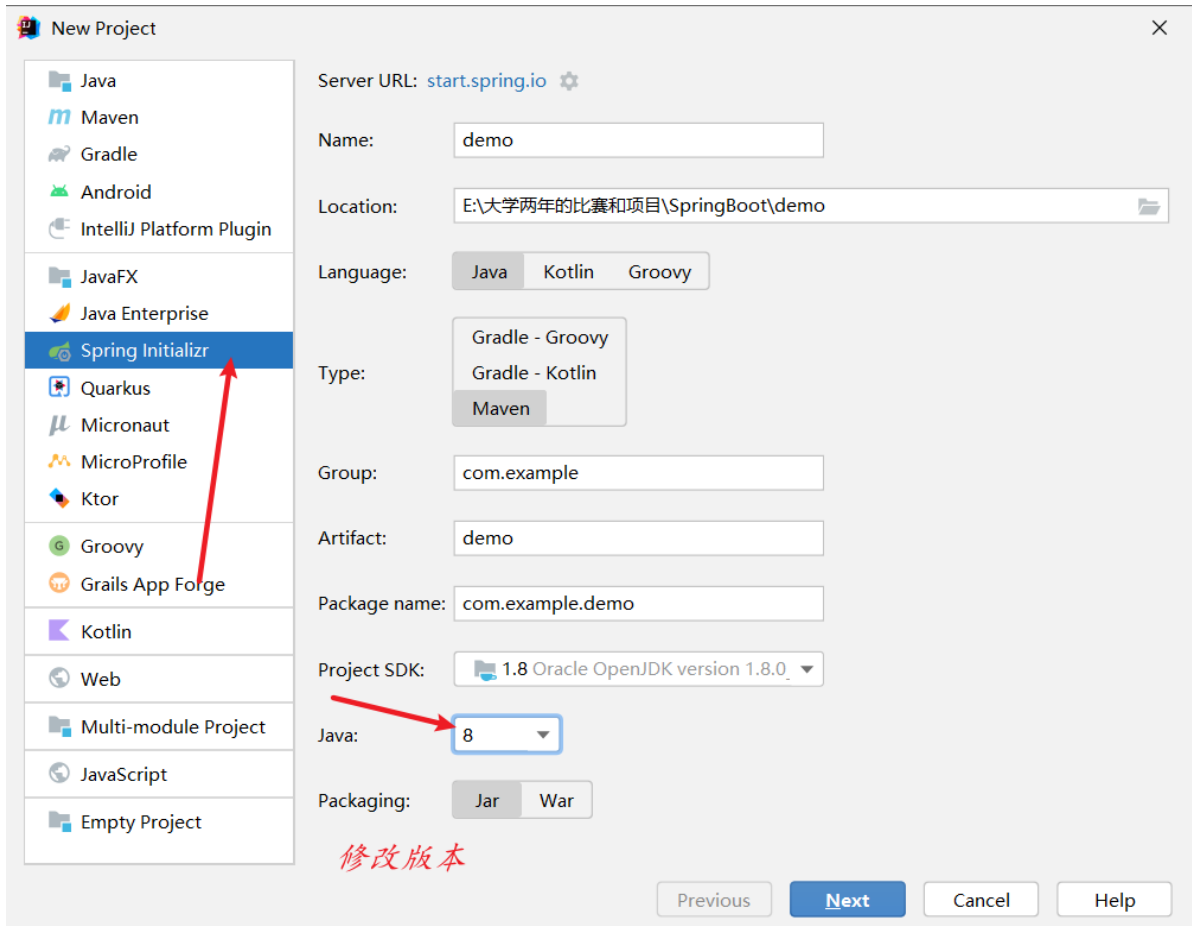


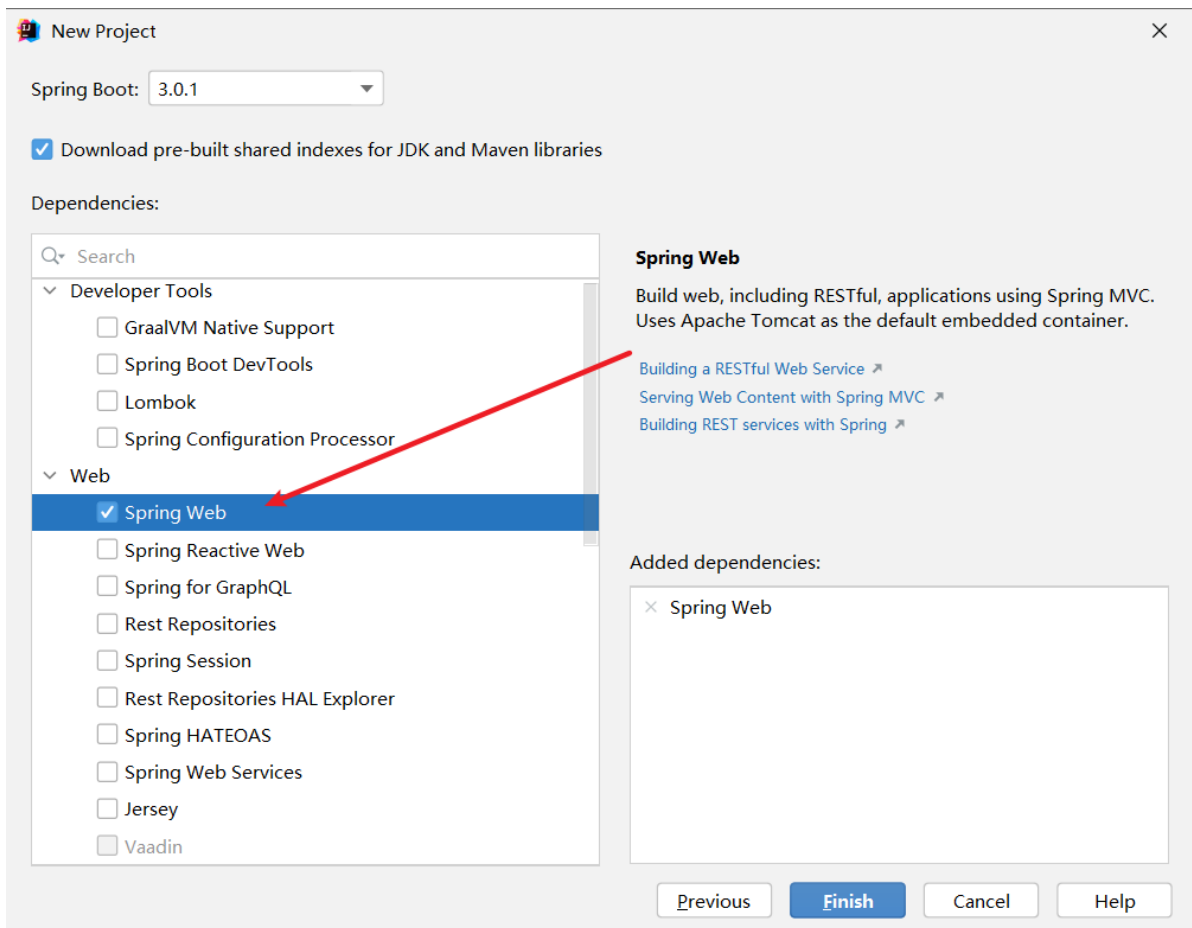
# SpringBoot

## 创建一个全新Boot工程

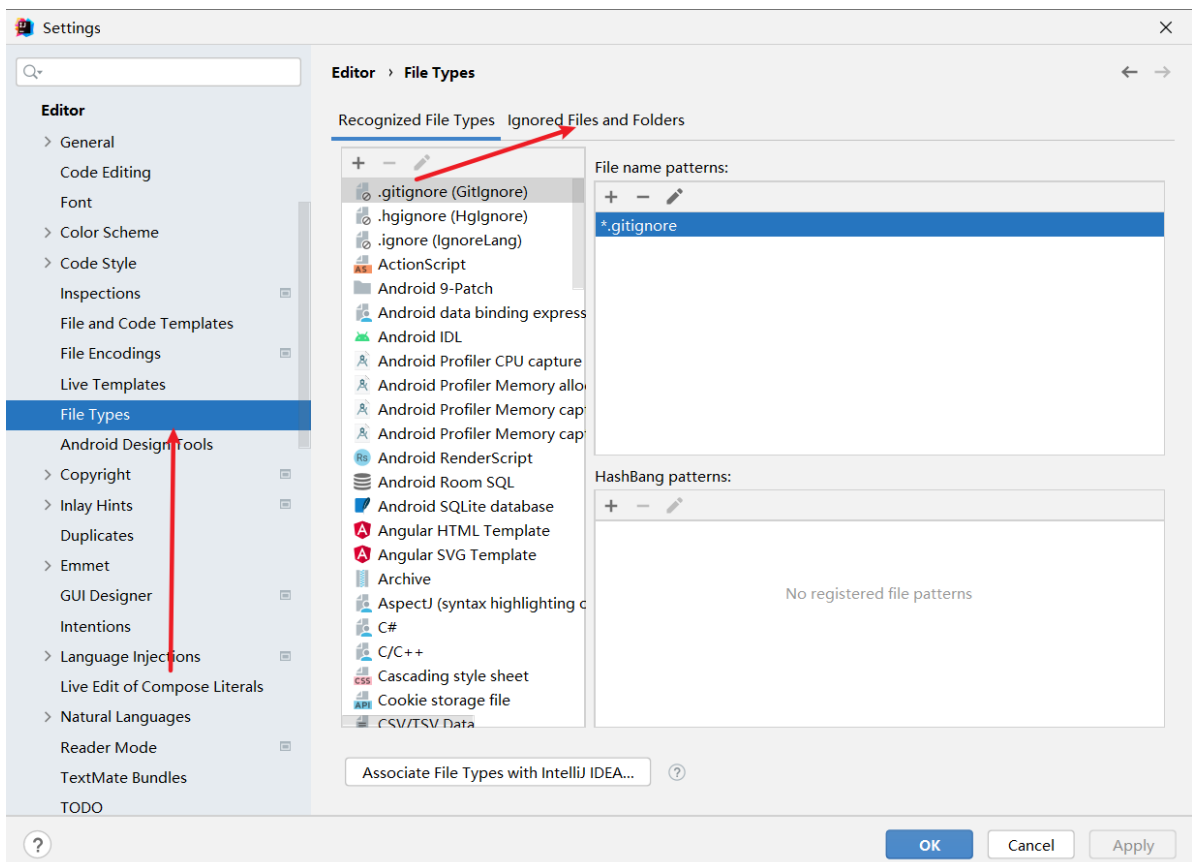
### 1 选择Spring Initializr项目

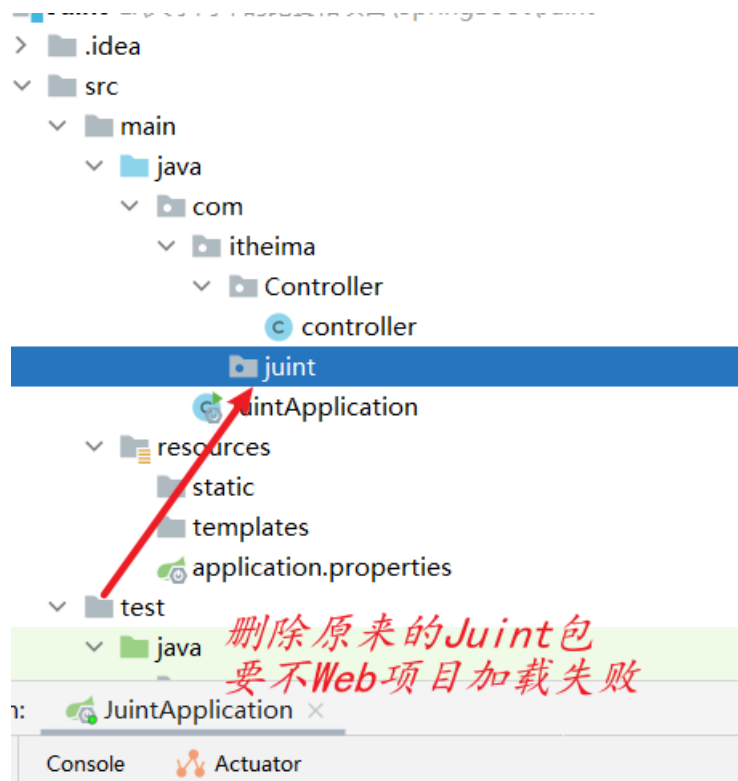
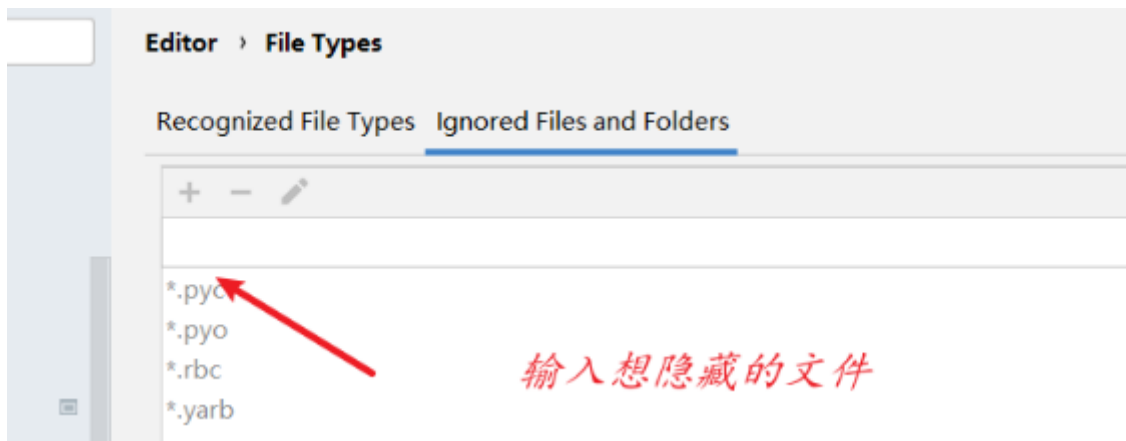


### 2 选择Spring Web框架



## 隐藏文件





```
<parent>
  <groupId>org.springframework.boot</groupId>
  <artifactId>spring-boot-starter-parent</artifactId>
  // 修改版本
  <version>2.7.3</version>
  <relativePath/> <!-- lookup parent from repository -->
</parent>
<properties>
  <java.version>8</java.version>
</properties>
```

## SpringBoot程序优点

- 起步依赖（简化依赖设置）
- 自动配置（简化常用工程配置）
- 辅助功能（内置服务器,...）

## Parent

```
<parent>
  <groupId>org.springframework.boot</groupId>
  <artifactId>spring-boot-starter-parent</artifactId>
  <version>2.7.3</version>
  <relativePath/> <!-- lookup parent from repository -->
</parent>
```

使用parent进行统一管理配置这个版本信息

使用进行共同管理

## Starter

starter技术使管理依赖变得简单，将依赖集中管理，减少依赖配置

## 引导类

SpringBoot自动生成一个引导类，生成一个容器，加载容器

```
@SpringBootApplication
public class SpringBoot01Application {

    public static void main(String[] args) {

        SpringApplication.run(SpringBoot01Application.class, args);

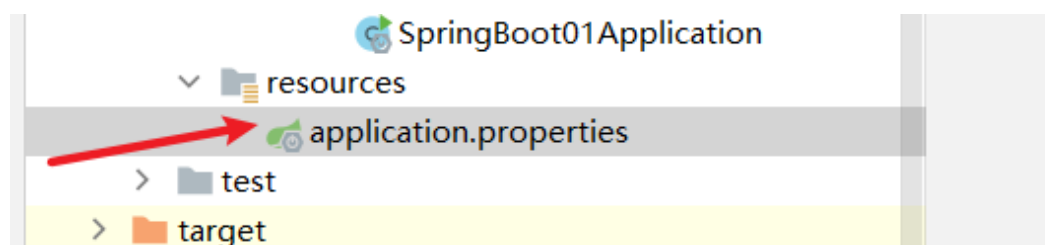
        ctx.getBean();
    }
}
```

可以获取同层目录下的Bean

## 基本配置

### 属性配置

简单配置服务器端口



```
#服务器端口
server.port=80
```

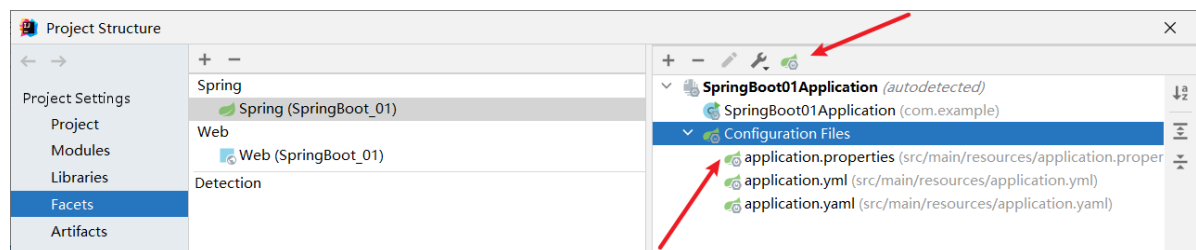
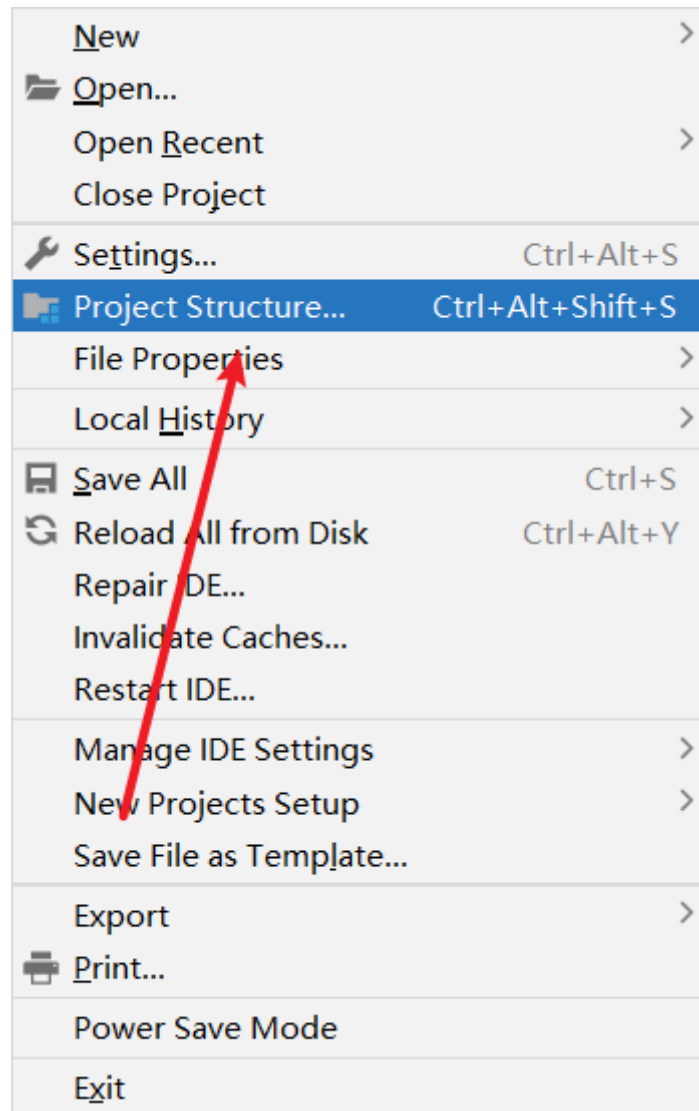
## 基础配备

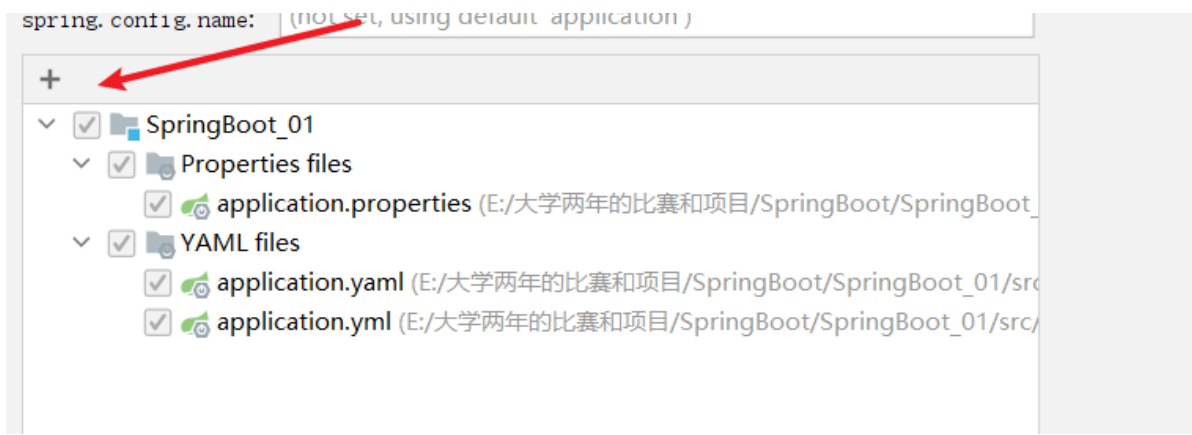
可以控制文本，图像显示，控制console打印信息的输出

## SpringBoot配置格式

- properties
- yml
- yaml

## 将yml文件加入





## 读取yaml文件

```
name:
  张三

likes:
  - rap
  - jump
  - sleep
```

```
package com.example.controller;

import org.springframework.beans.factory.annotation.Value;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RestController;

/**
 * @ClassName BookController
 * @Description TODO
 * @Author Typecoh
 * @Date 2022/9/4 23:09
 * @Version 1.0
 */

@RestController
@RequestMapping("/Books")

public class BookController {

    @Value("${name}")
    private String name;
    @Value("${likes[0]}")
    private String hobby1;

    @GetMapping("/{id}")
    public String getById(@PathVariable int id){

        System.out.println("id == >" + id);

        System.out.println("name==>" + name);
        System.out.println("hobby1==>" + hobby1);
    }
}
```

```
        return "get is running...";
    }
}
```

在yaml使用中间变量传递

```
dir: c://win

dirfile: ${dir}//test
```

```
@Autowired
private Environment environment;

// 自动将数据全部封装在 Environment
//使用getProperty获取value
System.out.println(environment.getProperty("dir"));
```

## 创建MyDataSource

```
package com.example;

import org.springframework.boot.context.properties.ConfigurationProperties;
import org.springframework.context.annotation.ComponentScan;
import org.springframework.context.annotation.Configuration;
import org.springframework.stereotype.Component;

/**
 * @ClassName MyDataSource
 * @Description TODO
 * @Author Typecoh
 * @Date 2023/1/4 20:50
 * @Version 1.0
 */

//定义成一个Bean
@Component
//指定数据加载
@ConfigurationProperties("datasource")
// 封装yaml文件数据
public class MyDataSource {

    private String driver;
    private String username;
    private String password;
    private String url;

    @Override
    public String toString() {
        return "MyDataSource{" +
            "driver='" + driver + '\'' +
            ", username='" + username + '\'' +
            ", password='" + password + '\'' +
            ", url='" + url + '\'' +
            '}';
    }
}
```

```

    public String getDriver() {
        return driver;
    }

    public void setDriver(String driver) {
        this.driver = driver;
    }

    public String getUsername() {
        return username;
    }

    public void setUsername(String username) {
        this.username = username;
    }

    public String getPassword() {
        return password;
    }

    public void setPassword(String password) {
        this.password = password;
    }

    public String getUrl() {
        return url;
    }

    public void setUrl(String url) {
        this.url = url;
    }
}

```

```

datasource:
  username: Typecoh
  password: 123456
  url: jdbc:mysql://localhost:3306//Books
  driver: com.mysql.jdbc.Driver

```

## SpringBoot整合第三方技术

---

### 整合Junit

#### 1 导入测试对应的starter

Maven自动装配好了

#### 2 测试类使用@SpringBootTest修饰



### 3 使用自动装配的形式添加要测试的对象

```
package com.itheima.juint;

import com.itheima.dao.BookDao;
import org.junit.jupiter.api.Test;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.boot.test.context.SpringBootTest;

@SpringBootTest
class JuintApplicationTests {

    // 自动装配 创建的 BookDaoImpl 对象装配到BookDao中
    @Autowired
    private BookDao bookDao;

    @Test
    void contextLoads() {

        System.out.println(bookDao);
        bookDao.save();
    }
}
```

- 名称: @SpringBootTest
- 类型: 测试类注解
- 位置: 测试类定义上方
- 作用: 设置JUnit加载的SpringBoot启动类
- 范例:

```
@SpringBootTest(classes = Springboot05JunitApplication.class)
class Springboot07JunitApplicationTests {}
```

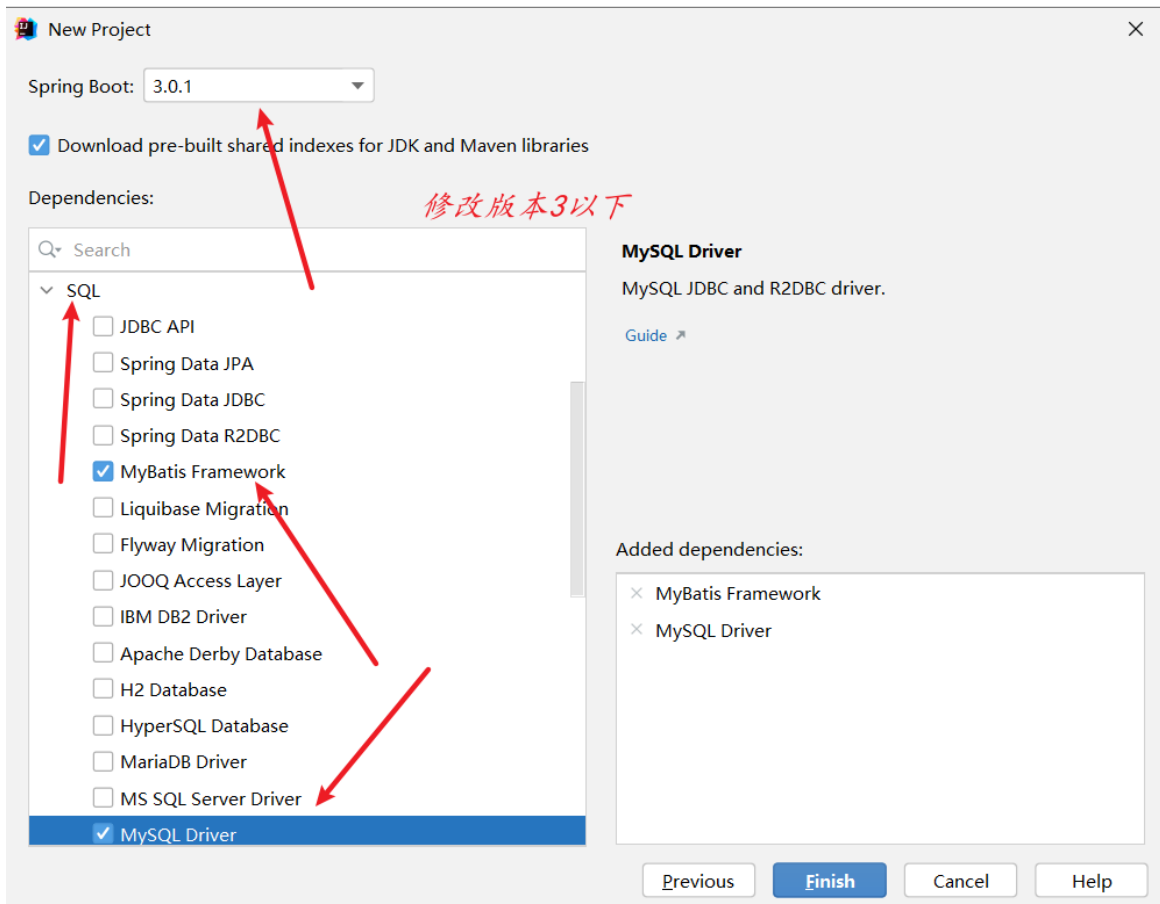
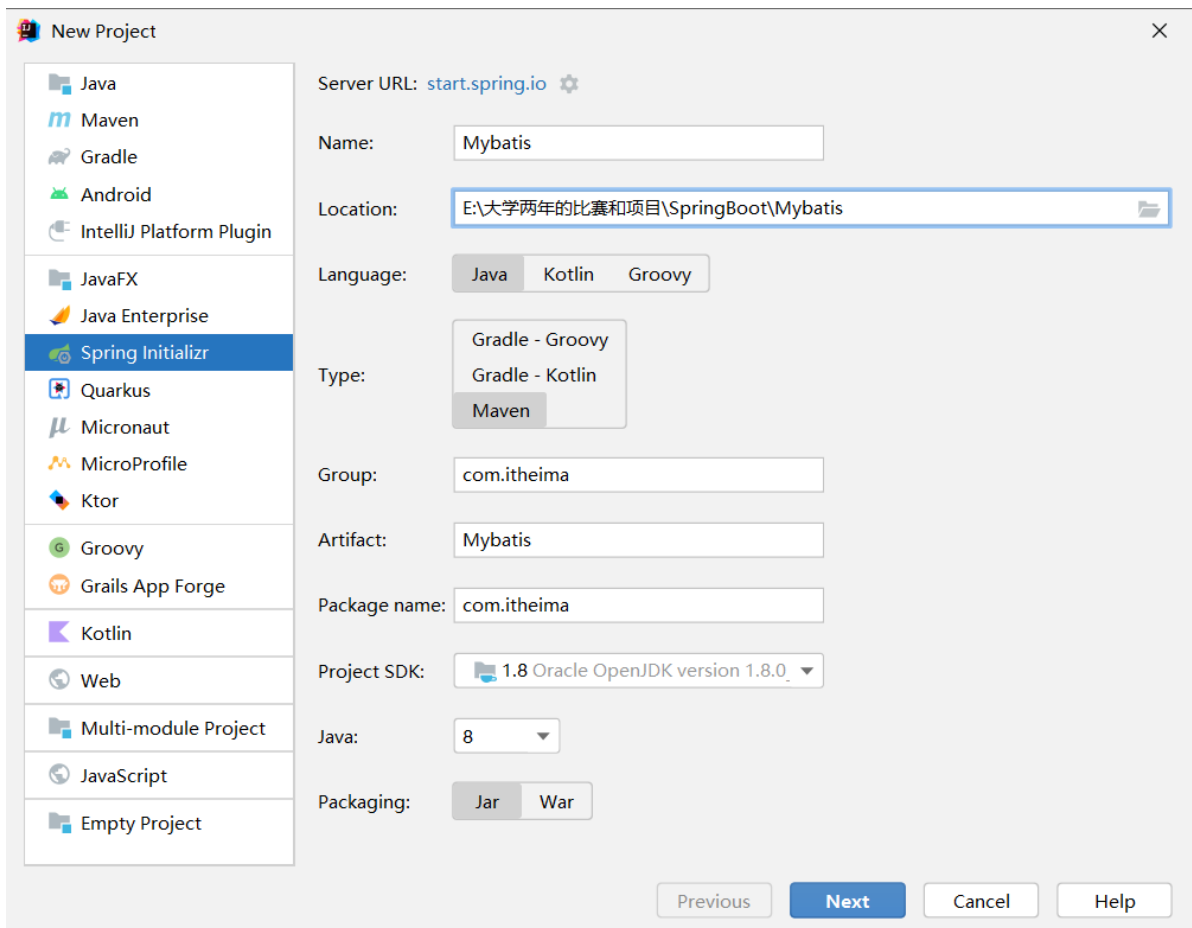
- 相关属性
  - ◆ classes: 设置SpringBoot启动类

#### 注意事项

如果测试类在SpringBoot启动类的包或子包中，可以省略启动类的设置，也就是省略classes的设定

## 整合Mybatis

### 创建一个新工程



## 创建文件

```
package com.itheima.dao;

import com.itheima.domain.Book;
import org.apache.ibatis.annotations.Mapper;
import org.apache.ibatis.annotations.Select;

/**
 * @ClassName
 * @Description TODO
 * @Author lenovo
 * @Date 2023/1/4 22:35
 * @Version 1.0
 */
//添加Mapper注释
@Mapper
public interface BookDao {

    @Select("select * from book where id = #{id}")
    public Book GetById(Integer id);
}
```

```
package com.itheima.domain;

/**
 * @ClassName Book
 * @Description TODO
 * @Author Typecoh
 * @Date 2023/1/4 22:37
 * @Version 1.0
 */

public class Book {

    public String id;
    public String type;
    public String name;
    public String description;

    @Override
    public String toString() {
        return "Book{" +
            "id='" + id + '\'' +
            ", type='" + type + '\'' +
            ", name='" + name + '\'' +
            ", description='" + description + '\'' +
            '}';
    }

    public String getId() {
        return id;
    }

    public void setId(String id) {
        this.id = id;
    }
}
```

```
}

public String getType() {
    return type;
}

public void setType(String type) {
    this.type = type;
}

public String getName() {
    return name;
}

public void setName(String name) {
    this.name = name;
}

public String getDescription() {
    return description;
}

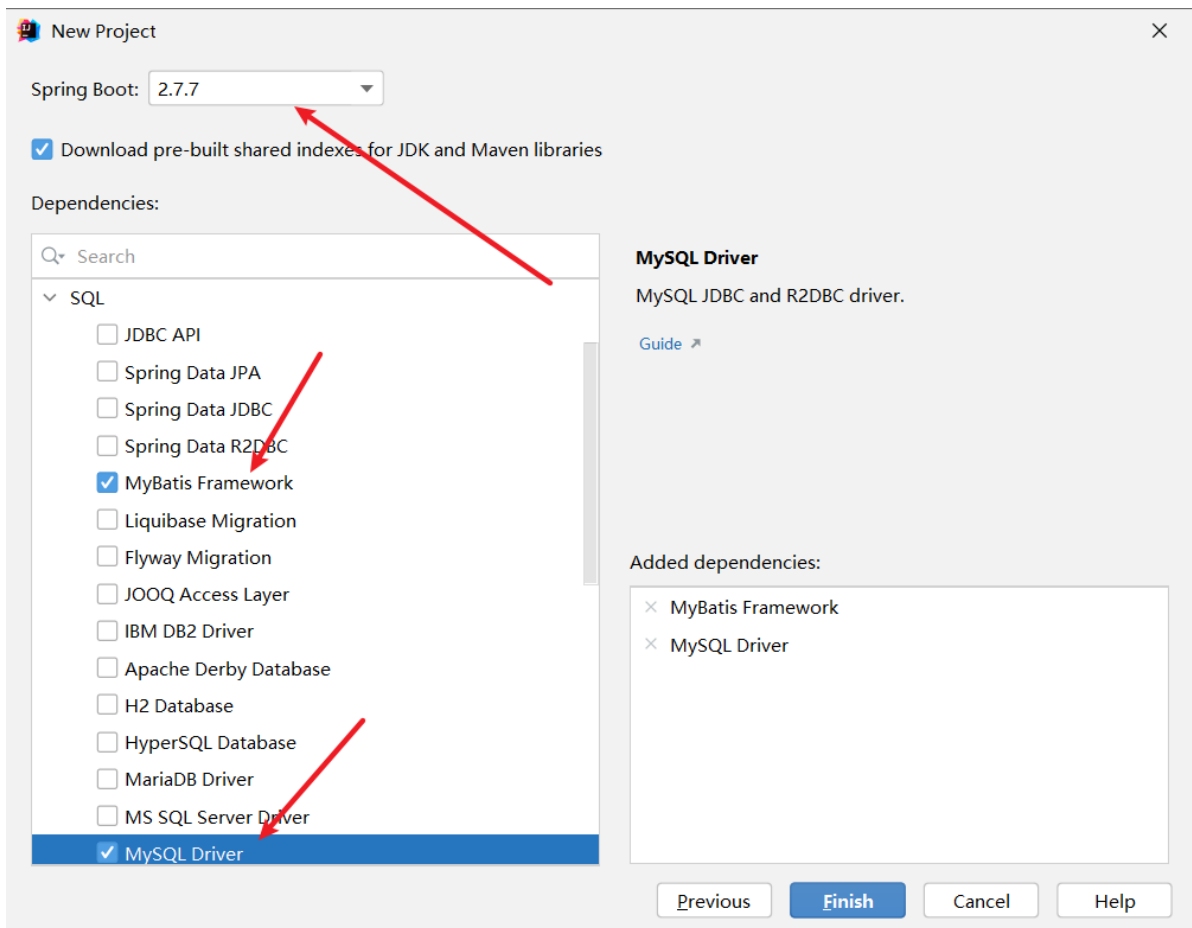
public void setDescription(String description) {
    this.description = description;
}
}
```

```
spring:
  datasource:
    url: jdbc:mysql://localhost:3306/mybatis
    password: 123456
    username: Typecoh
    driver-class-name: com.mysql.jdbc.Driver
```

创建好了之后需要先造好datasource，否则测试报错

## 整合Druid

### 1 创建新文件



## 2 导入指定的坐标

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

## 3 Druid数据配置

- 方式一

```
spring:
  datasource:
    driver-class-name: com.mysql.jdbc.Driver
    username: Typecoh
    password: 123456
    url: jdbc:mysql://localhost:3306/mybatis
    type: com.alibaba.druid.pool.DruidDataSource
```

- 方式二

```
spring:
  datasource:
    druid:
      driver-class-name: com.mysql.jdbc.Driver
      username: Typecoh
      password: 123456
      url: jdbc:mysql://localhost:3306/mybatis
```

1. 勾选SpringMVC与MySQL坐标

2. 修改配置文件为yml格式

3. 设置端口为80方便访问



## 配置lombok

### 配置版本

```
<!--导入lombok-->
<dependency>
    <groupId>org.projectlombok</groupId>
    <artifactId>lombok</artifactId>
</dependency>
```

### 使用@Data注解

```
//使用@Data替代 Getter Setter方法 toString方法
@Data
public class Book {

    public String id;
    public String type;
    public String name;
    public String description;
}
```

## 开启日志文件

```
mybatis:
  configuration:
    log-impl: org.apache.ibatis.logging.stdout.StdOutImpl
```

```
115 ==> Preparing: select * from book where id = ?
115 ==> Parameters: 1(Integer)
115 <== Columns: id, type, name, description
<== Row: 1, Spring实战 第5版, 计算机理论, Spring入门经典教程
<== Total: 1
Closing non transactional SqlSession [org.apache.ibatis.session.defaults.DefaultSqlSession@79d06bbd]
Book(id=1, type=Spring实战 第5版, name=计算机理论, description=Spring入门经典教程)
2023-01-05 19:13:13.217 INFO 12188 --- [ionShutdownHook] com.alibaba.druid.pool.DruidDataSource : {dataSource-1} closing ...
2023-01-05 19:13:13.219 INFO 12188 --- [ionShutdownHook] com.alibaba.druid.pool.DruidDataSource : {dataSource-1} closed
```

# 多环境开发

yaml书写格式

```
spring:
  profiles:
    active: test
---
spring:
  profiles: pro
server:
  port: 8080

---
spring:
  profiles: dev
server:
  port: 8081

---
spring:
  profiles: test
server:
  port: 8082
```

将文件打成jar包使用nmp执行

- 带参数启动SpringBoot

```
java -jar springboot.jar --spring.profiles.active=test
```

```
java -jar springboot.jar --server.port=88
```

```
java -jar springboot.jar --server.port=88 --spring.profiles.active=test
```

```
java -jar SpringBoot_01-0.0.1-SNAPSHOT.jar
```

```
replaced with 'spring.config.activate.on-profile' [origin: class path resource [a
config.ConfigDataEnvironment : Property 'spring.profiles' imported from loca
replaced with 'spring.config.activate.on-profile' [origin: class path resource [a
config.ConfigDataEnvironment : Property 'spring.profiles' imported from loca
replaced with 'spring.config.activate.on-profile' [origin: class path resource [a
embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s): 8082 (http)
alina.core.AprLifecycleListener : Loaded Apache Tomcat Native library [1.2.30]
alina.core.AprLifecycleListener : APR capabilities: IPv6 [true], sendfile [true
alina.core.AprLifecycleListener : APR/OpenSSL configuration: useAprConnector [f
alina.core.AprLifecycleListener : OpenSSL successfully initialized [OpenSSL 1.1
```

npm修改运行种类

```
Microsoft Windows [版本 10.0.19045.2364]
(c) Microsoft Corporation. 保留所有权利。

E:\大学两年的比赛和项目\SpringBoot\SpringBoot_01\target>java -jar SpringBoot_01-0.0.1-SNAPSHOT.jar --spring.profiles.active=dev

Spring
:: Spring Boot :: (v2.7.3)

2023-01-06 20:09:49.761 INFO 9508 --- [main] com.example.SpringBoot01Application : Starting SpringBoot01Application v0.0.1-SNAPSHOT using Java 1.8.0_151
on DESKTOP-B5M3CQ7 with PID 9508 (E:\大学两年的比赛和项目\SpringBoot\SpringBoot_01\target\SpringBoot_01-0.0.1-SNAPSHOT.jar started by lenovo in E:\大学两年的比赛和项目\
SpringBoot\SpringBoot_01\target)
2023-01-06 20:09:49.763 INFO 9508 --- [main] com.example.SpringBoot01Application : The following 1 profile is active: "dev"
2023-01-06 20:09:49.802 WARN 9508 --- [main] o.s.b.c.config.ConfigDataEnvironment : Property 'spring.profiles' imported from location 'class path resource
[application.yaml]' is invalid and should be replaced with 'spring.config.activate.on-profile' [origin: class path resource [application.yaml] from SpringBoot_01-0.0.1-
SNAPSHOT.jar - 36:13]
2023-01-06 20:09:49.803 WARN 9508 --- [main] o.s.b.c.config.ConfigDataEnvironment : Property 'spring.profiles' imported from location 'class path resource
[application.yaml]' is invalid and should be replaced with 'spring.config.activate.on-profile' [origin: class path resource [application.yaml] from SpringBoot_01-0.0.1-
SNAPSHOT.jar - 30:13]
2023-01-06 20:09:49.803 WARN 9508 --- [main] o.s.b.c.config.ConfigDataEnvironment : Property 'spring.profiles' imported from location 'class path resource
[application.yaml]' is invalid and should be replaced with 'spring.config.activate.on-profile' [origin: class path resource [application.yaml] from SpringBoot_01-0.0.1-
SNAPSHOT.jar - 24:13]
2023-01-06 20:09:50.828 INFO 9508 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s): 8081 (http)
2023-01-06 20:09:50.829 INFO 9508 --- [main] o.a.catalina.core.AprLifecycleListener : Loaded Apache Tomcat Native library [1.2.30] using APR version [1.7.0]
2023-01-06 20:09:50.829 INFO 9508 --- [main] o.a.catalina.core.AprLifecycleListener : APR capabilities: IPv6 [true], sendfile [true], accept filters [false]
```

```
java -jar SpringBoot_01-0.0.1-SNAPSHOT.jar --server.port=8085
```

## 修改临时端口

```
Microsoft Windows [版本 10.0.19045.2364]
(c) Microsoft Corporation. 保留所有权利。

E:\大学两年的比赛和项目\SpringBoot\SpringBoot_01\target>java -jar SpringBoot_01-0.0.1-SNAPSHOT.jar --server.port=8085

Spring
:: Spring Boot :: (v2.7.3)

2023-01-06 20:12:02.588 INFO 19824 --- [main] com.example.SpringBoot01Application : Starting SpringBoot01Application v0.0.1-SNAPSHOT using Java 1.8.0_151
on DESKTOP-B5M3CQ7 with PID 19824 (E:\大学两年的比赛和项目\SpringBoot\SpringBoot_01\target\SpringBoot_01-0.0.1-SNAPSHOT.jar started by lenovo in E:\大学两年的比
赛和项目\SpringBoot\SpringBoot_01\target)
2023-01-06 20:12:02.590 INFO 19824 --- [main] com.example.SpringBoot01Application : The following 1 profile is active: "test"
2023-01-06 20:12:02.633 WARN 19824 --- [main] o.s.b.c.config.ConfigDataEnvironment : Property 'spring.profiles' imported from location 'class path res
ource [application.yaml]' is invalid and should be replaced with 'spring.config.activate.on-profile' [origin: class path resource [application.yaml] from SpringBoot_0
1-0.0.1-SNAPSHOT.jar - 36:13]
2023-01-06 20:12:02.633 WARN 19824 --- [main] o.s.b.c.config.ConfigDataEnvironment : Property 'spring.profiles' imported from location 'class path res
ource [application.yaml]' is invalid and should be replaced with 'spring.config.activate.on-profile' [origin: class path resource [application.yaml] from SpringBoot_0
1-0.0.1-SNAPSHOT.jar - 30:13]
2023-01-06 20:12:02.634 WARN 19824 --- [main] o.s.b.c.config.ConfigDataEnvironment : Property 'spring.profiles' imported from location 'class path res
ource [application.yaml]' is invalid and should be replaced with 'spring.config.activate.on-profile' [origin: class path resource [application.yaml] from SpringBoot_0
1-0.0.1-SNAPSHOT.jar - 24:13]
2023-01-06 20:12:03.737 INFO 19824 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s): 8085 (http)
2023-01-06 20:12:03.739 INFO 19824 --- [main] o.a.catalina.core.AprLifecycleListener : Loaded Apache Tomcat Native library [1.2.30] using APR version [1
.7.0]
2023-01-06 20:12:03.739 INFO 19824 --- [main] o.a.catalina.core.AprLifecycleListener : APR capabilities: IPv6 [true], sendfile [true], accept filters [f
```



## Windows端口被占用

```
# 查询端口
netstat -ano

# 查询指定端口
netstat -ano |findstr "端口号"

# 根据进程PID查询进程名称
tasklist |findstr "进程PID号"

# 根据PID杀死任务
taskkill /F /PID "进程PID号"

# 根据进程名称杀死任务
taskkill -f -t -im "进程名称"
```

## 配置高级

修改临时属性

```
@SpringBootApplication
public class Package1Application {

    public static void main(String[] args) {

        String []arg = new String[1];
        arg[0] = "--server.port=8088";

        SpringApplication.run(Package1Application.class, arg);
    }

}
```

拦截临时属性

```

public class Package1Application {

    public static void main(String[] args) {

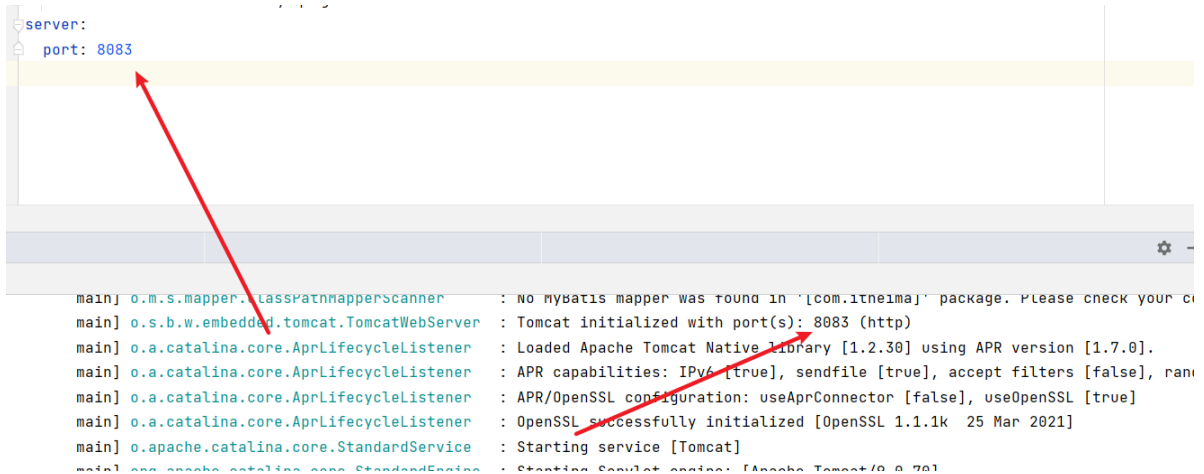
        // String []arg = new String[1];
        // arg[0] = "--server.port=8088";

        SpringApplication.run(Package1Application.class);
    }

}

```

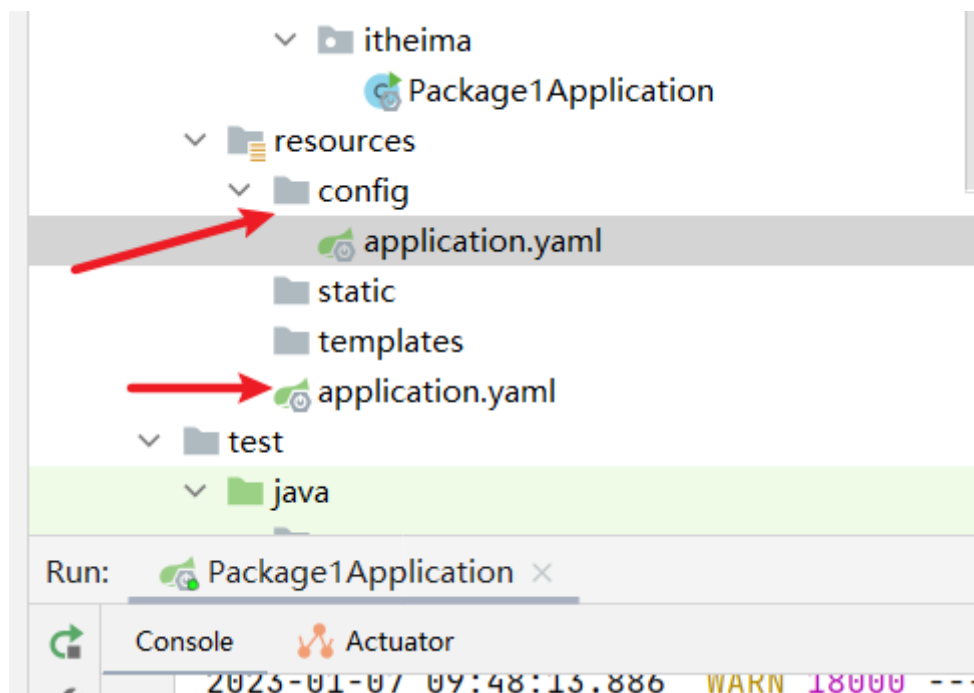
创建config文件夹覆盖原来文件



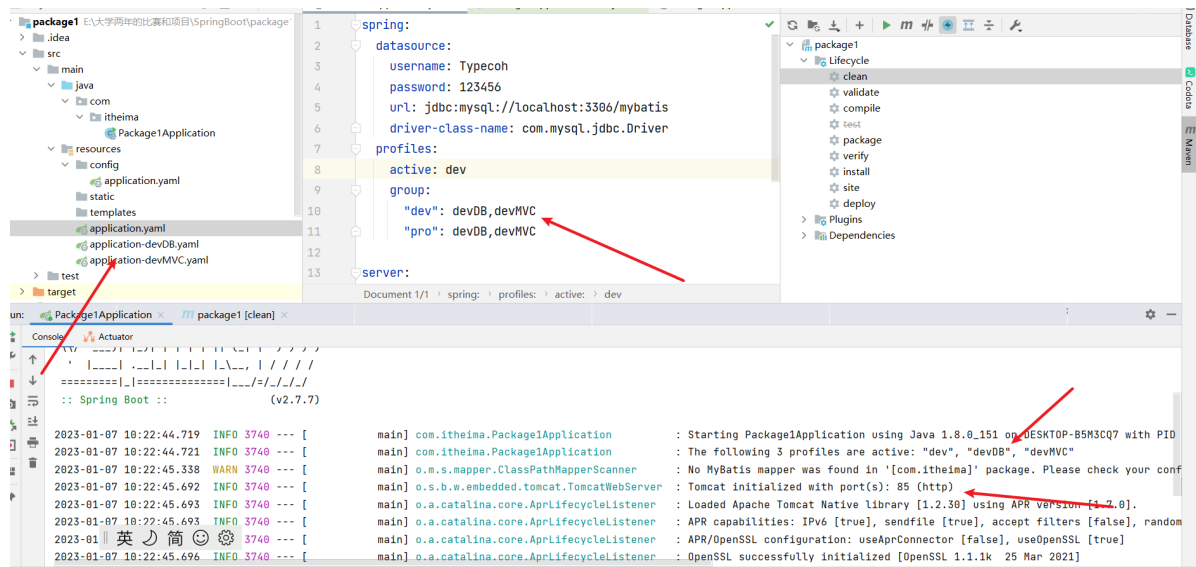
```

spring:
  datasource:
    username: Typecoh
    password: 123456
    url: jdbc:mysql://localhost:3306/mybatis
    driver-class-name: com.mysql.jdbc.Driver
  server:
    port: 8083

```

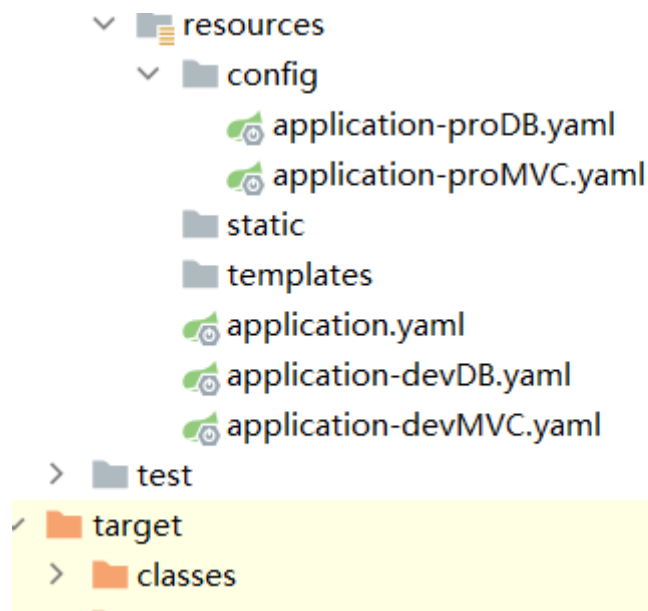


## Maven和SpringBoot结合



```
profiles:
  active: @profile.active@
  group:
    "dev": devDB,devMVC
    "pro": proDB,proMVC
```

```
server:
  port: 80
```



## 配置pom文件


```
<!-- 设置启动环境 -->
<profiles>
  <profile>
    <id>env_pro</id>
    <properties>
      <profile.active>pro</profile.active>
```

```

</properties>
<!--<activation>-->
<!--      <activeByDefault>true</activeByDefault>-->
<!--</activation>-->
</profile>
<profile>
  <id>env_dev</id>
  <properties>
    <profile.active>dev</profile.active>
  </properties>
  <activation>
    <activeByDefault>true</activeByDefault>
  </activation>
</profile>
</profiles>

```

E:\大学两年的比赛和项目\SpringBoot\packagel\target>java -jar packagel-0.0.1-SNAPSHOT.jar



```

:: Spring Boot :: (v2.7.7)

2023-01-07 10:31:09.154 INFO 9584 --- [main] com.itheima.PackagelApplication : Starting PackagelApplication v0.0.1-SNAPSHOT using Java 1.8.0.1
51 on DESKTOP-B5M3CQ7 with PID 9584 (E:\大学两年的比赛和项目\SpringBoot\packagel\target\packagel-0.0.1-SNAPSHOT.jar started by lenovo in E:\大学两年的比赛和项目\Sp
ringBoot\packagel\target)
2023-01-07 10:31:09.158 INFO 9584 --- [main] com.itheima.PackagelApplication : The following 3 profiles are active: "pro", "proDB", "proMVC"
2023-01-07 10:31:09.868 WARN 9584 --- [main] o.m.s.mapper.ClassPathMapperScanner : No MyBatis mapper was found in '[com.itheima]' package. Please
check your configuration.
2023-01-07 10:31:10.635 INFO 9584 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s): 88 (http)
2023-01-07 10:31:10.637 INFO 9584 --- [main] o.a.catalina.core.AprLifecycleListener : Loaded Apache Tomcat Native library [1.2.30] using APR version
[1.7.0].
2023-01-07 10:31:10.637 INFO 9584 --- [main] o.a.catalina.core.AprLifecycleListener : APR capabilities: IPv6 [true], sendfile [true], accept filters
[false], random [true], UDS [true].
2023-01-07 10:31:10.637 INFO 9584 --- [main] o.a.catalina.core.AprLifecycleListener : APR/OpenSSL configuration: useAprConnector [false], useOpenSSL
[true]
2023-01-07 10:31:10.640 INFO 9584 --- [main] o.a.catalina.core.AprLifecycleListener : OpenSSL successfully initialized [OpenSSL 1.1.1.k 25 Mar 2021]
2023-01-07 10:31:10.652 INFO 9584 --- [main] o.apache.catalina.core.StandardService : Starting service [Tomcat]
2023-01-07 10:31:10.652 INFO 9584 --- [main] org.apache.catalina.core.StandardEngine : Starting Servlet engine: [Apache Tomcat/9.0.70]
2023-01-07 10:31:10.795 INFO 9584 --- [main] o.a.c.c.C.[Tomcat].[localhost].[/] : Initializing Spring embedded WebApplicationContext
2023-01-07 10:31:10.795 INFO 9584 --- [main] w.s.c.ServletWebServerApplicationContext : Root WebApplicationContext: initialization completed in 1570 ms

```

```

<!--设置启动环境-->
<profiles>
  <profile>
    <id>env_pro</id>
    <properties>
      <profile.active>pro</profile.active>
    </properties>
    <!--<activation>-->
    <!--      <activeByDefault>true</activeByDefault>-->
    <!--</activation>-->
  </profile>
  <profile>
    <id>env_dev</id>
    <properties>
      <profile.active>dev</profile.active>
    </properties>
    <activation>
      <activeByDefault>true</activeByDefault>
    </activation>
  </profile>
</profiles>

```

```
(c) Microsoft Corporation. 保留所有权利。
E:\大学两年的比赛和项目\SpringBoot\packagel\target>java -jar packagel-0.0.1-SNAPSHOT.jar

Spring
:: Spring Boot :: (v2.7.7)

2023-01-07 10:34:45.324 INFO 1820 --- [main] com.itheima.PackagelApplication : Starting PackagelApplication v0.0.1-SNAPSHOT using Java 1.8.0_151 on DESKTOP-B5M3CQ7 with PID 1820 (E:\大学两年的比赛和项目\SpringBoot\packagel\target\packagel-0.0.1-SNAPSHOT.jar started by lenovo in E:\大学两年的比赛和项目\SpringBoot\packagel\target)
2023-01-07 10:34:45.326 INFO 1820 --- [main] com.itheima.PackagelApplication : The following 3 profiles are active: "dev", "devDB", "devMVC"
2023-01-07 10:34:46.023 WARN 1820 --- [main] o.m.s.mapper.ClassPathMapperScanner : No MyBatis mapper was found in '[com.itheima]' package. Please check your configuration.
2023-01-07 10:34:46.746 INFO 1820 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s): 85 (http)
2023-01-07 10:34:46.748 INFO 1820 --- [main] o.a.catalina.core.AprLifecycleListener : Loaded Apache Tomcat Native library [1.2.30] using APR version [1.7.0]
2023-01-07 10:34:46.748 INFO 1820 --- [main] o.a.catalina.core.AprLifecycleListener : APR capabilities: IPv6 [true], sendfile [true], accept filters [false], random [true], UDS [true]
2023-01-07 10:34:46.748 INFO 1820 --- [main] o.a.catalina.core.AprLifecycleListener : APR/OpenSSL configuration: useAprConnector [false], useOpenSSL [true]
2023-01-07 10:34:46.752 INFO 1820 --- [main] o.a.catalina.core.AprLifecycleListener : OpenSSL successfully initialized [OpenSSL 1.1.1k 25 Mar 2021]
2023-01-07 10:34:46.764 INFO 1820 --- [main] o.apache.catalina.core.StandardService : Starting service [Tomcat]
2023-01-07 10:34:46.765 INFO 1820 --- [main] org.apache.catalina.core.StandardEngine : Starting Servlet engine: [Apache Tomcat/9.0.70]
```

## 日志配置

`debug: true` // 开启debug 可以不开启

```
logging:
  level:
    root: info
```

```
logging:
# 设置分组
group:
  ebank: com.itheima.controller,com.itheima.service

level:
  root: info
# 将组内设置信息
ebank: info
```

使用lombok记录日志

```
<dependency>
  <groupId>org.projectlombok</groupId>
  <artifactId>lombok</artifactId>
</dependency>
```

```
@Slf4j
@RestController
@RequestMapping("/Book")
public class controller {

    @GetMapping
    public String say(){

        log.warn("warn~~~~~");
        return "SpringBoot~~";
    }
}
```

设置日志格式输出

```
logging:  
  pattern:  
    console: "%d -%m %n"
```