# INTRODUCTION

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**What is Spring Security ?**

- Spring Security is a framework  which provides various security features like : Authentication, Authorization to create secure Java Enterprise Applications.

- It is a sub-project of Spring Framework which was started in 2003 by Ben Alex. Later on, in 2004, It was released under the Apache License as Spring Security 2.0.0.

- Currently latest version of Spring Security is 6.0.

- Spring Security helps developers with easier configurations to secure a web application by using standard username/password authentication mechanism.

- Spring Security provides out of the box features to handle common security attacks like CSRF, CORs. It also has good integration with security standards like JWT, etc.

- Dependency for Spring Security :

```
<dependency>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-starter-security</artifactId>
</dependency>
```

**Authentication & Authorization :**

- Authentication verifies the identity of a user or service i.e; Authenticate user and
- Authorization determines their access rights i.e; give permission to access.

| AUTHENTICATION | AUTHORIZATION |
|---|---|
| In authentication, the identity of users are checked for providing the access to the system. | In authorization, person's or user's authorities are checked for accessing the resources. |
| Authentication done before authorization. | Authorization always happen after authentication. |
| It needs usally user's login details. | It needs user's privilege or role. |
| If authentication fails usually we will get 401 error response. | If authorization fails usually we will get 403 error response. |

| For example as a bank customer/employee in order to perform actions in the app. We need to prove our identity. | For example once logged into the application, my roles, authorities will decide what kind of action I can do. |
|---|---|
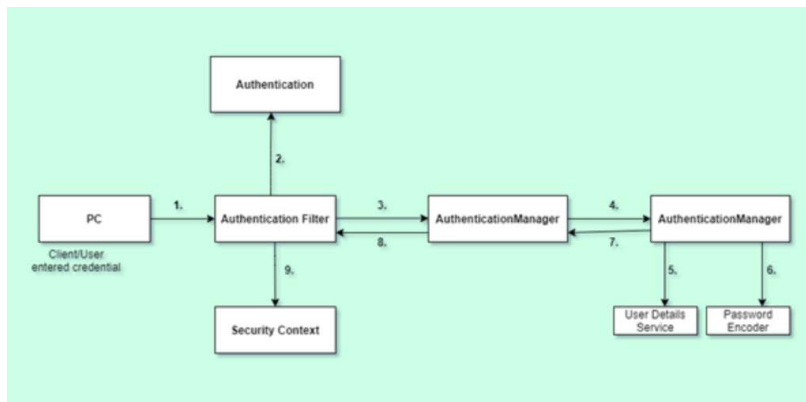


**Filter** : A filter is an object that is invoked at the preprocessing and postprocessing of a request.