Spring Security

Core Spring Security Components

Core Spring Security Component

1. UserDetails

The UserDetails interface represents a user in the Spring Security framework.
It provides methods to get user information such as username, password, and authorities.

Purpose: To encapsulate user information, including authentication and authorization details.

Implementation: You can use it to extend your User Entity.

Core Spring Security Component

2. UserDetailsService

The UserDetailsService interface is a core component in Spring Security that is used to retrieve user-related data. It has a single method: loadUserByUsername

Purpose: To fetch user details from a datasource (e.g., database) based on the username.

Implementation: You typically implement this interface to load user details, such as username, password, and roles, from your own user repository.

Core Spring Security Component

3. InMemoryUserDetailsManager

The InMemoryUserDetailsManager is a Spring Security provided implementation of UserDetailsService that stores user information in memory.

Purpose: To store user details in memory, typically for testing or small applications. You define users directly in the configuration.

Core Spring Security Component

3. PasswordEncoder

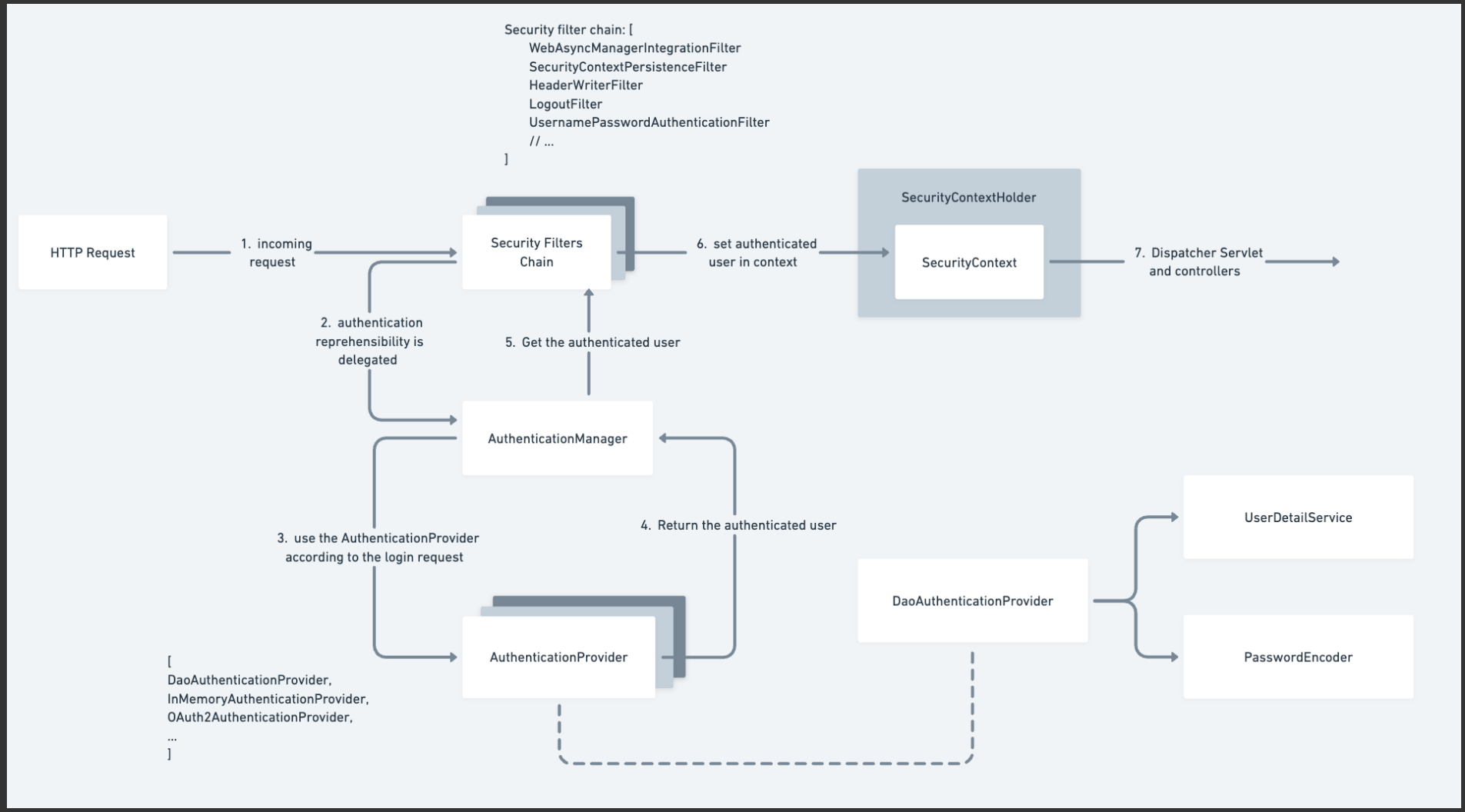
The PasswordEncoder interface is used for encoding and validating passwords. It has methods for encoding raw passwords and matching encoded passwords.

Purpose: To securely hash passwords before storing them and to verify hashed passwords during authentication.

Common Implementations:

- BCryptPasswordEncoder
- Pbkdf2PasswordEncoder
- SCryptPasswordEncoder

Internal Flow of Spring-Security



Zoomed in Flow