

마이크로서비스 개발 준비

SK(주) C&C 유해식

학습 목표

- 마이크로서비스 구현을 위한 개발환경을 설정할 수 있다.
- 도메인 모델을 마이크로서비스로 구현하고 테스트 하는 방법을 이해할 수 있다.
- 여러 개의 마이크로서비스 간 동기/비동기 통신 기능을 구현할 수 있다.

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개발환경 구축

구분	버전	설명
JDK	1.8	자바 개발 도구 (Java Development Kit)
STS	3.9.4	이클립스 기반 스프링 애플리케이션 개발 도구 (Spring Tool Suite)
Lombok	1.18.4	자바 객체의 프로퍼티에 대한 Getter/Setter, 생성자 등을 자동생성해 주는 라이브러리
Maven	3.6.0	자바 기반 프로젝트의 라이프사이클 관리를 위한 빌드 도구

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JDK 설치



Oracle Java SE Subscription

#1 Development Platform

Develop secure, portable, high-performance applications for the widest range of computing platforms possible while boosting end-user productivity and dramatically reducing the cost of ownership of applications.

[Oracle Java Platform, Standard Edition →](#)

Java SE Development Kit 8u201		
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Thank you for accepting the Oracle Binary Code License Agreement for Java SE; you may now download this software.		
Product / File Description	File Size	Download
Linux ARM 32 Hard Float ABI	72.98 MB	jdk-8u201-linux-arm32-vfp-hflt.tar.gz
Linux ARM 64 Hard Float ABI	69.92 MB	jdk-8u201-linux-arm64-vfp-hflt.tar.gz
Linux x86	170.98 MB	jdk-8u201-linux-i586.rpm
Linux x86	185.77 MB	jdk-8u201-linux-i586.tar.gz
Linux x64	168.05 MB	jdk-8u201-linux-x64.rpm
Linux x64	182.93 MB	jdk-8u201-linux-x64.tar.gz
Mac OS X x64	245.92 MB	jdk-8u201-macosx-x64.dmg
Solaris SPARC 64-bit (SVR4 package)	125.33 MB	jdk-8u201-solaris-sparcv9.tar.z
Solaris SPARC 64-bit	88.31 MB	jdk-8u201-solaris-sparcv9.tar.gz
Solaris x64 (SVR4 package)	133.99 MB	jdk-8u201-solaris-x64.tar.z
Solaris x64	92.16 MB	jdk-8u201-solaris-x64.tar.gz
Windows x86	197.66 MB	jdk-8u201-windows-i586.exe
Windows x64	207.46 MB	jdk-8u201-windows-x64.exe

Java SE 8u201 / Java SE 8u202
Java SE 8u201 / Java SE 8u202 includes important bug fixes. Oracle strongly recommends that all Java SE 8 users upgrade to this release.
[Learn more »](#)

- [Installation Instructions](#)
- [Release Notes](#)
- [Oracle License](#)
- [Java SE Licensing Information User Manual](#)
Includes Third Party Licenses
- [Certified System Configurations](#)
- [Readme Files](#)
 - [JDK ReadMe](#)
 - [JRE ReadMe](#)

JDK

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Server JRE

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JRE

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Java SE Downloads

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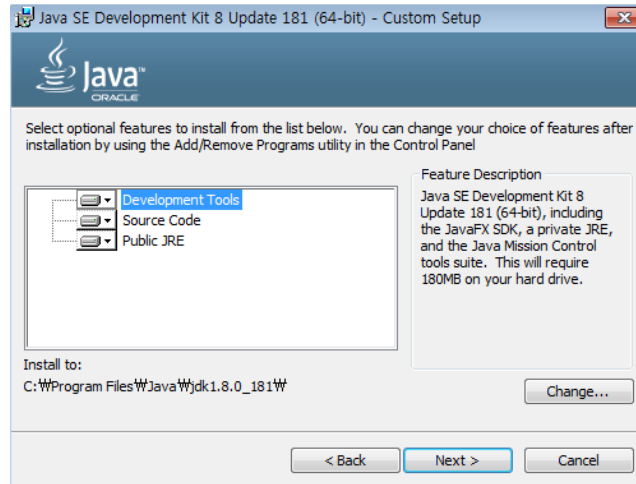
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Java Platform (JDK) 11

2

JDK 설치 (계속)

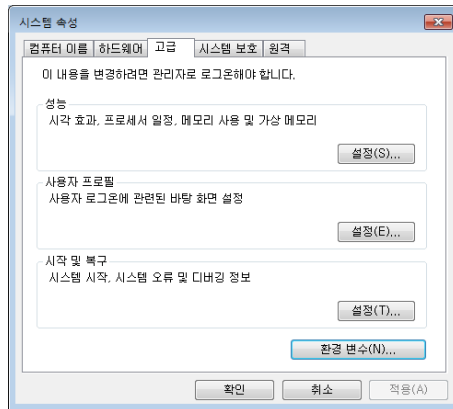
- 설치



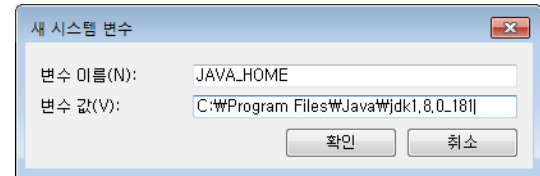
2

JDK 설치 (계속)

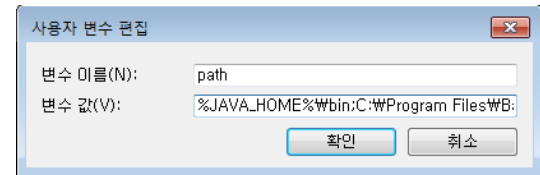
• 환경 변수 설정



JAVA_HOME 변수 설정 (JDK 경로)



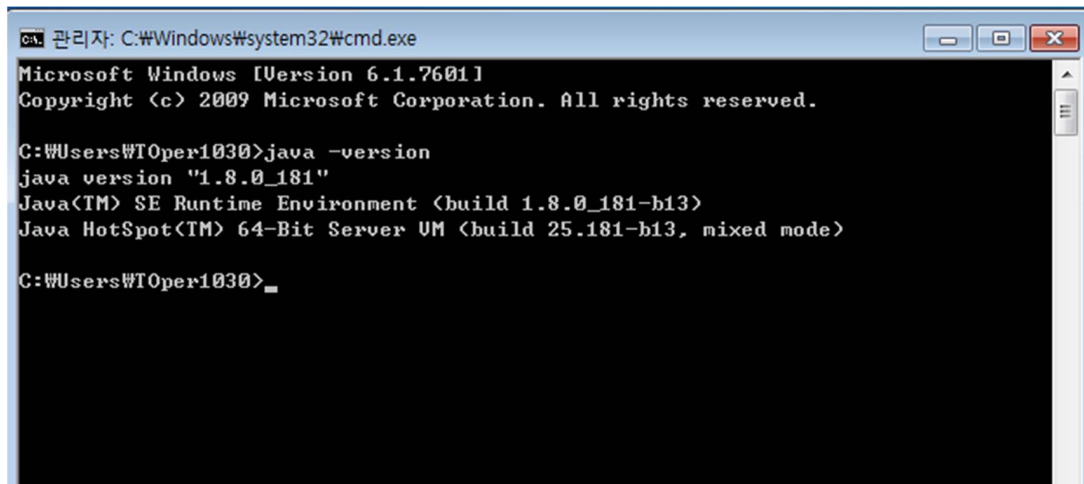
Path에 JAVA_HOME 설정



2

JDK 설치

- 설치 확인



```
C:\> 관리자: C:\Windows\system32\cmd.exe

Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

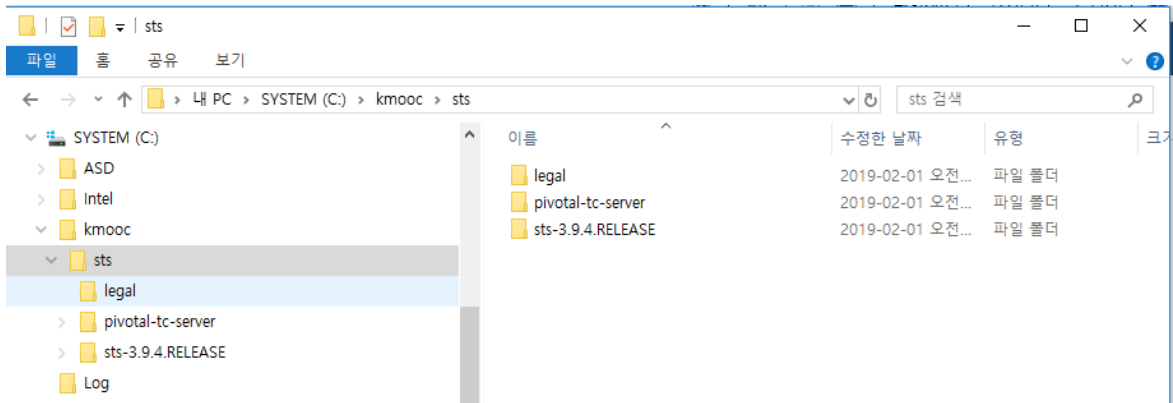
C:\Users\TOper1030>java -version
java version "1.8.0_181"
Java(TM) SE Runtime Environment (build 1.8.0_181-b13)
Java HotSpot(TM) 64-Bit Server VM (build 25.181-b13, mixed mode)

C:\Users\TOper1030>
```

3

STS 설치 및 Workspace 설정

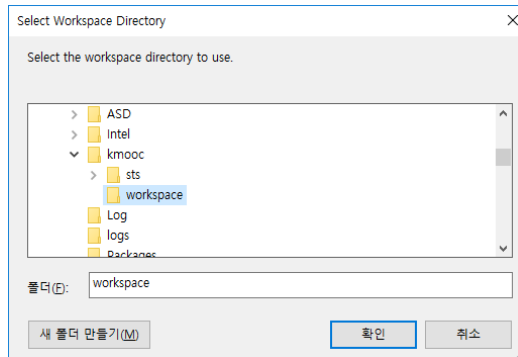
- 다운로드 : <https://spring.io/tools/sts/all>
- 압축풀기 : c:\Wkmooc\sts



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STS 설치 및 Workspace 설정

- STS 실행
- 작업 공간 설정 workspace

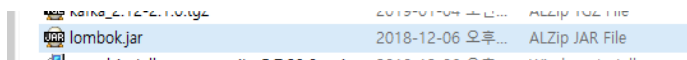
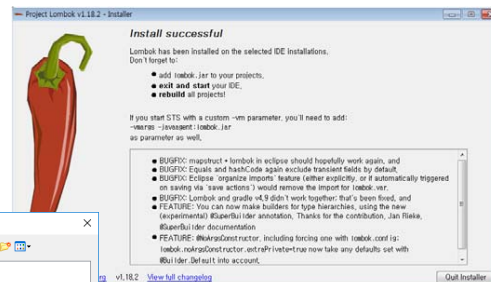
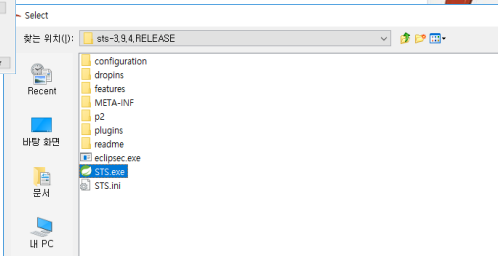


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Lombok 설치 및 설정

- 다운로드 projectlombok.org

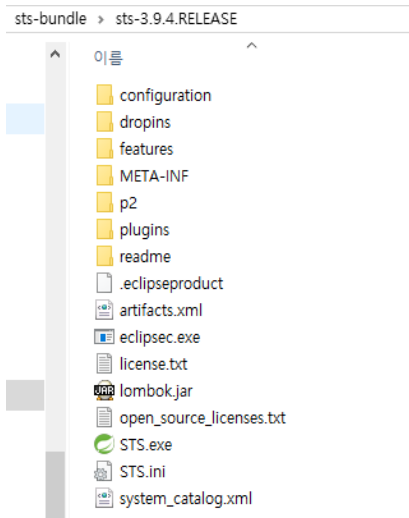
- 설치 및 설정



4

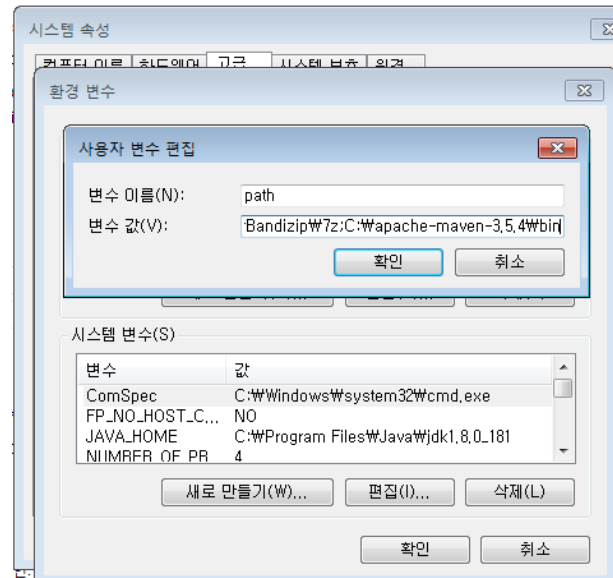
Lombok 설치 및 설정 (계속)

- 설치 확인



5 Maven 설치

- 다운로드 maven.apache.org
- 압축 해제
- 환경설정



5

Maven 설치 (계속)

- 설치확인

```
선택 관리자: 명령 프롬프트
Microsoft Windows [Version 10.0.16299.904]
(c) 2017 Microsoft Corporation. All rights reserved.

C:\Users\#08257>mvn -version
Apache Maven 3.6.0 (97c98ec64a1fdfee7767ce5fffb20918da4f719f3; 2018-10-25T03:41:47+09:00)
Maven home: D:\#cnaps\#apache-maven-3.6.0\bin\..
Java version: 1.8.0_191, vendor: Oracle Corporation, runtime: C:\#Program Files\Java\jdk1.8.0_191\jre
Default locale: ko_KR, platform encoding: MS949
OS name: "windows 10", version: "10.0", arch: "amd64", family: "windows"

C:\Users\#08257>_
```

workspace - shop-product/src/main/java/com/sk/kmooc/product/domain/model/Product.java - Spring Tool Suite

File Edit Source Refactor Navigate Search Project Run Window Help

Package Explorer

- shop-delivery [boot] [kmooc master ↑ 2]
- shop-product [boot] [kmooc master ↑ 2]
 - src/main/java
 - com.sk.kmooc
 - product
 - application.sp
 - domain
 - model
 - ColorType.java
 - Money.java
 - Product.java
 - ProductDescription.java
 - SizeType.java
 - repository
 - ProductRepository.java
 - service
 - ProductLogic.java
 - ProductService.java

Product.java

```
1 package com.sk.kmooc.product.domain.model;
2
3 import javax.persistence.Entity;
4
5 @NoArgsConstructor
6 @AllArgsConstructor
7 @Entity
8 @Data
9
10 public class Product {
11
12     @Id
13     @GeneratedValue(strategy = GenerationType.AUTO)
14     private Long id;
15
16     private String name;
17     private Money price;
18     private ProductDescription productDescription;
19
20 }
21
22
23
24
25
26
27
```

Outline

- com.sk.kmooc.product.domain.r
 - Product
 - Product()
 - Product(Long, String, Mone
 - getId() : Long
 - getName() : String
 - getPrice() : Money
 - getProductDescription() : Pr
 - setId(Long) : void
 - setName(String) : void
 - setPrice(Money) : void
 - setProductDescription(Prodi

Spring Explorer

- oms-example
- oms-servicedesk
- sampleMS
- shop-account
- shop-delivery
- shop-product
- shop-purchase
- shop-simple-account

Servers

Boot Dashboard

Type tags, projects, or working set names to match (ini

- local
 - [Install local cloud services](#)
 - oms-example
 - oms-servicedesk [devtools]

5 elements hidden by filter

shop-product - ProductApplication [Spring Boot App] C:\Program Files\Java\jdk1.8.0_191\bin\javaw.exe

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