**MODULE 4**

**AUTHENICATION & AUTHORIZATION**

TASK 1 (pp. 1 - 3)

Create a simple Spring Web application with endpoint /study/v1/info with returns simple text:

A screenshot of a computer

Description automatically generated

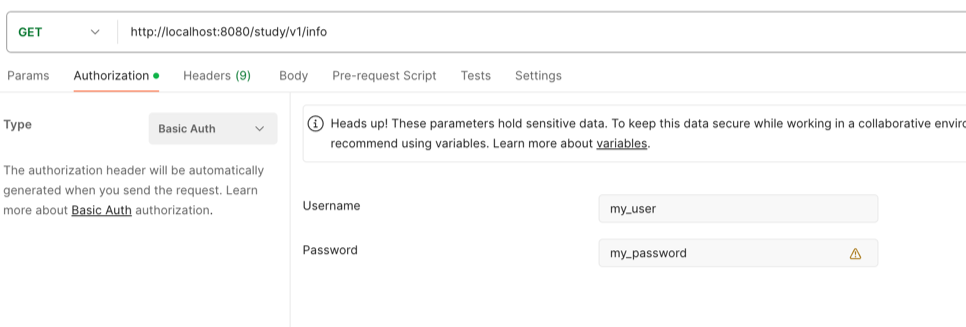
After added spring security dependency and configuration of web security context:

A screenshot of a computer

Description automatically generated

Endpoint stopped being available without authorization.

After adding authorization header with correspondent data:



Endpoint started being available back:

A screenshot of a computer

Description automatically generated

TAKS 2 (pp. 4-6)

In-Memory auth does not work anymore:

A screenshot of a computer

Description automatically generated

Havin provided correct credentials we get access to endpoint:

A screenshot of a computer

Description automatically generated

Now let’s try to login under admin user with incorrect password:

A screenshot of a computer

Description automatically generated

And providing correct password we get access to the endpoint under admin user:

A screenshot of a computer

Description automatically generated

BUT, still the password is used as plain text what’s insecure.

A screenshot of a computer

Description automatically generated

Having installed Spring CLI and executed password encode commands:

A screenshot of a computer program

Description automatically generated

So, now we can store the password in encoded format as bcrypt. Let’s update Liquibase script to replace password field.

Database table with users looks as follows:

A screenshot of a computer

Description automatically generated

Testing endpoint. With correct credentials for ADMIN user:

A screenshot of a computer

Description automatically generated

With incorrect credentials:

SA user

A screenshot of a computer

Description automatically generated

Admin user:

A screenshot of a computer

Description automatically generated

And with correct credentials for SA user:

A screenshot of a computer

Description automatically generated

Introducing new endpoint /study/v1/about with non-authenticated access:

A screenshot of a computer

Description automatically generated

Trying to call /study/v1/info in non-authenticated mode:

A screenshot of a computer

Description automatically generated

DENIED!

Setting up authentication mode ad providing credentials:

A screenshot of a computer

Description automatically generated

TASK 3 (pp. 7-11)

Arranged endpoints with the following authorizations:

/study/v1/about – non-authenticated mode

/study/v1/info – authenticated mode + requires role VIEW\_INFO

/study/v1/admin – authenticated mode + requires role VIEW\_ADMIN

The following users are pre-created and stand for verifications:

‘user\_view’ has role VIEW\_INFO

‘user\_admin’ has role VIEW\_ADMIN

‘user\_view\_admin’ has roles VIEW\_INFO + VIEW\_ADMIN

1. Endpoint ‘about’ does not require authentication:

A screenshot of a computer

Description automatically generated

1. Endpoint ‘info’ requires authentication and role VIEW\_INFO:

Users ‘user\_view’ and ‘user\_view\_admin’ can access it:

‘user\_view’ accesses:

A screenshot of a computer

Description automatically generated

‘user\_admin’ can’t access:

A screenshot of a computer

Description automatically generated

‘user\_view\_admin’ accesses:

A screenshot of a computer

Description automatically generated

1. Endpoint ‘admin’ requires authentication and role VIEW\_INFO:

Users ‘user\_admin’ and ‘user\_view\_admin’ can access it:

‘user\_view’ can’t access:

A screenshot of a computer

Description automatically generated

‘user\_admin; accesses:

A screenshot of a computer

Description automatically generated

‘user\_view\_admin’ accesses:

A screenshot of a computer

Description automatically generated