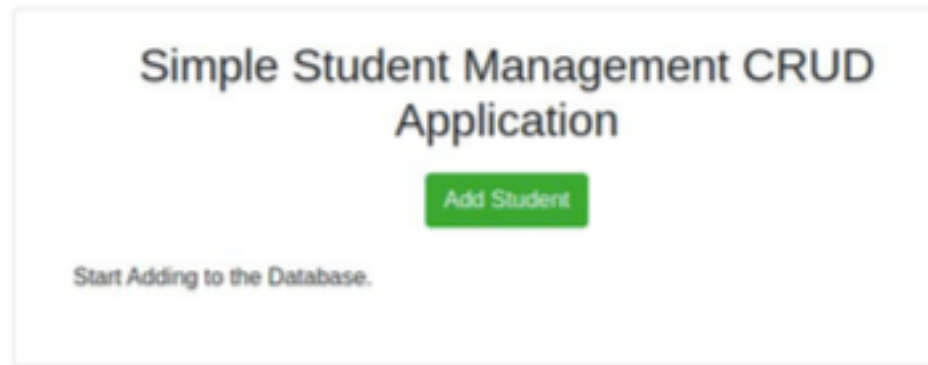
11. Build docker

```
[[muhammad_aulia_rahman68@instance-1 students]$ docker-compose build
Building web
Step 1/13 : FROM php:7.2
Trying to pull repository docker.io/library/php ...
7.2: Pulling from docker.io/library/php
```

12. Up semua service Docker

```
[[muhammad_aulia_rahman68@instance-1 students]$ docker-compose up -d
Creating network "students_default" with driver "bridge"
Building web
Step 1/13 : FROM php:7.2
Trying to pull repository docker.io/library/php ...
7.2: Pulling from docker.io/library/php
8559a31e96f4: Pull complete
e0276193a084: Pull complete
eb2d00c10344: Extracting [=>
f54006e0dc29: Download complete
df3eccd383e5: Download complete
6312b85684fc: Download complete
375301794b33: Download complete
d0bb92cdc4e2: Download complete
a0801f227b17: Download complete
61ea7a265c49: Download complete
```

13. Akses local ip:8000/students



14. Build docker push to repo

```
Error parsing reference: 'composer:1.0.0 as build' is not a valid repository/tag. im
[[muhammad_aulia_rahman68@instance-1 tugasakhir]$ docker build . -t heypam68/laravel
Sending build context to Docker daemon 11.44 MB
```

15. Lakukan run

```
[[muhammad_aulia_rahman68@instance-1 tugasakhir]$ kubectl run laravel --image=heypam68/laravel --port=8090
pod/laravel created
```

16. Liat sudah running untuk pod

```
[[muhammad_aulia_rahman68@instance-1 tugasakhir]$ kubectl get pods
NAME          READY   STATUS              RESTARTS   AGE
laravel       0/1     ContainerCreating   0           83s
```

17. Silahkan akses

