**Hands on 1**

**Create a Spring Web Project using Maven**

**SME to walk through the following aspects related to the project created:**

1. **src/main/java :** Contains application source code.
   * Package: com.cognizant.springlearn
   * Contains the SpringLearnApplication (main class) and all future Controllers, Services, Models.
2. **src/main/resources :** Contains application configurations:
   * application.properties: Default config file.
   * Static files, templates (for MVC apps), and logging config can go here.
3. **src/test/java :** Contains unit and integration tests.
   * Follows same package structure for test classes.
   * Can use JUnit or TestNG (based on dependencies).
4. **SpringLearnApplication.java :** Main entry point of the Spring Boot app. SpringApplication.run() bootstraps the entire Spring Boot app.

@SpringBootApplication

public class SpringLearnApplication

{

public static void main(String[] args)

{

SpringApplication.run(SpringLearnApplication.class, args);

}

}

1. **Purpose of @SpringBootApplication annotation :** This is a composite annotation that includes:
   * @Configuration – marks class as a source of bean definitions.
   * @EnableAutoConfiguration – automatically configures Spring beans based on classpath.
   * @ComponentScan – scans current package and sub-packages for components.
2. **pom.xml:**
3. **Walkthrough all the configuration defined in XML file :** Key configurations include:

<groupId>com.cognizant</groupId>

<artifactId>spring-learn</artifactId>

<version>0.0.1-SNAPSHOT</version>

<name>spring-learn</name>

<dependencies>

<dependency>

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

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

</dependency>

<dependency>

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

<artifactId>spring-boot-devtools</artifactId>

<scope>runtime</scope>

</dependency>

</dependencies>

1. **Open 'Dependency Hierarchy' and show the dependency tree :**

* Go to pom.xml → Tab at bottom: Dependency Hierarchy
* It shows parent-child relationships of all libraries used by Spring Boot (like Jackson, Tomcat, etc.).

