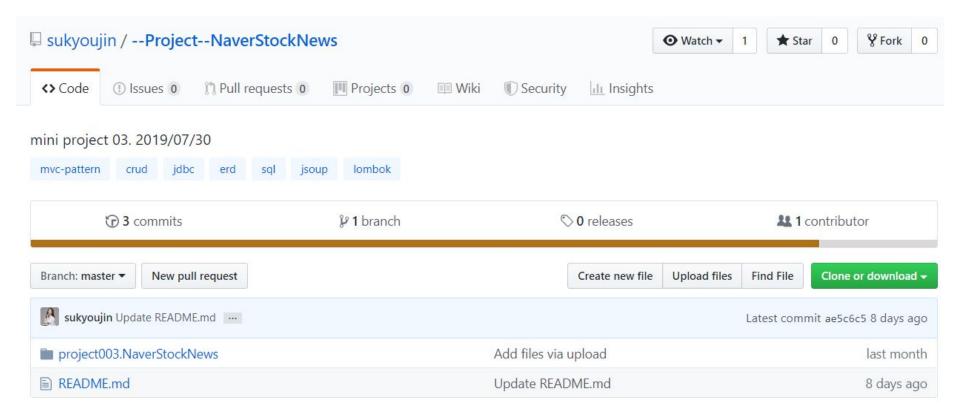
물고 JPA로 가조



김경원 남세영 변영인 작유 종

우리는 2달 전보다 나아졌...나요? (JDBC -> JPA)



시연

KEY LEARNING

1. BigDecimal / precision

```
@Data
@Entity
public class Stock {
   @Id
   @Column(length = 30, nullable = false)
    private String name;
    @Column(precision = 7, nullable = false)
    private BigDecimal price;
   @Column(length = 20)
                                   cf. scale
    private String netUpDown;
                                   (소수점 자리)
   @Column(precision = 6)
                                   ex. scale = 2
    private BigDecimal net;
    @Column(length = 20)
    private String upDown;
    @Column(precision = 8, nullable = false)
    private BigDecimal marketCap;
```

```
tmp = new Stock();
tmp.setName(getStringFromEl(el, "td:nth-c
tmp.setPrice(new BigDecimal getIntFromEl(
tmp.setNetUpDown(getStringFromEl(el, "td:
tmp.setNet(new BigDecimal(getIntFromEl(el
tmp.setUpDown(getStringFromEl(el, "td:nth
tmp.setMarketCap(new BigDecimal(getIntFro
```

2. JPQL

두 가지 방식의 기능적 차이는 없으므로, 편한대로 사용하시면 됩니다.

단, 동적으로 추가되는 데이터는 꼭 바인딩을 해서 사용해야 합니다.

```
String jpql = "SELECT b FROM Book b WHERE title = " + param1;
```

이런 식으로 데이터를 직접 바인딩 할 경우, SQL Injection의 위험이 있으니 꼭 setParamet er() 메서드를 호출하여 동적으로 데이터를 바인딩을 해야 합니다.

출처: https://victorydntmd.tistory.com/205

3. DBUtil

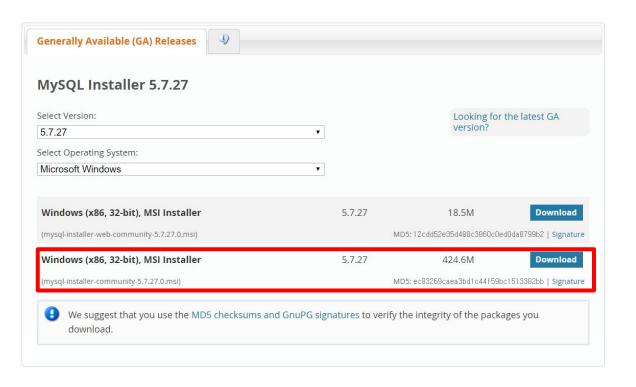
```
public class DBUtil {
    private static EntityManagerFactory factory = null;
    private DBUtil() {};
    public static EntityManagerFactory getFactory() {
       return factory;
    public static void runFactory() {
       factory = Persistence.createEntityManagerFactory("encore");
    public static void closeFactory() {
       factory.close();
```

3. DBUtil

```
EntityManagerFactory factory = DBUtil.getFactory();
  Factory 실행
                            EntityManager em = factory.createEntityManager();
DBUtil.runFactory();
                            EntityTransaction tx = em.getTransaction();
    // 크롤링
    controller.crawling();
    // 유저 전체 검색
  System-out.println("== 전체 검색==");
   controller.getNewsUserList();
} finally {
      Factory 반환
   DBUtil.closeFactory();
```



<설치> https://dev.mysql.com/downloads/windows/installer/5.7.html



```
<설정> pom.xml
   <dependency>
       <groupId>mysql
       <artifactId>mysql-connector-java</artifactId>
       <version>5.1.48</version>
   </dependency>
     persistance.xml
cproperty name="javax.persistence.jdbc.driver" value="com.mysql.jdbc.Driver" />
property name="javax.persistence.jdbc.url"
value="jdbc:mysql://localhost:3306/stock?useUnicode=true&characterEncoding=utf8
cproperty name="javax.persistente.jdbq.user" value=[root" />
cproperty name="javax.persisterce.jdbt.password" value="root" //>
cproperty name="hibernate.dialect" value="org.hibernate.dialect.MySQL5Dialect" />
                                database name
                      port num
```

encoding 설정



- Database 생성 및 인코딩 확인
 - C:\Program Files\MySQL\MySQL Server 5.7\bin + cmd
 - o mysql -u *ID* -p
 - show databases
 - create database DB
 - o use *DB*
 - show variables like 'c%';

```
nvsal> show variables like 'c%';
 Variable_name
                            Value
character_set_client
                            euckr
character_set_connection
                            euckr
character_set_database
                            utf8
character_set_filesystem |
                            binary
character_set_results
                            euckr
                            utf8
character_set_server
character_set_system
                            utf8
character_sets_dir
                            C:#Program Files#MySQL#MySQL Server 5.7#share#charsets#
                            OFF
check_proxy_users
collation connection
                            euckr korean ci
collation_database
                            utf8_general_ci
                            utf8_general_ci
collation server
                            NO CHAIN
completion_type
                            AUTO
concurrent insert
connect timeout
core_file
                            OFF
```

- set session collation_connection=utf8_unicode_ci;
- set session character_set_database=utf8;

(이 외에도 latin이나 swedish 들어가 있는 건 다 수정!)

C:\ProgramData\MySQL\MySQL Server 5.7\my.ini

[mysql] no-beep

default-character-set=utf8

The default character set that will be used when a new schema or table is # created and no character set is defined

character-set-server=utf8





Front단을 구현할 시간이 없습니다!

5. TelegramBot BotFather (Telegram)



BotFather

I can help you create and manage Telegram bots. If you're new to the Bot API, please see the manual.

You can control me by sending these commands:

/newbot - create a new bot /mybots - edit your bots [beta]

Bot name



BotFather

Done! Congratulations on your new bot. You will find it at t.me/StockNewsAlarmBot You can now add a description, about section and profile picture for your bot, see /help for a list of commands. By the way, when you've finished creating your cool bot, ping our Bot Support if you want a better username for it. Just make sure the bot is fully operational pefore you do this.

Use this token to access the HTTP API:



Masfo

token

Keep your token **secure** and **store it safely**, it can be used by anyone to control your bot.

For a description of the Bot API, see this page:

https://core.telegram.org/bots/api

5. TelegramBot Java Code

참고: https://kosate.tistory.com/185

```
public class TelegramBot {
    public static void main(String[] args) {
        TelegramBotsApi api = new TelegramBotsApi();
        try {
             ApiContextInitializer.init();
             api.registerBot(new BotHandler());
        } catch (TelegramApiException e) {
             e.printStackTrace();
        }
    }
}
```

5. TelegramBot Java Code

참고: https://kosate.tistory.com/185

```
public class BotHandler extends TelegramLongPollingBot {
    public static StockNewsService service = StockNewsService.getInstance();
   @Override
   public String getBotUsername() {
        return "StockNewsAlarmBot";
   @Override
    public void onUpdateReceived(Update update) {
        if (update.hasMessage() && update.getMessage().hasText()) {
                                            token
    @Override
    public String getBotToken()
        return "8751
```

5. TelegramBot Java Code

<Telegram>

<Server>



영인

롯데케미칼



NaverStockNews

제목: LG화학·롯데케미칼·대한유화...석유화학株 '탐나네'

일자: 2019.09.22 15:48

https://finance.naver.com/item/news_read.nhn? article_id=0004212420&office_id=015&code=011170

Naver

네이버 금융

국제유가 상승 수혜주는?에쓰오일, 3분기 영업의 章자 전망SK이노베이션·GS도 好실적 예상글로벌 경기둔화로 인한 수요 위축 우려에 짓눌려 있던 국제 유가 흐름에 변화의 기운이 감지되고 있다. 사우디아라비아 아람코 생산설비에 대한 공격으로 원유공급에 차질이 예상되면서다.

12:34:52 PM

12:34:58 PM

롯데케미칼

9월 24, 2019 12:34:53 오후 org.hibernate.jpa.internal.util.LogHelp INFO: HHH000204: Processing PersistenceUnitInfo [name: encore]

9월 24, 2019 12:34:54 오후 org.hibernate.Version logVersion

INFO: HHH000412: Hibernate Core {5.4.3.Final}

9월 24, 2019 12:34:54 오후 org.hibernate.annotations.common.reflectINFO: HCANN000001: Hibernate Commons Annotations {5.1.0.Final} 9월 24, 2019 12:34:54 오후 org.hibernate.engine.jdbc.connections.i

WARN: HHH10001002: Using Hibernate built-in connection pool (no

9월 24, 2019 12:34:55 오후 org.hibernate.engine.jdbc.connections.i

Q&A

