1. **What is the purpose of the core module in AEM?**

The purpose of core module is it handles backend logic like Sling Models, OSGi services, servlets, and workflows. It provides the dynamic data used by frontend components.

1. **What kind of files and code can be found in the core folder?**

The core folder contains Java classes for Sling Models, OSGi services, servlets, event listeners, and utility functions.

1. **Explain the role of ui.apps in AEM projects**

Contains the frontend code and defines components, templates, and configurations. It is responsible for **how the website looks and behaves.**

1. **How are components structured in the ui.apps folder?**

Each component has component.html, \_cq\_dialog.xml, \_cq\_component.xml, and clientlibs.

1. **Hello World Component:**

* **Where is the Hello World component located in both core and ui.apps?**

Core - /core/src/main/java/com/myTraining/models/HelloWorldModel

ui.apps - /ui.apps/src/main/content/jcr\_root/apps/myTraining/components/helloworld

* **Explain the Java class (in core) for the Hello World component.**

A Sling Model that retrieves the "message" property and provides it to the frontend. If no value is set, it returns a default message.

* **How does the HTL script work in ui.apps for Hello World?**

Displays the message using ${properties.message} in the component's HTML. It dynamically fetches the stored value from JCR and renders it safely.

* **How are properties and dialogs defined for this component?**

Defined in \_cq\_dialog.xml, the dialog contains a text field allowing authors to input a custom message. This value is stored in JCR and used by the component.

1. **What are the different types of AEM modules (core, ui.apps, ui.content)?**

Core - Backend logic.

ui.apps - Stores components, templates, and clientlibs.

ui.content - Contains sample pages and configurations.

Dispatcher - Manages caching and URL rewriting.

1. **How does Maven build these modules?**

Maven compiles Java code, processes frontend files, packages them, and deploys to AEM using structured build phases.

1. **Explain the build lifecycle of Maven in the context of AEM.**

clean - Removes old builds.

compile - Compiles Java code.

package - Creates deployable files.

install - Stores locally.

deploy - Uploads to AEM.

1. **How are dependencies managed in pom.xml?**

Maven manages dependencies in pom.xml using <dependencies> tags. It downloads required libraries automatically from repositories and ensures version consistency.

1. **Why is Maven used instead of other build tools?**

Maven standardizes project structure, automates dependency management, and integrates well with AEM, unlike Ant or Gradle.

1. **What advantages does Maven offer for AEM development?**

Maven simplifies AEM development by handling OSGi bundles, managing dependencies, automating builds, and supporting continuous integration.

1. **How does Maven help in managing dependencies and plugins in AEM projects?**

Maven automates dependency resolution in pom.xml, downloading required libraries from repositories. It also manages plugins for tasks like building, compiling code, and deploying AEM packages.

1. **What does mvn clean install do in an AEM project?**

It removes old builds (clean), compiles and packages the project, and installs the package in the local repository. This ensures the project is correctly built and ready for deployment.

1. **How to deploy packages directly to AEM using Maven commands?**

Use mvn clean install -PautoInstallPackage to deploy the full package or mvn clean install -PautoInstallBundle for only the OSGi bundle.

1. **Explain the purpose of different Maven profiles in AEM (autoInstallPackage, autoInstallBundle).**

autoInstallPackage - Deploys the full content package to AEM.

autoInstallBundle - Deploys only the OSGi bundle without affecting other content.

1. **What is the purpose of dumplibs in AEM?**

dumplibs helps debug and analyze client libraries by listing all clientlibs used on a page, their categories, and dependencies.

1. **How can you view client libraries using dumplibs?**

Access http://localhost:4502/libs/granite/ui/content/dumplibs.html, enter the page path, and analyze the clientlibs loaded.

1. **Explain how client libraries are structured in AEM.**

ui.apps/src/main/content/jcr\_root/apps/myTraining/clientlibs/