Exercise 2

CSCI - C437 | *Brandon Young*

Book Questions

7. With an increase to 10 characters there would be an increase in strength of 26^2 as there are two more positions to fill with 26 options each. When we increas to 12 characters, the increase in strength from 10 characters is 26^2 as well, for the same reasons. These are multiplicative, not additive, so every additional character you add to the password improves the strength of the password. When you add aditional characters you increase the base on which the exponent is applied. So when we add numbers, upper-case, and symbols, we get 26 lowercase + 26 uppercase + 10 numbers + 32 characters = 94 ^ length of password. When you add nontypable characters, this again increases the base of the equation to 1,114,206 ^ length of password. Each of these represents a gain in strength many times over.

8. You might consider utilizing blood samples or DNA depending on the hospital. However this can introduce other security concerns as to how DNA and blood are being utilized apart from auth as well as these methods would not be necessarily fast. You could utilize anything from a SSN to a family member's approval. Things you would want to avoid however might me physical auth such as a fingerprint or cell phone text messages. These would require physical motor skills that may not be present.

9. No, this would not be necessary to provide ID to a game website or a streaming service or social media service, as these companies already collect more than they need for their own benefit. This would also increase the possibility of cloned ID. All anonymity is also lost. Therefore, this is not reasonable in all situations.