

Spring-L2 – Assignments

No. of Assignments to be Completed	4
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Environment Setup Details:

Option 1	<p>Software to be installed and available on your local PC/Laptop</p> <ol style="list-style-type: none">1. OpenJDK 11 or more2. Apache Maven 3.x3. Eclipse IDE Latest version4. Apache Tomcat 9.05. Any database (MySQL/Oracle) OR any in-memory database (h2/hsqldb) <p>You can raise a software request for the above software by following one of the below options:</p> <ol style="list-style-type: none">1. https://wasp.wipro.com/esd2. https://mywipro.wipro.com --> My Requests --> IT Services --> Software Requisition
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General Instructions:

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

1. Assignment-1:

- Create a Spring application that maintains a list of 10 student objects with details like studentId, studentName, studentAddress in a collection (array, list, map etc.,)
- It also has methods as below:
 - getAllDetails() -> That displays all the details of all 10 students.
 - getDetails(studentId) -> That displays the details of a particular student by taking studentId as an input
- I would want to log a message in the format '<MethodName>invoked at <date-time>' in the console whenever the method successfully completes and would also want to display the total time taken by each of these methods for their execution.
- Use Spring AOP and Log4J for this solution.

2. Assignment-2:

- a. Re-write the solution of 'Assignment 1' above but instead of storing the student details in a collection store the student details in a table in a database and access it whenever required.
- b. Use Spring ORM and Transaction Management for this solution.

3. Assignment-3:

- a. Create a form which takes three inputs from the User -> Science marks , Maths marks and English marks
- b. After entering the data, when the user clicks on the submit button, it has to calculate the sum of these numbers and show the total marks back to the user.
- c. Use Spring MVC for this solution

4. Assignment-4:

- a. Re-write the solution of 'Assignment 3' added with Spring Basic Security Authentication.