**Exercise 5: Configuring the Spring IoC Container**

**Folder Structure (Maven standard)**

spring-basic-app/

├── src/

│ ├── main/

│ │ ├── java/

│ │ │ └── com/example/

│ │ │ ├── App.java

│ │ │ ├── Engine.java

│ │ │ └── Car.java

│ │ └── resources/

│ │ └── beans.xml

*App.java*

package com.example;

import org.springframework.context.ApplicationContext;

import org.springframework.context.support.ClassPathXmlApplicationContext;

public class App {

public static void main(String[] args) {

ApplicationContext context = new ClassPathXmlApplicationContext("beans.xml");

Car car = context.getBean("car", Car.class);

car.drive();

}

}

*Car.java*

package com.example;

public class Car {

private Engine engine;

// Setter method for dependency injection

public void setEngine(Engine engine) {

this.engine = engine;

}

public void drive() {

engine.start();

System.out.println("Car is driving.");

}

}

*Engine.java*

package com.example;

public class Engine {

public void start() {

System.out.println("Engine started.");

}

}

*beans.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>

<https://www.springframework.org/schema/beans/spring-beans.xsd>">

<bean id="car" class="com.example.Car">

<property name="engine" ref="engine" />

</bean>

<bean id="engine" class="com.example.Engine" />

</beans>

**Running command**

mvn clean compile

mvn exec:java

**Output**

Engine started.

Car is driving.

