**Spring Security Interview Questions:**

What is authentication and authorization:

Authentication and authorization are two processes that work together to protect systems and data from unauthorized access:

* Authentication

Verifies a user's identity to ensure that only valid users can access a system. For example, when you log in to a system, you might provide a username and password to prove your identity.

* Authorization

Determines what resources a user can access based on their identity and level of access. For example, a pet sitter might be authorized to enter a house and access certain areas, but not others.

Authentication and authorization are often used together to protect systems and data. Authentication helps protect user accounts, while authorization protects the systems those accounts can access.

In simple terms, authentication is the process of verifying who a user is, while authorization is the process of verifying what they have access to. Comparing these processes to a real-world example, when you go through security in an airport, you show your ID to authenticate your identity.

A diagram of a type of authentication

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A diagram of a core concept

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Lets take a simple CRUD example.

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If we run this application and access it /all end point , then we can get all the data.

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If we have some sensitive information, then anyone can expose our data easily. So this is not secured.

So implement spring security.

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Now if we run the application, then the password will be generated in the console.

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Now if we try to access the same url with /all, then first it will ask for login page.

A screenshot of a login box

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Here only for the people who has having access to the logs,they can only get the password.

Here username is user and password is from the console.

Now we can able to login.

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This is called authentication, and we will discuss authorization as well.

**How to create our own username and password instead of auto generated password?**

**A screenshot of a computer

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Now if we run the application, then we will not see auto generated password in the console.

We can login with our own username and password.

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All the above authentication is done by spring authentication manager. How to do by ourselves.

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Now instead of giving username and password in the properties file, we can provide like below.

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Now roles method is not important, because we are doing only authentication and not authorization.

In projects, we should not give password as hardcoded. If we run this , we will get error, while trying to login from UI.

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To solve this error, we will create a bean with @Bean tag. It will create instance with the return type of method.

A screenshot of a computer screen

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Now we run it, then it will be success without error.

We can also configure multiple users like below.

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**How to enable authorization?**

Now two roles USER and ADMIN both can access all endpoints from the controller.

So, we can implement authorization to control it.

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