K104 : 개츠비

삼성SW청년아카데미 부울경캠퍼스 7기
특화프로젝트(7주: 2022.10.10 ~ 2022.11.21)

포팅 매뉴얼

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목차

1. 프로젝트 기술 스택

가. 이슈 관리: Jira

나. 형상 관리: Gitlab

다. 커뮤니케이션: Notion, Mattermost

라. 개발 환경

1) OS: Windows 10

2) IDE

가) IntelliJ 2021.3.2

나) Visual Studio Code 1.70.1

다) UI/UX: Figma

3) Database:

가) MySQL 8.0.31

나) Redis 7.0.5

다) Firebase 9.1.0 (외부)

4) Server: AWS EC2 Ubuntu 20.04 LTS

5) Dev-Ops

가) Docker 20.10.21

나) Jenkins 2.361.2

마. 상세 사용

1) Frontend

가) HTML5, CSS3, JavaScript(ES6)

나) React 17.0.2, Redux 4.2.0

다) Node.js 16.16.0

라) React-wordcloud 1.2.7

2) Backend

가) Spring boot 2.7.5

나) Open JDK 11

다) Gradle 7.5.1

라) Querydsl 5.0

마) Selenium 4.5.3

바) Jwt 0.11.5

2. 주요 환경변수

```
# db
spring.datasource.url=[DB 주소]
spring.datasource.username=[DB 호스트명: gease]
spring.datasource.password=[DB 비밀번호: g2b1s1l2]

spring.jpa.database-platform=org.hibernate.dialect.MySQL8Dialect
spring.jpa.hibernate.ddl-auto=update
spring.jpa.properties.hibernate.format_sql=true

# 로깅

logging.level.org.hibernate.SQL=warn
logging.level.org.springframework=warn
logging.level.org.springframework.web=warn
logging.level.org.springframework.security=warn



# jwt
jwt.header=Authorization
jwt.access-token-validity-in-seconds=86400

jwt.refresh-token-validity-in-seconds=604800

app.auth.token.secret-key=[jwt 시크릿 키]
app.auth.token.refresh-cookie-key=refresh



# OAuth (kakao)
spring.security.oauth2.client.provider.kakao.authorization-uri=
https://kauth.kakao.com/oauth/authorize
spring.security.oauth2.client.provider.kakao.token-uri=
https://kauth.kakao.com/oauth/token
spring.security.oauth2.client.provider.kakao.user-info-uri=
https://kapi.kakao.com/v2/user/me
```

```
spring.security.oauth2.client.provider.kakao.user-name-attribute= id
spring.security.oauth2.client.registration.kakao.client-id=[Kakao Client Id]
spring.security.oauth2.client.registration.kakao.client-secret=[Kakao Secret Key]
spring.security.oauth2.client.registration.kakao.redirect-uri=
{baseUrl}/oauth2/callback/kakao
spring.security.oauth2.client.registration.kakao.scope= profile_image
spring.security.oauth2.client.registration.kakao.authorization-grant-type=
authorization_code
spring.security.oauth2.client.registration.kakao.client-authentication-method= POST
spring.security.oauth2.client.registration.kakao.client-name= Kakao

# OAuth (Naver)
spring.security.oauth2.client.provider.naver.authorization-uri=
https://nid.naver.com/oauth2.0/authorize
spring.security.oauth2.client.provider.naver.token-uri=
https://nid.naver.com/oauth2.0/token
spring.security.oauth2.client.provider.naver.user-info-uri=
https://openapi.naver.com/v1/nid/me
spring.security.oauth2.client.provider.naver.user-name-attribute= response
spring.security.oauth2.client.registration.naver.client-id=[Naver Client Id]
spring.security.oauth2.client.registration.naver.client-secret=[Naver Secret Key]
spring.security.oauth2.client.registration.naver.redirect-uri=
{baseUrl}/oauth2/callback/naver
spring.security.oauth2.client.registration.naver.authorization-grant-type=
authorization_code

# OAuth (github)
spring.security.oauth2.client.registration.github.client-id=[Github Client Id]
spring.security.oauth2.client.registration.github.client-secret=[Github Secret Key]
spring.security.oauth2.client.registration.github.redirect-uri=
{baseUrl}/oauth2/callback/github
spring.security.oauth2.client.registration.github.scope= user
```

```
# OAuth (google)
spring.security.oauth2.client.registration.google.client-id=[Google Client Id]
spring.security.oauth2.client.registration.google.client-secret=[Google Secret Key]
spring.security.oauth2.client.registration.google.redirect-uri=
{baseUrl}/oauth2/callback/{registrationId}
spring.security.oauth2.client.registration.google.scope= profile, email


# s3
cloud.aws.stack.auto=false
cloud.aws.region.static=[AWS region]
cloud.aws.credentials.access-key=[발급받은 엑세스 키]
cloud.aws.credentials.secret-key=[발급받은 시크릿 키]
cloud.aws.s3.bucket=[버킷명]
logging.level.com.amazonaws.util.EC2MetadataUtils=error


# 서버 설정

server.servlet.context-path=/api
server.error.include-stacktrace=never

# redis
spring.redis.host=[레디스 호스트 주소]
spring.redis.port=[레디스 포트 번호]
spring.redis.password=[레디스 비밀번호]

# ssl
security.require-ssl=true
server.ssl.key-store=classpath:spring_key.p12
server.ssl.key-store-type=PKCS12
server.ssl.key-store-password=[ssl 인증서 비밀번호]
server.ssl.enabled=true
```

3. 도커 이미지 빌드 및 실행

가) Docker 설치

```
$ sudo apt-get remove docker docker-engine docker.io containerd runc

$ sudo apt-get update

$ sudo apt-get install apt-transport-https ca-certificates curl gnupg-agent software-properties-common

$ curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo apt-key add -

$ sudo apt-key fingerprint 0EBFCD88

$ sudo add-apt-repository "deb [arch=amd64] https://download.docker.com/linux/ubuntu $(lsb_release -cs) stable"

$ sudo apt-get update

$ sudo apt-get install docker-ce docker-ce-cli containerd.io

$ sudo docker --version
```

나) mysql 도커에 올리기

```
$ sudo docker pull mysql

$ sudo docker images

$ sudo ufw allow 3306

$ sudo docker run -d --name mysql -e MYSQL_ROOT_PASSWORD=[패스워드] -p 3306:3306 mysql

$ sudo docker ps
```

다) Jenkins 도커에 올리기

```
$ sudo docker pull jenkins/jenkins:lts

$ sudo docker
```

```
$ sudo ufw allow

$ sudo docker run --name jenkins -d -p 8080:8080 -p 50000:50000 -v /home/jenkins:/var/jenkins_home -v /var/run/docker.sock:/var/run/docker.sock -e TZ=Asia/Seoul -u root jenkins/jenkins:lts

$ sudo docker ps

$ sudo docker logs jenkins
```

4. Jenkins 쉘 스크립트

가) backend

```
$ cd backend

$ docker build -t backend .

$ docker ps -q --filter "name=backend" | grep -q . && docker stop backend && docker rm backend | true

$ docker run -p 8081:8080 -d -e TZ=Asia/Seoul --name=backend backend

$ docker rmi -f $(docker images -f "dangling=true" -q) || true
```

나) frontend

```
$ cd frontend

$ docker build -t frontend .

$ docker ps -q --filter "name=frontend" | grep -q . && docker stop frontend && docker rm frontend | true

$ docker run -d -p 80:80 -p 443:443 -v /home/ubuntu/certbot/conf:/etc/letsencrypt/ -v /home/ubuntu/certbot/www:/var/www/certbot --name frontend frontend

$ docker rmi -f $(docker images -f "dangling=true" -q) || true
```

5. Docker 파일

가) backend

```
FROM openjdk:11-jdk-slim as builder

COPY gradlew .
COPY gradle gradle
COPY build.gradle .
COPY settings.gradle .
COPY src src
COPY chrome chrome
RUN chmod +x ./gradlew
RUN ./gradlew bootJar



FROM openjdk:11-jdk-slim
COPY --from=builder build/libs/*.jar app.jar
ENTRYPOINT ["java","-jar","-Dspring.profiles.active=gcp","/app.jar"]
EXPOSE 8081
```

나) frontend

```
# build stage
FROM node:lts-alpine as build-stage
WORKDIR /app
COPY package*.json ./
RUN yarn install
COPY . .
RUN npm run build

# production stage
FROM nginx:stable-alpine as production-stage
COPY --from=build-stage /app/build /usr/share/nginx/html
```

```
EXPOSE 80
CMD ["nginx", "-g", "daemon off;"]
```

6. 배포 특이사항

가) Spring boot에 SSL 적용

1) Certbot container 생성 및 인증서 발급

```
sudo mkdir certbot
cd certbot
sudo mkdir conf www logs

sudo docker pull certbot/certbot
sudo docker run -it --rm --name certbot -p 80:80 ₩
-v "/home/ubuntu/certbot/conf:/etc/letsencrypt" ₩
-v "/home/ubuntu/certbot/log:/var/log/letsencrypt" ₩
-v "/home/ubuntu/certbot/www:/var/www/certbot" ₩
certbot/certbot certonly
```

2) SSL인증서를 spring boot에서 필요한 형식(PKCS12)로 변환

```
openssl pkcs12 -export -in fullchain.pem -inkey privkey.pem-out keystore.p12 -name tomcat -CAfile chain.pem -caname root
```

3) keystore p.12 파일을 /src/main/resources에 이동

나) nginx SSL 설정

1) /home/ubuntu/nginx/conf/default.conf

```
server {
    listen 80;
    server_name k7e104.p.ssafy.io;
    location / {
        return 301 https://$host$request_uri;
    }

}
```

```
server {
    listen 443 ssl;
    server_name k7e104.p.ssafy.io;
    access_log /var/log/nginx/access.log;
    error_log /var/log/nginx/error.log;

    ssl_certificate /etc/letsencrypt/live/k7e104.p.ssafy.io/fullchain.pem;
    ssl_certificate_key /etc/letsencrypt/live/k7e104.p.ssafy.io/privkey.pem;
    ssl_protocols TLSv1 TLSv1.1 TLSv1.2 SSLv3;
    ssl_ciphers ALL;

    location / {
        root /usr/share/nginx/html;
        index index.html index.htm
        proxy_redirect off;
        charset utf-8;
        try_files $uri $uri/ /index.html;

        proxy_http_version 1.1;
        proxy_set_header Upgrade $http_upgrade;
        proxy_set_header Connection "upgrade";
        proxy_set_header Host $host;
        proxy_set_header X-Real-IP $remote_addr;
        proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
        proxy_set_header X-Forwarded-Proto $scheme;
        proxy_set_header X-Nginx-Proxy true;
    }

}
```

7. 외부 서비스

가) 카카오 로그인 기능

나) 네이버 로그인 기능

다) 깃허브 로그인 기능

라) 구글 로그인 기능

다) AWS S3