**Capstone Project and Guidelines**

* Create a table Employee with 3 columns (EmployeeID, EmployeeName, DateOfBirth) in a database.

 Write programming language code (preferably in Java) to query a single record based upon EmployeeID.  This code should run from Springboot or an Application server such as Tomcat, WebLogic, etc.

 Invalid EmployeeID Error should be returned if EmployeeID is not matched.

 Ensure code is checked into a repository such as GIT or equivalent.

 Use Jenkins to deploy changes to the code to the Application server.

 Modify the Java (or equivalent) code so that it is exposed as a HTTP web service. The request should accept a single EmployeeID while the response should have all three fields of that Employee i.e., EmployeeID, EmployeeName, DateOfBirth.

 Web service should print a log file with date-timestamp for every time it is calls.  In case size of log exceeds 1 MB, the log file should get rotated i.e., existing file should be backed up, new log file should be utilized.

 Call this web service from PostMan.

 Change this web service so that it is exposed as HTTPS and not HTTP.  Use a self-signed certificate. Re-test from Postman.

 Write a CURL command to call this web service.

 Write a separate Java (or equivalent) client program to call this web service.

 Update the code of the web service so that DateOfBirth is encrypted using AES-256.

 Update the client program to decrypt this encrypted value.

 Create a containerized version of the web service.

 Deploy this container on Kubernetes, with 3 instances on the container running.  The same/similar client program should be utilized to call this containerized version of the web service.