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CS 405 Secure Coding

3/15/2023

2-2 Activity: SQL Injection Coding

The initial code provided had flaws which would allow hackers to hack into the database using a technique called SQL injections. These flaws had to be modified and fixed to make sure the data was protected for this company. To fix this, it was necessary to add a library to detect patterns and prevent this from being hacked. Here is the code prior to adding and repairing.

Text

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To make modifications, I added in the regex library. Regex library is regular expressions. The regex library is “is a sequence of characters, used to search and locate specific sequences of characters that match a pattern” (Barnhill, 2021). This uses metacharacters to compare strings such as “like”, “similar to” to find similar strings and to help define patterns. This strategy using regex library is used to detect SQL injections. If a hacker was attempting to use SQL injections, a warning message was implemented to present that a person is attempting to hack into the system. This error will block the hacker when attempting to access the database. The below screenshot shows the updated code, a detection of SQL injections, warning presented to the user, and the blocked access.

Text

Description automatically generated

**Sources**

Barnhill, B. (2021, August 9). *How Regex in SQL Works*. The Data School. Retrieved May 13, 2022, from <https://dataschool.com/how-to-teach-people-sql/how-regex-works-in-sql/>