Spring– L1: Hands-on Assignments

Estimated Efforts: 2PDs
Author:

No. of Assignments to be Completed	**5**

Environment Setup Details:

Option 1	Software to be installed and available on your local PC/Laptop 1. OpenJDK 11 or more 2. Apache Maven 3.x 3. Eclipse IDE Latest version 4. Apache Tomcat 9.0 5. Any database (MySQL/Oracle) OR any in-memory database (h2/hsql) You can raise a software request for the above software by following one of the below options: 1. https://wasp.wipro.com/esd **2.** https://mywipro.wipro.com --> My Requests --> IT Services --> Software Requisition

General Instructions:

a. Use the Eclipse IDE for these assignments.
b. Use Maven build tool/ Maven build based applications.
c. Use H2 in-memory database for the assignments wherever applicable.
d. Create separate project for each of the assignments.
e. Capture screen shots of the output of the program wherever applicable and submit it along with the solutions.
f. Submit the src and pom.xml for each project.

ToC : TCA ADM-Spring-L1

Sensitivity: Internal & Restricted

Topic Name	Min No of assignments to be done for Hands on
Spring Framework Overview	
Spring Framework Architecture	
Spring Environment Setup	
Spring Hello World Example	1
Spring Basics	2
Spring IoC Containers	
Spring Bean Definition	
Spring Bean Scopes	
Spring Bean Life Cycle	
Spring Bean Post Processors	
Spring Bean Definition Inheritance	
Spring Dependency Injection Inversion of Control	2
Spring Injecting Inner Beans	
Spring Injecting Collection	
Spring Beans Auto-Wiring	
Spring Annotation Based Configuration	
Spring Java Based Configuration	

Topics Covered:

Spring Hello World
Assignment-1
Write a simple Spring Application to print "Hello World".

Spring Basics:-
Assignment-1
A Model class "Movie" has the below properties

- movieId – String – E.g.: M001
- movieName – String – E.g.: The Firm
- movieActor – String – E.g.: Tom Cruise
- Create a spring xml configuration file to create a bean entry for the Movie object with some sample property values

The client program should be able to display all the details of the Movie object on the console.

Assignment 2:

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- Re-write the solution of Assignment 1 but this time use Annotations to configure your application instead of xml configurations.

Dependency Injection and Inversion of Control

Assignment 1:

There are two Model classes as below:

Student

studentId -> String -> S001
studentName -> String -> Steve
studentTest -> Object of type Test (could be a collection variety also if you need to store more than 1 test details)

Test

testId -> String -> T001
testTitle -> String -> "Core Java Test"
testMarks -> int -> 80

Create a spring program to create 2 student instances. First student has taken up only one test and the Second student has taken up 2 tests.

In the client program display all the details of both the students along with their test details as well.

Assignment 2:

There are two Model classes as below:

Player

- playerId -> String -> P001
- playerName -> String -> Sachin
- country -> Object -> of type 'Country'

Country

- countryId -> String -> C001
- countryName -> String -> 'India'

Every player belongs to a particular country. Create a spring program to create 5 players and 2 countries. 2 players belong to one country and the other 3 players belong to another country.

The client program should display the details of all players and their corresponding country details. If given a country name, it should also display all the player names who belong to that country.

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