**Obfuscation of Credentials**:

To Encrypt the application.properties file we used a resource called Jasypt (Java Simplified Encryption) to encrypt our local passwords. Jasypt can keep back-end passwords safe using a simple Encryption method. There are a few steps needed to get Jasypt running in your application.

**Step 1.**

Bring in the proper dependency and plugin:

<dependency>

<groupId>com.github.ulisesbocchio</groupId>

<artifactId>jasypt-spring-boot-starter</artifactId>

<version>2.0.0</version>

</dependency>

<plugin>

<groupId>com.github.ulisesbocchio</groupId>

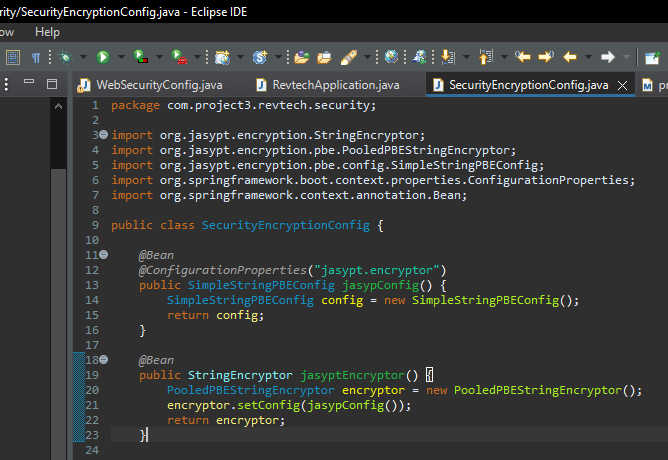
<artifactId>jasypt-maven-plugin</artifactId>

<version>2.0.0</version>

</plugin>

**Step 2.**

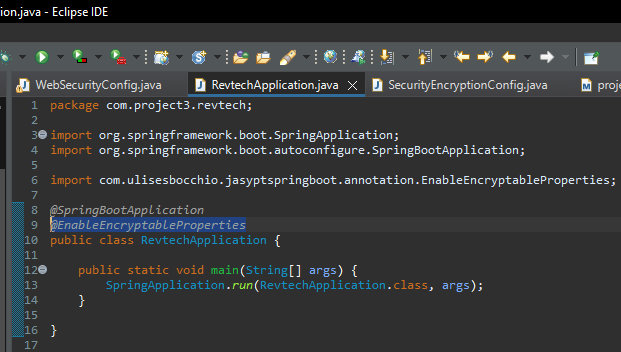
Create Encryption class:



This class with the following functions allow for the encryption. The Jasypt dependency allows you to bring in all the necessary imports.

**Step 3.**

Add @EnableEncryptableProperties annotation to your application class:

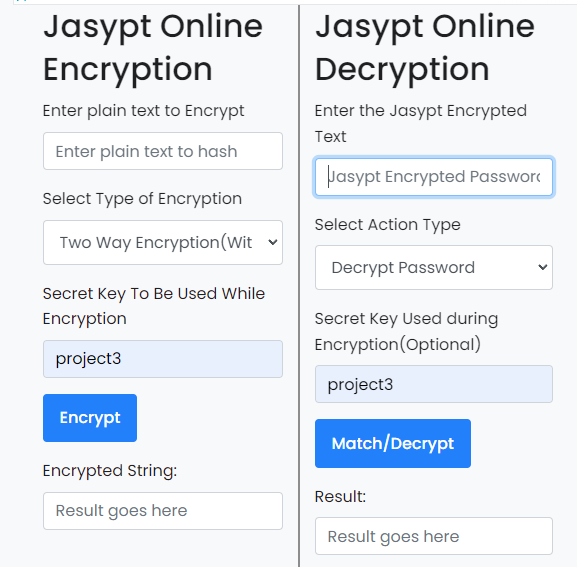


This concludes configuration, the next steps will cover implementation of Jasypt.

**Step 4.**

To implement the Encryption we first need to encrypt the passwords then create a key for each password. To do this we use the Jasypt website below or do a simple Google search, “Jasypt Online Encryption and Decryption”

<https://www.devglan.com/online-tools/jasypt-online-encryption-decryption>



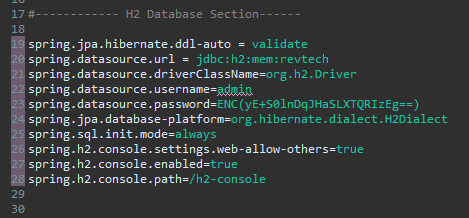
1. The password goes on the first line
2. Select Two Way Encryption
3. Create a Key
4. Copy the Encrypted string

For decryption the process is the same but in reverse. Paste the encrypted value first, select decrypt password, type in your key, and your password will then be given.

**Step 5.**

Adding the Encryption within your project:

In your properties file replace your password with the given encrypted value. The encryption must be wrapped as follows ENC(0qYFveYfWREpiwXtwUSRNQ==). See picture below for example.



**Step 6.**

Running the application:

Now that we have encrypted our database password we can now run the application. When we run the application we must select “Run as Configurations”. Then select “Arguments” at the top. Now under “VM Arguments” type in your key. The format goes as follows:

-Djasypt.encryptor.password=project3

Then select Run. All keys for project 3 is: project3