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ILC Database Theory/Security

Week 3 Progress Report

1/31/2023

My goal is to study Database Theories and Security through the book Translucent Databases. Some additional smaller goals I am trying to accomplish are doing my work this quarter with docker containers and If time allows study a bit about document-oriented databases.

This week I read chapter 3 of Translucent Databases called ‘One-way Tables’, this chapter seemed to expand on the idea of one-way functions from the previous chapter and talked about ways to put them in to practice. One question that the book brings up is when do you apply these functions? For example you could scramble data on the client side that way your data is never seen in your database server as plaintext. This is one method the book has described to make a database more ‘Translucent’. Unfortunately I have not yet done any exercises for this chapter, the practice I did do was more for chapter two where I created a function in java to hash a string input using either md5 or sha256, this was accomplished using the MessageDigest class.

Next week I plan to read chapter 4 and do exercises for chapter 3 and 4. Additionally I would like to expand the java program built last week to connect to a MySQL database and send hashed data, as well as get started on chapter 5.