시작하기

Maven 의존성

```xml
<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.xsd">

    <modelVersion>4.0.0</modelVersion>
    <parent>
        <groupId>org.springframework.boot</groupId>
        <artifactId>spring-boot-starter-parent</artifactId>
        <version>2.1.3.RELEASE</version>
        <relativePath/> <!-- lookup parent from repository -->
    </parent>
    <groupId>net.skhu</groupId>
    <artifactId>demo</artifactId>
    <version>0.0.1-SNAPSHOT</version>
    <packaging>war</packaging>
    <name>vote</name>
    <description>School System Voting</description>

    <properties>
        <java.version>1.8</java.version>
        <maven.compiler.source>${java.version}</maven.compiler.source>
        <maven.compiler.target>${java.version}</maven.compiler.target>
        <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
        <project.reporting.outputEncoding>UTF-8</project.reporting.outputEncoding>
        <security.version>5.0.6.RELEASE</security.version>
    </properties>

    <dependencies>

        <!-- add params -->
        <dependency>
            <groupId>org.junit.jupiter</groupId>
            <artifactId>junit-jupiter-params</artifactId>
            <version>5.4.0-M1</version>
            <scope>test</scope>
        </dependency>

        <!-- 개발용 -->
        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-devtools</artifactId>
            <scope>runtime</scope>
        </dependency>

        <dependency>
            <groupId>org.mybatis.spring.boot</groupId>
            <artifactId>mybatis-spring-boot-starter</artifactId>
            <version>1.3.2</version>
        </dependency>
```

```xml
<dependency>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-starter-web</artifactId>
</dependency>

<dependency>
    <groupId>javax.servlet</groupId>
    <artifactId>jstl</artifactId>
    <version>1.2</version>
</dependency>
<dependency>
    <groupId>org.apache.tomcat.embed</groupId>
    <artifactId>tomcat-embed-jasper</artifactId>
</dependency>

<dependency>
    <groupId>mysql</groupId>
    <artifactId>mysql-connector-java</artifactId>
    <scope>runtime</scope>
</dependency>
<dependency>
    <groupId>org.projectlombok</groupId>
    <artifactId>lombok</artifactId>
    <optional>true</optional>
</dependency>
<dependency>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-starter-tomcat</artifactId>
    <scope>provided</scope>
</dependency>
<dependency>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-starter-test</artifactId>
    <exclusions>
        <exclusion>
            <groupId>junit</groupId>
            <artifactId>junit</artifactId>
        </exclusion>
    </exclusions>
    <scope>test</scope>
</dependency>

<!-- Provide JUnit 5 API -->
<dependency>
    <groupId>org.junit.jupiter</groupId>
    <artifactId>junit-jupiter-api</artifactId>
    <scope>test</scope>
</dependency>
<!-- and the engine for surefire and failsafe -->
<dependency>
    <groupId>org.junit.jupiter</groupId>
    <artifactId>junit-jupiter-engine</artifactId>
    <scope>test</scope>
</dependency>
<dependency>
    <groupId>org.junit.vintage</groupId>
    <artifactId>junit-vintage-engine</artifactId>
    <scope>test</scope>
</dependency>
<dependency>
    <groupId>org.mockito</groupId>
```

```xml
        <artifactId>mockito-junit-jupiter</artifactId>
        <scope>test</scope>
</dependency>


<!-- AWS -->
<dependency>
        <groupId>org.springframework.cloud</groupId>
        <artifactId>spring-cloud-starter-aws</artifactId>
        <version>2.0.1.RELEASE</version>
</dependency>

<dependency>
        <groupId>org.springframework.cloud</groupId>
        <artifactId>spring-cloud-aws-context</artifactId>
        <version>1.2.1.RELEASE</version>
</dependency>
<dependency>
        <groupId>org.springframework.cloud</groupId>
        <artifactId>spring-cloud-aws-autoconfigure</artifactId>
        <version>1.2.1.RELEASE</version>
</dependency>

<dependency>
        <groupId>org.testng</groupId>
        <artifactId>testng</artifactId>
        <version>RELEASE</version>
        <scope>test</scope>
</dependency>




<!-- spring security 확장 태그 라이브러리 -->
<dependency>
        <groupId>org.springframework.security</groupId>
        <artifactId>spring-security-taglibs</artifactId>
        <version>${security.version}</version>
</dependency>

<!-- java mail -->
<dependency>
        <groupId>javax.mail</groupId>
        <artifactId>mail</artifactId>
        <version>1.4.7</version>
</dependency>

<dependency>
        <groupId>org.springframework</groupId>
        <artifactId>spring-context-support</artifactId>
        <version>3.1.1.RELEASE</version>
</dependency>

<!--Multipart File Up&Download -->
<dependency>
        <groupId>org.apache.commons</groupId>
        <artifactId>commons-lang3</artifactId>
        <version>3.0</version>
</dependency>

<dependency>
```

```xml
            <groupId>org.apache.commons</groupId>
            <artifactId>commons-io</artifactId>
            <version>1.3.2</version>
        </dependency>

        <dependency>
            <groupId>com.amazonaws</groupId>
            <artifactId>aws-java-sdk</artifactId>
            <version>1.11.388</version>
        </dependency>
        <dependency>
            <groupId>commons-fileupload</groupId>
            <artifactId>commons-fileupload</artifactId>
            <version>1.4</version>
        </dependency>


        <dependency>
            <groupId>org.apache.httpcomponents</groupId>
            <artifactId>httpclient</artifactId>
            <version>4.5.2</version>
            <scope>runtime</scope>
        </dependency>

        <!-- aws-java-sdk -->
        <dependency>
            <groupId>com.amazonaws</groupId>
            <artifactId>aws-java-sdk</artifactId>
            <version>1.11.106</version>
        </dependency>
        <!-- AOP -->
        <dependency>
            <groupId>org.aspectj</groupId>
            <artifactId>aspectjweaver</artifactId>
            <version>1.8.11</version>
        </dependency>

        <!-- JWT -->
        <dependency>
            <groupId>com.auth0</groupId>
            <artifactId>java-jwt</artifactId>
            <version>3.3.0</version>
        </dependency>

        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-actuator</artifactId>
        </dependency>

    </dependencies>

    <build>
        <plugins>
            <plugin>
                <groupId>org.springframework.boot</groupId>
                <artifactId>spring-boot-maven-plugin</artifactId>
            </plugin>
        </plugins>

    </build>
```

```
</project>
```

실행 하기

Window 10 환경 기준

- 8080 포트 사용

- Jdk8과 maven 설치

- JAVA_HOME 환경변수 설정

- Path에 maven 환경 변수 설정

- 톰캣을 이용해 서버 배포

- Application.yml 파일 필요

- mvn spring-boot:run 으로 실행

사용된 도구들

- Spring-boot

- Maven

- Tomcat

- Mysql

- IntelliJ IDEA

- AWS EC2

- AWS RDS

- AWS S3