1. What is DAM and why do we use it?

DAM (Digital Asset Management) is a system in AEM used to store, manage, and organize digital assets like images, videos, and documents. It helps in:

- **Centralized storage** of assets
- **Easy retrieval and reuse** across pages
- **Optimized delivery** by creating renditions and caching
- **Metadata management** for better searchability

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2. How to create a folder and upload images?

Follow these steps:

1. Navigate to AEM DAM: **http://localhost:4502/assets.html/content/dam**
2. Create a new folder: **/content/dam/myTraining/us/en-us**
3. Upload two images inside this folder
4. To use these images on a page:
   - Open an AEM page in Edit mode
   - Drag and drop the **Image Component**
   - Select the uploaded images from DAM

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3. What are renditions?

Renditions are automatically generated versions of an image in different sizes and resolutions. They help in optimizing image delivery for different devices.

To check renditions:

1. Go to **AEM DAM**
2. Select an uploaded image
3. Click on **"Renditions"** in the properties

AEM generates various renditions like thumbnails, web-friendly sizes, and custom sizes for different devices.

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4. How to add FirstName and LastName fields to Hello World component?

1. **Modify the _cq_dialog.xml** to add two fields:

xml

```
<items jcr:primaryType="nt:unstructured">

  <firstName

    jcr:primaryType="nt:unstructured"

    sling:resourceType="granite/ui/components/coral/foundation/form/textfield"

    fieldLabel="First Name"

    name="./firstName"/>

  <lastName

    jcr:primaryType="nt:unstructured"

    sling:resourceType="granite/ui/components/coral/foundation/form/textfield"

    fieldLabel="Last Name"

    name="./lastName"/>

</items>
```

2. **Modify helloWorld.html** to display values:

html

```
<div>

  First Name: ${properties.firstName} <br>

  Last Name: ${properties.lastName}

</div>
```

Now, when an author enters values in these fields, they will appear on the page.

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5. Using @ValueMapValue in HelloWorldModel.java

Modify the Sling Model HelloWorldModel.java to fetch values dynamically:

java

```java
@Model(adaptables = Resource.class)
public class HelloWorldModel {

    @ValueMapValue
    private String firstName;

    @ValueMapValue
    private String lastName;

    public String getFullName() {
        return firstName + " " + lastName;
    }
}
```

Now, you can use **${helloWorld.fullName}** in helloWorld.html to display the full name.

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6. Why use Package Manager?

AEM **Package Manager** is used for:

- **Deploying components, templates, and content** across environments
- **Creating backup copies** of content
- **Sharing code and content** between teams

Steps to create a package:

1. Open **http://localhost:4502/crx/packmgr/index.jsp**

2. Click **"Create Package"**

3. Add the **Hello World component** and uploaded **images**

4. Build and Download the package

There will be **two packages**:

- **One for DAM assets (images)**

- **One for the Hello World component**

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7. Configure Replication Agent & Publish from 4502 to 4503

Replication is used to **publish content from the Author (4502) to the Publish (4503) environment**.

Steps to configure the replication agent:

1. Open **http://localhost:4502/etc/replication/agents.author.html**

2. Click on **"Default Agent (Publish)"**

3. Enter the **publish instance URL (http://localhost:4503)**

4. Save and **Test Connection**

5. Now, go to **Sites** > Select a Page > Click **"Publish"**

The content is now available in the **Publish environment (4503)**.