Task 1: AEM Understanding

**1.Maven Life Cycle**

* Clean → Deletes old stuff.
* Build → Compiles, tests, packages.
* Site → Generates reports (not really used much).
* Everything runs in a certain order, no need to do manually.

**2.What is pom.xml?**

* Main config file.
* Defines project details, dependencies, build settings, etc.
* Without this, Maven won't know what to do.

**3.How Dependencies Work?**

* Need an external library? Just add it in pom.xml.
* Maven downloads it automatically (no need to manually search).
* Saves it in .m2/repository (so no need to download again).

**4.Checking Maven Repository**

* Local repo → .m2/repository.
* Remote repo → Maven Central.
* Run mvn dependency:tree to see what’s installed.

**5.Building Modules in Maven**

* Multi-module projects have a **parent POM**.
* Running mvn install builds everything together.
* Modules are just sub-projects inside a main project.

**6.Building Only One Module:**

* If you don’t want to build everything:

mvn install -pl module-name -am

* This builds just one module (plus any required dependencies).

**7.What are ui.apps, ui.content, and ui.frontend?**

* ui.apps → All AEM components and templates.
* ui.content → Actual content like pages.
* ui.frontend → CSS, JS, front-end stuff.
* Each one has its own role, don't mix them.

**8.Why Use Run Modes?**

* Different configs for different environments.
* Example: author, publish, local, prod.
* AEM loads the right settings automatically based on run mode.

**9.What is Publish Environment?**

* The place where users see the live content.
* Authors work in **Author instance**, then **publish** it.
* Publish instance is what the outside world sees.

**10.Why Dispatcher?**

* Cache → Speeds up AEM.
* Security → Blocks direct access to Publish instance.
* Load Balancer → Handles multiple requests efficiently.
* Without this, AEM will be slow and vulnerable.

**11.How to Open crx/de?**

* Just go to:
* http://localhost:4502/crx/de
* 4502 = Author instance, 4503 = Publish instance.
* CRXDE is where we edit AEM content.