**WEEK 3 SOLUTONS**

**Spring Core and Maven:**

**Exercise 1 Configuring a Basic Spring Application**

**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>3.5.3</version>  
 <relativePath/> <!-- lookup parent from repository -->  
 </parent>  
 <groupId>com.exercise</groupId>  
 <artifactId>one</artifactId>  
 <version>0.0.1-SNAPSHOT</version>  
 <name>LibraryManagement</name>  
 <description>Library Management Project</description>  
 <properties>  
 <java.version>24</java.version>  
 </properties>  
 <dependencies>  
 <dependency>  
 <groupId>org.springframework</groupId>  
 <artifactId>spring-context</artifactId>  
 <version>5.3.34</version>  
 </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>

**ApplicationContext.xml:**

<?xml version="1.0" encoding="UTF-8" ?>  
<beans xmlns="http://www.springframework.org/schema/beans"  
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
 xsi:schemaLocation="http://www.springframework.org/schema/beans  
 http://www.springframework.org/schema/beans/spring-beans.xsd">  
 <bean id="bookRepository" class="com.exercise.one.repository.BookRepository"/>  
  
 <bean id = "bookService" class="com.exercise.one.service.BookService">  
 <property name="bookRepository" ref="bookRepository"/>  
 </bean>  
</beans>

**BookRepository.java:**

package com.exercise.one.repository;  
  
public class BookRepository {  
 public void saveBook(String s){  
 System.*out*.println(s+" ,Book Saved");  
 }  
}

**BookService.java:**

package com.exercise.one.service;  
  
import com.exercise.one.repository.BookRepository;  
  
import java.util.ArrayList;  
import java.util.List;  
  
public class BookService {  
 private BookRepository bookRepository;  
 public List<String> books = new ArrayList<>();  
 public void setBookRepository(BookRepository bookRepository){  
 this.bookRepository=bookRepository;  
 }  
 public void addBook(String s){  
 books.add(s);  
 System.*out*.println("Book Added to library.");  
 bookRepository.saveBook(s);  
 }

public void displayAllBooks(){  
 System.*out*.println(books);  
 }

}

Librarian.java:

package com.exercise.one;  
import com.exercise.one.service.BookService;  
import org.springframework.context.ApplicationContext;  
import org.springframework.context.support.ClassPathXmlApplicationContext;  
public class Librarian {  
 public static void main(String[] args) {  
 ApplicationContext obj = new ClassPathXmlApplicationContext("applicationContext.xml");  
 BookService srvc = (BookService) obj.getBean("bookService");  
 srvc.addBook("Fault in our Stars");

srvc.addBook("Atomic Habits");

srvc.displayAllBooks();  
 }  
}

Output:

