

AEM QUESTIONS

What is the purpose of the core module in AEM?

The core module is like the brain of the application in AEM. It contains the backend logic (Java code) that makes the components work. Without it, the components won't function properly.

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

The core folder mainly contains Java classes inside the model's folder, which control the behavior of components. It also has a pom.xml file to manage dependencies and configurations.

Explain the role of ui.apps in AEM projects.

The ui.apps module is where all the front-end components live. It includes HTML, dialogs, and client libraries (like JS and CSS). This is what you actually see and interact with on the website.

How are components structured in the ui.apps folder?

In ui.apps, components are arranged like:

/components/helloworld/ → Component folder.

helloworld.html → Front-end display.

_cq_dialog.xml → Configuration for user input (like text fields).

Hello World Component:

In core, the Java logic (backend) is found under core/models/HelloWorldModel.java.

In ui.apps, the front-end files are under ui.apps/components/helloworld.

The Java class (HelloWorldModel) has a variable called message and a method called init() that sets the value of message with the resource path. This logic is protected, meaning it can only be accessed within the same package or by child classes.

The HTML file uses HTL (HTML Template Language) to fetch and display the message from the Java class.

The _cq_dialog.xml file in the component folder defines what inputs the user can provide, like text, image, or dropdown options.

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

core → Contains the backend Java logic.

ui.apps → Contains components, client libraries, and dialogs.

ui.content → Handles page content and templates.

ui.frontend → Manages front-end frameworks like React, Angular, etc.

it.tests → Handles integration tests.

dispatcher → Manages the server-side content delivery.

ui.config → Contains configuration settings for the project.

How does Maven build these modules?

Maven uses the pom.xml file to understand what modules to build, compile the code, package it, and deploy it to the AEM server. It handles the entire build process automatically.

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

The Maven build lifecycle is:

clean → Deletes old build files.

compile → Compiles the Java code.

package → Creates a deployable file (JAR).

install → Installs the package locally.

deploy → Deploys the package to the AEM server.

How are dependencies managed in pom.xml?

The pom.xml file contains a <dependencies> section where we mention what external libraries or packages we need. Maven then automatically downloads and installs them.

Why is Maven used instead of other build tools?

Maven is simple to use, handles dependencies, automates builds, and works perfectly with AEM projects.

What advantages does Maven offer for AEM development?

Maven makes it easy to build and deploy projects, manage dependencies, and maintain consistent project structure.

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

Maven's pom.xml keeps track of all required libraries and plugins. When you build the project, Maven downloads and integrates them automatically.

What does mvn clean install do in an AEM project?

The command mvn clean install does three things:

Cleans old build files.

Installs all dependencies.

Builds and packages the project.

How to deploy packages directly to AEM using Maven commands?

To deploy the package, use:

```
nginx
```

```
mvn clean install -PautoInstallPackage
```

This command will build and deploy the project to the AEM server.

Explain the purpose of different Maven profiles in AEM

autoInstallPackage → Deploys the entire project (backend + frontend).

autoInstallBundle → Deploys only the backend logic (Java classes).

What is the purpose of dumplib in AEM?

Dumplib is a tool that helps you see all the client libraries (JS/CSS) used in your project.

How can you view client libraries using dumplib?

```
ruby
```

```
http://localhost:4502/libs/granite/ui/content/dumplib.html
```

This page lists all client libraries used in the project.

Explain how client libraries are structured in AEM.

Client libraries are stored in:

/apps/project/clientlibs

└─ js.txt → Lists JS files.

└─ css.txt → Lists CSS files.

└─ allowProxy → Allows public access via /etc.clientlibs/.

This structure allows easy access and loading of JS/CSS files.