

Case Study Title: Employee Info API using Spring Boot AutoConfiguration

EmployeeApiApplication.java:

```
package com.company.employeeapi;

import org.springframework.boot.SpringApplication;
import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class EmployeeApiApplication {

    public static void main(String[] args) {

        SpringApplication.run(EmployeeApiApplication.class, args);

    }

}
```

EmployeeController.java:

```
package com.company.employeeapi.controller;

import com.company.employeeapi.model.Employee;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.RestController;

@RestController

public class EmployeeController {

    @GetMapping("/employee")

    public Employee getEmployeeInfo() {

        return new Employee(101, "John Doe", "Engineering");

    }

}
```

Employee.java:

```
package com.company.employeeapi.model;

public class Employee {

    private int id;
```

```

private String name;

private String department;

public Employee() {

}

public Employee(int id, String name, String department) {

    this.id = id;

    this.name = name;

    this.department = department;

}

public int getId() { return id; }

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

public String getName() { return name; }

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

public String getDepartment() { return department; }

public void setDepartment(String department) { this.department = department; }

}

```

Application.properties:

spring.application.name=employee-api

server.port=8080

pom.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
https://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>3.5.4</version>

  <relativePath/> <!-- lookup parent from repository -->

</parent>

<groupId>com.company</groupId>

<artifactId>employee-api</artifactId>

<version>0.0.1-SNAPSHOT</version>

<name>employee-api</name>

<description>Company project for Spring Boot</description>

<url/>

<licenses>

  <license/>

</licenses>

<developers>

  <developer/>

</developers>

<scm>

  <connection/>

  <developerConnection/>

  <tag/>

  <url/>

</scm>

<properties>

  <java.version>21</java.version>
```

</properties>

<dependencies>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-web</artifactId>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-test</artifactId>

<scope>test</scope>

</dependency>

</dependencies>

<build>

<plugins>

<plugin>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-maven-plugin</artifactId>

</plugin>

</plugins>

</build>

</project>

Case Study: Monitoring an Inventory System

InventoryMonitoringApplication.java:

```
package com.company.inventorymonitoring;

import org.springframework.boot.SpringApplication;
import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class InventoryMonitoringApplication {

    public static void main(String[] args) {

        SpringApplication.run(InventoryMonitoringApplication.class, args);

    }

}
```

application.properties:

```
spring.application.name=inventory-monitoring
management.endpoints.web.exposure.include=*
server.port=8082
```

InventoryMonitoringApplicationTests.java:

```
package com.company.inventory_monitoring;

import org.junit.jupiter.api.Test;
import org.springframework.boot.test.context.SpringBootTest;

@SpringBootTest

class InventoryMonitoringApplicationTests {

    @Test

    void contextLoads() {

    }

}
```

Pom.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
https://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>3.5.4</version>

<relativePath/> <!-- lookup parent from repository -->

</parent>

<groupId>com.company</groupId>

<artifactId>inventory-monitoring</artifactId>

<version>0.0.1-SNAPSHOT</version>

<name>inventory-monitoring</name>

<description>Inventory monitoring project for Spring Boot</description>

<url/>

<licenses>

<license/>

</licenses>

<developers>

<developer/>

</developers>

<scm>

<connection/>

<developerConnection/>

<tag/>
```

```
<url/>

</scm>

<properties>

  <java.version>21</java.version>

</properties>

<dependencies>

  <dependency>

    <groupId>org.springframework.boot</groupId>

    <artifactId>spring-boot-starter-actuator</artifactId>

  </dependency>

  <dependency>

    <groupId>org.springframework.boot</groupId>

    <artifactId>spring-boot-starter-web</artifactId>

  </dependency>

  <dependency>

    <groupId>org.springframework.boot</groupId>

    <artifactId>spring-boot-starter-test</artifactId>

    <scope>test</scope>

  </dependency>

</dependencies>

<build>

  <plugins>

    <plugin>

      <groupId>org.springframework.boot</groupId>

      <artifactId>spring-boot-maven-plugin</artifactId>
```

</plugin>

</plugins>

</build>

</project>