



# 포팅매뉴얼

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이후 `docker compose up -d` 명령어로 실행

## 1. 개요

### 1-1. 프로젝트 개요

- YOLO족 유행이 줄어들고 FIRE족 유행이 늘어나는 상황 속,

**소비 금액을 줄이는 습관을 목표로 하는 방향의 서비스**가 필요하다.

- 기존에 씬씀이가 큰 소비 습관을 가진 사람의 경우, 당장에 소비 습관을 바로잡기가 힘들다.
  - 해당 서비스는 **소비를 절약하는 습관을 잡아주는 역할**을 수행할 수 있다.
- 사용자가 평균적으로 소비하는 금액을 줄이고자 하는데 도움이 될 수 있는 서비스

## 1-2. 개발 환경

### Backend

- **Java** : Oracle Open JDK 17
- **Spring Boot** : 3.2.3
- **JPA** : hibernate-core-6.4.1
- **DB** :
- **IntelliJ** : 2023. 3
- **Spring Security** : 6.2

### Frontend

- **React.js** : 18.2.0
- **Typescript** : 5.3.3
- **SASS(SCSS)** : 1.71.1
- **Node.js** : 20.10.0
- **Redux** : 5.0.1
- **Axios** : 1.6.8
- **Vscode**

### Server

- **AWS EC2**
  - **CPU** : 4CPU
  - **RAM** : 16.8 GB

- OS : Ubuntu

## Service

- Nginx-proxy-manager : 3.8
- Docker : 25.0.1
- Docker-compose : 2.24.6

## 1-3. 프로젝트 사용도구

- 이슈 / 형상 관리 : Gitlab
- 코드 리뷰 : Gitlab
- 커뮤니케이션 : Notion, Mattermost
- 디자인 : Figma
- UCC : (모바비) VLLO

## 1-4. 외부 서비스

- SSAFY 금융 API
- 공공데이터 포털 OpenAPI

## 1-5. Gitignore 정보

루트 디렉토리 위치

- React : .env
- Spring : .env

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# 2. 빌드

## 2-1. 환경 변수

### Spring

- application.yml

```
spring:
  datasource:
    driver-class-name: com.mysql.cj.jdbc.Driver
    url: ${MYSQL_DATASOURCE_URL}
    username: ${MYSQL_DATASOURCE_USERNAME}
    password: ${MYSQL_DATASOURCE_PASSWORD}
```

---

```
spring:
  profiles:
    active: prods
```

---

```
spring:
  profiles:
    active: dev
```

---

```
spring:
  profiles:
    active: local
```

- `application-dev.yml`

```
spring:
  jpa:
    database: mysql
    database-platform: org.hibernate.dialect.MySQLDialect
    show-sql: true
    hibernate.ddl-auto: update
    open-in-view: false
    properties:
      hibernate:
        format_sql=true:
        use_sql_comments=true:
```

- `application-local.yml`

```
spring:
  jpa:
    database: mysql
    database-platform: org.hibernate.dialect.MySQLDialect
    show-sql: true
    hibernate.ddl-auto: update
    open-in-view: false
    properties:
      hibernate:
        format_sql=true:
        use_sql_comments=true:
```

- `application-prod.yml`

```
spring:
  jpa:
    database: mysql
    database-platform: org.hibernate.dialect.MySQLDialect
    show-sql: true
    hibernate.ddl-auto: none
    open-in-view: false
```

## React

- `.env`

```
REACT_APP_API_URL=http://api.pennypal.site/api
REACT_APP_WS_URL=http://api.pennypal.site/ws
```

## 2-2. 빌드

### Frontend

1. Node.js 설치
2. yarn 설치

```
npm install -g yarn
```

2. cd Frontend

3. node\_modules 설치

```
yarn install
```

4. 배포 환경 실행

```
yarn prod
```

## Backend

- build.gradle 실행

## 2-3. 외부 서비스 이용 방법

- SSAFY 금융 API
- 공공데이터 포털 OpenAPI
  - 공공데이터 포털 Open API 홈페이지에서 이용 신청 및 승인 과정을 거쳐 API key 를 얻는다
  - .env 파일에 API\_KEY 를 등록한다.

## 3. 배포

- Linux 기준

1. git 설치

```
sudo apt-get install git
```

```
sudo apt install git
```

```
# 버전확인
```

```
git --version
```

## 2. 프로젝트 clone

## 3. docker 설치 - 공식문서 참조

```
# Add Docker's official GPG key:
sudo apt-get update
sudo apt-get install ca-certificates curl
sudo install -m 0755 -d /etc/apt/keyrings
sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg
sudo chmod a+r /etc/apt/keyrings/docker.asc

# Add the repository to Apt sources:
echo \
  "deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/
  $(. /etc/os-release && echo "$VERSION_CODENAME") stable" |
  sudo tee /etc/apt/sources.list.d/docker.list > /dev/null
sudo apt-get update
```

## 3-1. 도커 이미지

### Frontend

1. 프론트 루트디렉토리로 이동
2. `docker build -t frontend:latest .`

### Backend

1. 백엔드 루트 디렉토리로 이동
2. `docker build -t backend:latest .`

## docker-compose.yml

```
version: "3.8"
services:
  app:
    image: "jc21/nginx-proxy-manager:latest"
    restart: unless-stopped
    ports:
```

```

    - "80:80"
    - "60081:81"
    - "443:443"
environment:
  # Mysql/Maria connection parameters:
  DB_MYSQL_HOST: "db"
  DB_MYSQL_PORT: 3306
  DB_MYSQL_USER: "npm"
  DB_MYSQL_PASSWORD: "npm"
  DB_MYSQL_NAME: "npm"
  # Uncomment this if IPv6 is not enabled on your host
  # DISABLE_IPV6: 'true'
volumes:
  - ./data:/data
  - ./letsencrypt:/etc/letsencrypt
depends_on:
  - db

db:
  image: "jc21/mariadb-aria:latest"
  restart: unless-stopped
  environment:
    MYSQL_ROOT_PASSWORD: "npm"
    MYSQL_DATABASE: "npm"
    MYSQL_USER: "npm"
    MYSQL_PASSWORD: "npm"
    MARIADB_AUTO_UPGRADE: "1"
  volumes:
    - ./data/mysql:/var/lib/mysql

frontend:
  image: mine0702/pennypal-frontend
  restart: unless-stopped
  container_name: app_frontend
  expose:
    - "3000"
  stdin_open: true
  mem_limit: 1024m

```



```

backend:
  image: mine0702/pennypal-backend
  restart: unless-stopped
  container_name: app_backend
  stdin_open: true
  expose:
    - "8080" # 백엔드 서비스가 사용하는 포트, 외부에 노출하지 않음
  mem_limit: 1024m

bigdata:
  image: mine0702/pennypal-flask
  restart: unless-stopped
  container_name: app_bigdata
  stdin_open: true
  expose:
    - "5000" # 백엔드 서비스가 사용하는 포트, 외부에 노출하지 않음
  mem_limit: 1024m

node:
  image: mine0702/pennypal-node
  restart: unless-stopped
  container_name: app_node
  stdin_open: true
  expose:
    - "9000" # 백엔드 서비스가 사용하는 포트, 외부에 노출하지 않음
  mem_limit: 1024m

```

## Front End Docker File

```

FROM node:alpine as build-stage

WORKDIR /app

COPY package*.json ./

```

```
RUN npm install

COPY . .

RUN npm run build

FROM nginx:alpine as production-stage

COPY ./nginx/default.conf /etc/nginx/conf.d/default.conf

COPY --from=build-stage /app/dist /usr/share/nginx/html
```

## Front End nginx default.config

```
server{
    listen 3000;

    location / {

        root /usr/share/nginx/html;

        index index.html index.htm;

        try_files $uri $uri/ /index.html;

    }
}
```

## Back End Docker File

```
FROM openjdk:17

ARG JAR_FILE=build/libs/*.jar

COPY ${JAR_FILE} app.jar
```

```

ENV SPRING_PROFILES_ACTIVE=prod \
    MYSQL_DATASOURCE_URL="jdbc:mysql://3.35.170.191:3307/penn"
    MYSQL_DATASOURCE_USERNAME="root" \
    MYSQL_DATASOURCE_PASSWORD="108" \
    SSAFY_BANK_API_KEY="240b64cd4d0e4056837b473405ecc8d1" \
    SSAFY_BANK_API_SERVER="https://finapi.p.ssafy.io/ssafy/ap

ENTRYPOINT ["java", "-jar", "/app.jar"]

```

## Flask Docker File

```

# Anaconda 이미지를 기본으로 사용
FROM continuumio/anaconda3:latest

# base.yaml을 사용하여 가상 환경을 생성하고 활성화
COPY base.yaml /opt/base.yaml

RUN conda env update -f /opt/base.yaml

WORKDIR /app

COPY . .

EXPOSE 5000

ENV FLASK_APP=app.py

ENV FLASK_RUN_HOST=0.0.0.0

CMD ["flask", "run"]

```

## Flask base.yaml

```

name: base
channels:
  - defaults
dependencies:
  - _anaconda_depends=2024.02=py311_mkl_1
  - _libgcc_mutex=0.1=main
  - _openmp_mutex=5.1=1_gnu
  - abseil-cpp=20211102.0=hd4dd3e8_0
  - aiobotocore=2.7.0=py311h06a4308_0
  - aiohttp=3.9.3=py311h5eee18b_0
  - aioitertools=0.7.1=pyhd3eb1b0_0
  - aiosignal=1.2.0=pyhd3eb1b0_0
  - alabaster=0.7.12=pyhd3eb1b0_0
  - altair=5.0.1=py311h06a4308_0
  - anaconda-anon-usage=0.4.3=py311hfc0e8ea_100
  - anaconda-catalogs=0.2.0=py311h06a4308_0
  - anaconda-client=1.12.3=py311h06a4308_0
  - anaconda-cloud-auth=0.1.4=py311h06a4308_0
  - anaconda-navigator=2.5.2=py311h06a4308_0
  - anaconda-project=0.11.1=py311h06a4308_0
  - anyio=4.2.0=py311h06a4308_0
  - aom=3.6.0=h6a678d5_0
  - appdirs=1.4.4=pyhd3eb1b0_0
  - archspec=0.2.3=pyhd3eb1b0_0
  - argon2-cffi=21.3.0=pyhd3eb1b0_0
  - argon2-cffi-bindings=21.2.0=py311h5eee18b_0
  - arrow=1.2.3=py311h06a4308_1
  - arrow-cpp=14.0.2=h374c478_1
  - astroid=2.14.2=py311h06a4308_0
  - astropy=5.3.4=py311hf4808d0_0
  - asttokens=2.0.5=pyhd3eb1b0_0
  - async-lru=2.0.4=py311h06a4308_0
  - atomicwrites=1.4.0=py_0
  - attrs=23.1.0=py311h06a4308_0
  - automat=20.2.0=py_0
  - autopep8=1.6.0=pyhd3eb1b0_1
  - aws-c-auth=0.6.19=h5eee18b_0
  - aws-c-cal=0.5.20=hdbd6064_0

```

- aws-c-common=0.8.5=h5eee18b\_0
- aws-c-compression=0.2.16=h5eee18b\_0
- aws-c-event-stream=0.2.15=h6a678d5\_0
- aws-c-http=0.6.25=h5eee18b\_0
- aws-c-io=0.13.10=h5eee18b\_0
- aws-c-mqtt=0.7.13=h5eee18b\_0
- aws-c-s3=0.1.51=hdbd6064\_0
- aws-c-sdkutils=0.1.6=h5eee18b\_0
- aws-checksums=0.1.13=h5eee18b\_0
- aws-crt-cpp=0.18.16=h6a678d5\_0
- aws-sdk-cpp=1.10.55=h721c034\_0
- babel=2.11.0=py311h06a4308\_0
- backports=1.1=pyhd3eb1b0\_0
- backports.funcutils\_lru\_cache=1.6.4=pyhd3eb1b0\_0
- backports.tempfile=1.0=pyhd3eb1b0\_1
- backports.weakref=1.0.post1=py\_1
- bcrypt=3.2.0=py311h5eee18b\_1
- beautifulsoup4=4.12.2=py311h06a4308\_0
- binaryornot=0.4.4=pyhd3eb1b0\_1
- black=23.11.0=py311h06a4308\_0
- blas=1.0=mkl
- bleach=4.1.0=pyhd3eb1b0\_0
- blinker=1.6.2=py311h06a4308\_0
- blosc=1.21.3=h6a678d5\_0
- bokeh=3.3.4=py311h92b7b1e\_0
- boltons=23.0.0=py311h06a4308\_0
- boost-cpp=1.82.0=hdb19cb5\_2
- boto3=1.31.64=py311h06a4308\_0
- bottleneck=1.3.7=py311hf4808d0\_0
- brotli=1.0.9=h5eee18b\_7
- brotli-bin=1.0.9=h5eee18b\_7
- brotli-python=1.0.9=py311h6a678d5\_7
- brunslis=0.1=h2531618\_0
- bzip2=1.0.8=h7b6447c\_0
- c-ares=1.19.1=h5eee18b\_0
- c-blosc2=2.12.0=h80c7b02\_0
- ca-certificates=2024.3.11=h06a4308\_0
- cachetools=4.2.2=pyhd3eb1b0\_0

- certifi=2024.2.2=py311h06a4308\_0
- cffi=1.16.0=py311h5eee18b\_0
- cfitsio=3.470=h5893167\_7
- chardet=4.0.0=py311h06a4308\_1003
- charls=2.2.0=h2531618\_0
- charset-normalizer=2.0.4=pyhd3eb1b0\_0
- click=8.1.7=py311h06a4308\_0
- cloudpickle=2.2.1=py311h06a4308\_0
- clyent=1.2.2=py311h06a4308\_1
- colorama=0.4.6=py311h06a4308\_0
- colorcet=3.0.1=py311h06a4308\_0
- comm=0.1.2=py311h06a4308\_0
- conda=24.3.0=py311h06a4308\_0
- conda-build=24.1.2=py311h06a4308\_0
- conda-content-trust=0.2.0=py311h06a4308\_0
- conda-index=0.4.0=pyhd3eb1b0\_0
- conda-libmamba-solver=24.1.0=pyhd3eb1b0\_0
- conda-pack=0.6.0=pyhd3eb1b0\_0
- conda-package-handling=2.2.0=py311h06a4308\_0
- conda-package-streaming=0.9.0=py311h06a4308\_0
- conda-repo-cli=1.0.75=py311h06a4308\_0
- conda-token=0.4.0=pyhd3eb1b0\_0
- conda-verify=3.4.2=py\_1
- constantly=23.10.4=py311h06a4308\_0
- contourpy=1.2.0=py311hdb19cb5\_0
- cookiecutter=2.5.0=py311h06a4308\_0
- cryptography=42.0.2=py311hdda0065\_0
- cssselect=1.2.0=py311h06a4308\_0
- curl=8.5.0=hdbd6064\_0
- cycler=0.11.0=pyhd3eb1b0\_0
- cyrus-sasl=2.1.28=h52b45da\_1
- cytoolz=0.12.2=py311h5eee18b\_0
- dask=2023.11.0=py311h06a4308\_0
- dask-core=2023.11.0=py311h06a4308\_0
- datashader=0.16.0=py311h06a4308\_0
- dav1d=1.2.1=h5eee18b\_0
- dbus=1.13.18=hb2f20db\_0
- debugpy=1.6.7=py311h6a678d5\_0

- decorator=5.1.1=pyhd3eb1b0\_0
- defusedxml=0.7.1=pyhd3eb1b0\_0
- diff-match-patch=20200713=pyhd3eb1b0\_0
- dill=0.3.7=py311h06a4308\_0
- distributed=2023.11.0=py311h06a4308\_0
- distro=1.8.0=py311h06a4308\_0
- docstring-to-markdown=0.11=py311h06a4308\_0
- docutils=0.18.1=py311h06a4308\_3
- entrypoints=0.4=py311h06a4308\_0
- et\_xmlfile=1.1.0=py311h06a4308\_0
- executing=0.8.3=pyhd3eb1b0\_0
- expat=2.5.0=h6a678d5\_0
- filelock=3.13.1=py311h06a4308\_0
- flake8=6.0.0=py311h06a4308\_0
- flask=2.2.5=py311h06a4308\_0
- flask\_cors=3.0.10=pyhd3eb1b0\_0
- fmt=9.1.0=hdb19cb5\_0
- fontconfig=2.14.1=h4c34cd2\_2
- fonttools=4.25.0=pyhd3eb1b0\_0
- freetype=2.12.1=h4a9f257\_0
- frozenlist=1.4.0=py311h5eee18b\_0
- fsspec=2023.10.0=py311h06a4308\_0
- future=0.18.3=py311h06a4308\_0
- gensim=4.3.0=py311hba01205\_1
- gflags=2.2.2=h6a678d5\_1
- giflib=5.2.1=h5eee18b\_3
- gitdb=4.0.7=pyhd3eb1b0\_0
- gitpython=3.1.37=py311h06a4308\_0
- glib=2.78.4=h6a678d5\_0
- glib-tools=2.78.4=h6a678d5\_0
- glog=0.5.0=h6a678d5\_1
- gmp=6.2.1=h295c915\_3
- gmpy2=2.1.2=py311hc9b5ff0\_0
- greenlet=3.0.1=py311h6a678d5\_0
- grpc-cpp=1.48.2=he1ff14a\_1
- gst-plugins-base=1.14.1=h6a678d5\_1
- gstreamer=1.14.1=h5eee18b\_1
- h5py=3.9.0=py311hdd6beaf\_0

- hdf5=1.12.1=h2b7332f\_3
- heapdict=1.0.1=pyhd3eb1b0\_0
- holoviews=1.18.3=py311h06a4308\_0
- hvplot=0.9.2=py311h06a4308\_0
- hyperlink=21.0.0=pyhd3eb1b0\_0
- icu=73.1=h6a678d5\_0
- idna=3.4=py311h06a4308\_0
- imagecodecs=2023.1.23=py311h8105a5c\_0
- imageio=2.33.1=py311h06a4308\_0
- imagesize=1.4.1=py311h06a4308\_0
- imbalanced-learn=0.11.0=py311h06a4308\_1
- importlib-metadata=7.0.1=py311h06a4308\_0
- importlib\_metadata=7.0.1=hd3eb1b0\_0
- incremental=22.10.0=pyhd3eb1b0\_0
- inflection=0.5.1=py311h06a4308\_0
- iniconfig=1.1.1=pyhd3eb1b0\_0
- intake=0.6.8=py311h06a4308\_0
- intel-openmp=2023.1.0=hdb19cb5\_46306
- intervaltree=3.1.0=pyhd3eb1b0\_0
- ipykernel=6.28.0=py311h06a4308\_0
- ipython=8.20.0=py311h06a4308\_0
- ipython\_genutils=0.2.0=pyhd3eb1b0\_1
- ipywidgets=7.6.5=pyhd3eb1b0\_2
- isort=5.9.3=pyhd3eb1b0\_0
- itemadapter=0.3.0=pyhd3eb1b0\_0
- itemloaders=1.1.0=py311h06a4308\_0
- itsdangerous=2.0.1=pyhd3eb1b0\_0
- jaraco.classes=3.2.1=pyhd3eb1b0\_0
- jedi=0.18.1=py311h06a4308\_1
- jeepney=0.7.1=pyhd3eb1b0\_0
- jellyfish=1.0.1=py311hb02cf49\_0
- jinja2=3.1.3=py311h06a4308\_0
- jmespath=1.0.1=py311h06a4308\_0
- joblib=1.2.0=py311h06a4308\_0
- jpeg=9e=h5eee18b\_1
- jq=1.6=h27cfd23\_1000
- json5=0.9.6=pyhd3eb1b0\_0
- jsonpatch=1.32=pyhd3eb1b0\_0



- jsonpointer=2.1=pyhd3eb1b0\_0
- jsonschema=4.19.2=py311h06a4308\_0
- jsonschema-specifications=2023.7.1=py311h06a4308\_0
- jupyter=1.0.0=py311h06a4308\_9
- jupyter-lsp=2.2.0=py311h06a4308\_0
- jupyter\_client=8.6.0=py311h06a4308\_0
- jupyter\_console=6.6.3=py311h06a4308\_0
- jupyter\_core=5.5.0=py311h06a4308\_0
- jupyter\_events=0.8.0=py311h06a4308\_0
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- pip:
  - mysql-connector-python==8.3.0
prefix: /home/mine/anaconda3

```

## Node Docker File

```

# Node.js 공식 이미지를 기반으로 한다.
FROM node:20

# 환경변수 설정
ENV SERVICE_URL=http://apis.data.go.kr/1160100/service/GetSto

```

```
SERVICE_KEY=fpeFLcbNpgVARQY6mse0o%2FFH%2FJMR0Hsnq1FaW50m0.  
MYSQL_HOST=3.35.170.191 \  
MYSQL_PORT=3307 \  
MYSQL_DATABASE=penny_pal \  
MYSQL_USER=root \  
MYSQL_PASSWORD=108  
  
# 앱 디렉터리 생성  
WORKDIR /usr/src/app  
  
# 앱 의존성 설치  
# package.json과 package-lock.json(존재한다면)을 모두 복사  
COPY package*.json ./  
  
# 패키지 설치  
RUN npm install  
  
# 앱 소스 추가  
COPY . .  
  
# 앱이 사용할 포트를 설정 (Node 앱 설정에 따라 변경)  
EXPOSE 9000  
  
# 서비스를 실행  
CMD [ "npm", "start" ]
```

이후 `docker compose up -d` 명령어로 실행