Spring Boot集成MyBatis

1.整合Durid数据源

1、引入Jar包

```

<dependencies>
    <dependency>
        <groupId>org.springframework.boot</groupId>
        <artifactId>spring-boot-starter-jdbc</artifactId>
    </dependency>
    <dependency>
        <groupId>org.springframework.boot</groupId>
        <artifactId>spring-boot-starter-web</artifactId>
    </dependency>
    <!--mybatis的场景启动器
    因为MyBatis它是Spring data jpa
    <dependency>
        <groupId>org.mybatis.spring.boot</groupId>
        <artifactId>mybatis-spring-boot-starter</artifactId>
        <version>2.1.4</version>
    </dependency>
    -->
    <dependency>
        <groupId>com.alibaba</groupId>
        <artifactId>druid</artifactId>
        <version>1.2.3</version>
    </dependency>

```

```
    <dependency>
        <groupId>mysql</groupId>
        <artifactId>mysql-connector-java</artifactId>
        <scope>runtime</scope>
    </dependency>
    <dependency>
        <groupId>org.springframework.boot</groupId>
        <artifactId>spring-boot-starter-test</artifactId>
        <scope>test</scope>
    </dependency>
</dependencies>
```

2.application.yml配置

```
#数据源
spring:
  datasource:
    username: root
    password: 123456
    url: jdbc:mysql://localhost:3306/springboot_mybatis?characterEncoding=utf8&useSSL=fa
    driver-class-name: com.mysql.cj.jdbc.Driver
    type: com.alibaba.druid.pool.DruidDataSource

    #   数据源其他配置
    initialSize: 5
    minIdle: 5
    maxActive: 20
    maxWait: 60000
    timeBetweenEvictionRunsMillis: 60000
    minEvictableIdleTimeMillis: 300000
    validationQuery: SELECT 1 FROM DUAL
    testWhileIdle: true
    testOnBorrow: false
    testOnReturn: false
    poolPreparedStatements: true
    #   配置监控统计拦截的filters，去掉后监控界面sql无法统计，'wall'用于防火墙
    filters: stat,wall
    maxPoolPreparedStatementPerConnectionSize: 20
```

```
    useGlobalDataSourceStat: true
```

```
    connectionProperties: druid.stat.mergeSql=true;druid.stat.slowSqlMillis=500
    schema: classpath:sql/mybatis.sql
    initialization-mode: ALWAYS
```

3.读取配置类DruidConfig

```
/**
 *  数据源配置类
 */
@Configuration
public class DruidConfig {
    // 将所有前缀为spring.datasource下的配置项都加载到DataSource中
    @ConfigurationProperties(prefix = "spring.datasource")
    @Bean
    public DataSource druidDataSource() {
        return new DruidDataSource();
    }

    @Bean
    public ServletRegistrationBean statViewServlet() {
        ServletRegistrationBean servletRegistrationBean = new ServletRegistrationBean(new
        // 添加IP白名单
        servletRegistrationBean.addInitParameter("allow", "127.0.0.1");
        // 添加IP黑名单，当白名单和黑名单重复时，黑名单优先级更高
        servletRegistrationBean.addInitParameter("deny", "127.0.0.1");
        // 添加控制台管理用户
        servletRegistrationBean.addInitParameter("loginUsername", "admin");
        servletRegistrationBean.addInitParameter("loginPassword", "123456");
        // 是否能够重置数据
        servletRegistrationBean.addInitParameter("resetEnable", "false");
        return servletRegistrationBean;
    }

    /**
     * 配置服务过滤器
     *
     * @return 返回过滤器配置对象
     */
    @Bean
    public FilterRegistrationBean statFilter() {
```

```
        FilterRegistrationBean filterRegistrationBean = new FilterRegistrationBean(new W
        // 添加过滤规则
        filterRegistrationBean.addUrlPatterns("/*");
        // 忽略过滤格式
        filterRegistrationBean.addInitParameter("exclusions", "*.js,*.gif,*.jpg,*.png,*.
        return filterRegistrationBean;
    }
}
```

其实没有必要一个个手动去配置， druid 启动starter

```
<dependency>
    <groupId>com.alibaba</groupId>
    <artifactId>druid-spring-boot-starter</artifactId>
    <version>1.2.3</version>
</dependency>
```

druid 自动配置类

```

@Configuration
@ConditionalOnClass(DruidDataSource.class)
@AutoConfigureBefore(DataSourceAutoConfiguration.class)
@EnableConfigurationProperties({DruidStatProperties.class, DataSourceProperties.class})
@Import({DruidSpringAopConfiguration.class,
    DruidStatViewServletConfiguration.class,
    DruidWebStatFilterConfiguration.class,
    DruidFilterConfiguration.class})
public class DruidDataSourceAutoConfigure {

    private static final Logger LOGGER = LoggerFactory.getLogger(DruidDataSourceAutoConf

    @Bean(initMethod = "init")
    @ConditionalOnMissingBean
    public DataSource dataSource() {
        LOGGER.info("Init DruidDataSource");
        return new DruidDataSourceWrapper();
    }
```

```
}
```

2.整合MyBatis

2.1生成MyBatis代码:

pom.xml

```
  <!-- Mybatis-Generator插件，自动生成代码 -->
        <plugin>
            <groupId>org.mybatis.generator</groupId>
            <artifactId>mybatis-generator-maven-plugin</artifactId>
            <version>1.3.5</version>
            <configuration>
                <configurationFile>${project.basedir}/src/main/resources/generatorConfig
                <verbose>true</verbose>
                <overwrite>true</overwrite>
            </configuration>
            <dependencies>
                <!--必须要引入数据库驱动-->
                <dependency>
                    <groupId>mysql</groupId>
                    <artifactId>mysql-connector-java</artifactId>
                    <!--必须制定版本-->
                    <version>8.0.22</version>
                </dependency>
            </dependencies>
        </plugin>
    </plugins>
</build>
```

generatorConfig.xml

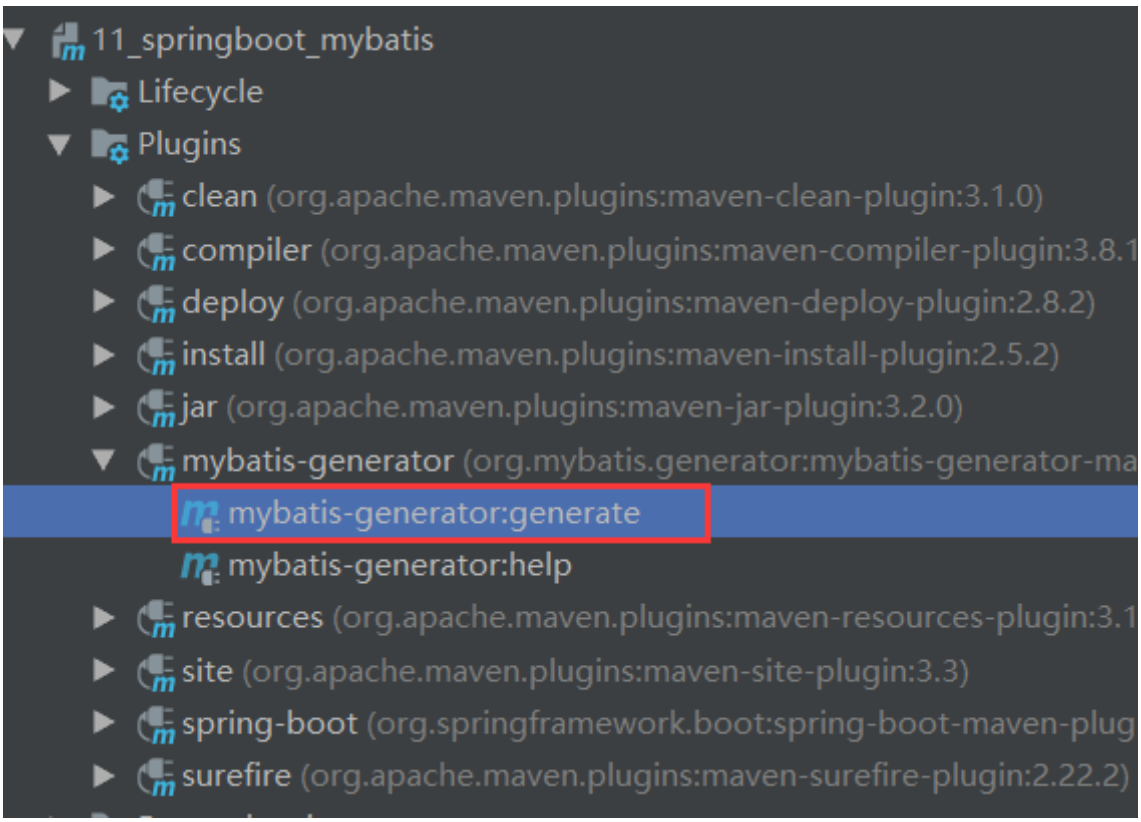
```


<!DOCTYPE generatorConfiguration PUBLIC
        "-//mybatis.org//DTD MyBatis Generator Configuration 1.0//EN"
        "http://mybatis.org/dtd/mybatis-generator-config_1_0.dtd">
<generatorConfiguration>
```

```

```

```
8
9       <!--如果需要使用 command的方式生成需要配置数据库驱动的jar包路径
10      <classPathEntry location="指定数据驱动的磁盘路径"/>-->
11
12      <!--context 生成上下文 配置生成规则
13              id 随意写
14             targetRuntime 生成策略
15                  MyBatis3DynamicSql 默认的，会生成 动态生成sql的方式（没有xml)
16                  MyBatis3 生成通用的查询，可以指定动态where条件
17                  MyBatis3Simple 只生成简单的CRUD
18      -->
19      <context id="simple" targetRuntime="MyBatis3Simple">
20
21
22          <commentGenerator>
23              <!--设置是否生成注释  true 不生成  注意： 如果不生成注释，下次生成代码就不会进行合
24              <property name="suppressAllComments" value="true"/>
25          </commentGenerator>
26          <!--数据源 -->
27          <jdbcConnection driverClass="com.mysql.jdbc.Driver"
28                          connectionURL="jdbc:mysql://localhost:3306/mybatis"
29                          userId="root"
30                          password="123456"/>
31
32          <!--pojo
33          javaModelGenerator  java实体生成规则(POJO)
34              targetPackage 生成到哪个包下
35              targetProject 生成到当前文件的哪个相对路径下
36          -->
37          <javaModelGenerator targetPackage="cn.tulingxueyuan.pojo" targetProject="src/mai
38          <!--mapper xml映射文件
39              sqlMapGenerator mapper xml映射文件生成规则
40              targetPackage 生成到哪个包下
41              targetProject 生成到当前文件的哪个相对路径下
42          -->
43          <sqlMapGenerator targetPackage="cn.tulingxueyuan.mapper" targetProject="src/main
44          <!--mapper接口
45              javaClientGenerator mapper mapper接口生成规则
46              type 指定生成的方式
```

```
                1.使用注解的方式生成
                2.使用接口绑定的方式生成（要配置sqlMapGenerator）
            targetPackage 生成到哪个包下
            targetProject 生成到当前文件的哪个相对路径下-->
        <javaClientGenerator type="XMLMAPPER" targetPackage="cn.tulingxueyuan.mapper" ta


        <!--配置哪些表需要进行代码生成
        tableName 表名
        domainObjectName pojo类名
        mapperName 对应mapper接口的类名 和 mapper xml文件名
        -->
        <table tableName="emp" domainObjectName="Emp" mapperName="EmpMapper" />
        <table tableName="dept" domainObjectName="Dept" mapperName="DeptMapper" />
    </context>
</generatorConfiguration>
```

运行插件---生成代码



2.2 整合Mybatis

1.引入jar包

```

1、引入Jar包
```

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


```

application.yml

```
mybatis:
  # 映射文件所在路径
  mapper-locations: classpath:mappers/*.xml
  # pojo类所在包路径
  type-aliases-package: com.cx.user.model
```

MyBatis自动配置原理

```
@Bean
@ConditionalOnMissingBean
public SqlSessionFactory sqlSessionFactory(DataSource dataSource) throws Exception {
  SqlSessionFactoryBean factory = new SqlSessionFactoryBean();
  factory.setDataSource(dataSource);
  factory.setVfs(SpringBootVFS.class);

  // 设置Mybaits的全局配置文件
  if (StringUtils.hasText(this.properties.getConfigLocation())) {
    factory.setConfigLocation(this.resourceLoader.getResource(this.properties.getConfigL
  }
  // ?  有另一种定制方式的体现
  applyConfiguration(factory);
  // 相当于mybatis全局配置文件中
  /*<properties>
    <property name="" value=""/>
</properties>*/
  if (this.properties.getConfigurationProperties() != null) {
    factory.setConfigurationProperties(this.properties.getConfigurationProperties());
  }
```

```
  // 就是配置插件-拦截器  只需要配置一个实现了Interceptor的接口为Bean
  if (!ObjectUtils.isEmpty(this.interceptors)) {
    factory.setPlugins(this.interceptors);
  }
  // 设置数据库厂商id
  if (this.databaseIdProvider != null) {
    factory.setDatabaseIdProvider(this.databaseIdProvider);
  }
  // 设置别名：去application.yml中獲取mybatis.typeAliasesPackage
  if (StringUtils.hasLength(this.properties.getTypeAliasesPackage())) {
    factory.setTypeAliasesPackage(this.properties.getTypeAliasesPackage());
  }
  // 可以通过父类过滤哪些类需要使用别名
  比如：pojo.user extends basePojo
       pojo.user2
       去application.yml中设置mybatis.typeAliasesSuperType: com.tulingxueyuan.pojo.basePo
  if (this.properties.getTypeAliasesSuperType() != null) {
    factory.setTypeAliasesSuperType(this.properties.getTypeAliasesSuperType());
  }
  // 设置类型处理器
<typeHandlers>
    <package name=""/>
</typeHandlers>
  if (StringUtils.hasLength(this.properties.getTypeHandlersPackage())) {
    factory.setTypeHandlersPackage(this.properties.getTypeHandlersPackage());
  }
   // 设置类型处理器
<typeHandlers>
    <typeHandler handler=""
</typeHandlers>
  if (!ObjectUtils.isEmpty(this.typeHandlers)) {
    factory.setTypeHandlers(this.typeHandlers);
  }
  // 设置mapper.xml映射文件：mapper-locations: classpath:com/tulingxueyuan/mapper/*Mapper.
  if (!ObjectUtils.isEmpty(this.properties.resolveMapperLocations())) {
    factory.setMapperLocations(this.properties.resolveMapperLocations());
  }
  Set<String> factoryPropertyNames = Stream
      .of(new BeanWrapperImpl(SqlSessionFactoryBean.class).getPropertyDescriptors()).map
      .collect(Collectors.toSet());
```

```
  Class<? extends LanguageDriver> defaultLanguageDriver = this.properties.getDefaultScri
  if (factoryPropertyNames.contains("scriptingLanguageDrivers") && !ObjectUtils.isEmpty(
    // Need to mybatis-spring 2.0.2+
    factory.setScriptingLanguageDrivers(this.languageDrivers);
    if (defaultLanguageDriver == null && this.languageDrivers.length == 1) {
      defaultLanguageDriver = this.languageDrivers[0].getClass();
    }
  }
  if (factoryPropertyNames.contains("defaultScriptingLanguageDriver")) {
    // Need to mybatis-spring 2.0.2+
    factory.setDefaultScriptingLanguageDriver(defaultLanguageDriver);
  }

  return factory.getObject();
}
```

- 如果依然放不下mybatis全局配置文件， springboot 还是支持的：
  - 配置application.yml

```
mybatis:
  config-location: classpath:mybatis-config.xml
```

- mybatis-config.xml

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE configuration
        PUBLIC "-//mybatis.org//DTD Config 3.0//EN"
        "http://mybatis.org/dtd/mybatis-3-config.dtd">
<!--就是DOCTYPE后面对应的根节点-->
<configuration>

    <!--mybatis的设置选项  可以改变mybatis运行时行为-->
    <settings>
        <setting name="mapUnderscoreToCamelCase" value="true"/>
    </settings>

    <!--类型别名可为 Java 类型设置一个缩写名字。 它仅用于 XML 配置，意在降低冗余的全限定类名书写
    <typeAliases>
        <package name="com.tulingxueyuan.pojo"/>
    </typeAliases>
```

```
17
18 </configuration>
```

- 如果要设置mybatis的settings怎么设置呢?
  - 1.可以通过mybatis全局配置文件设置
  - 2. 也可以通过在application.yml中配置configuration
    - configuration 它封装mybatis所有信息

```yaml
configuration:
  mapUnderscoreToCamelCase: true
```

- configuration 什么情况=null呢?
  - 没有在application.yml中配置configuration 就会为null
- 如果没有在application.yml中配置config-location 就会new new Configuration();
- 要定制mybatis
  - 1. 使用mybatis全局配置文件
  - 2. 可以使用application.yml中配置configuration + ConfigurationCustomizer
  - 要么使用mybatis的东西，要么使用springboot的， 只能用1种

```
private void applyConfiguration(SqlSessionFactoryBean factory) {
  Configuration configuration = this.properties.getConfiguration();
  if (configuration == null && !StringUtils.hasText(this.properties.getConfigLocation())
    configuration = new Configuration();
  }
  if (configuration != null && !CollectionUtils.isEmpty(this.configurationCustomizers)) {
    for (ConfigurationCustomizer customizer : this.configurationCustomizers) {
      customizer.customize(configuration);
    }
  }
  factory.setConfiguration(configuration);
}
```