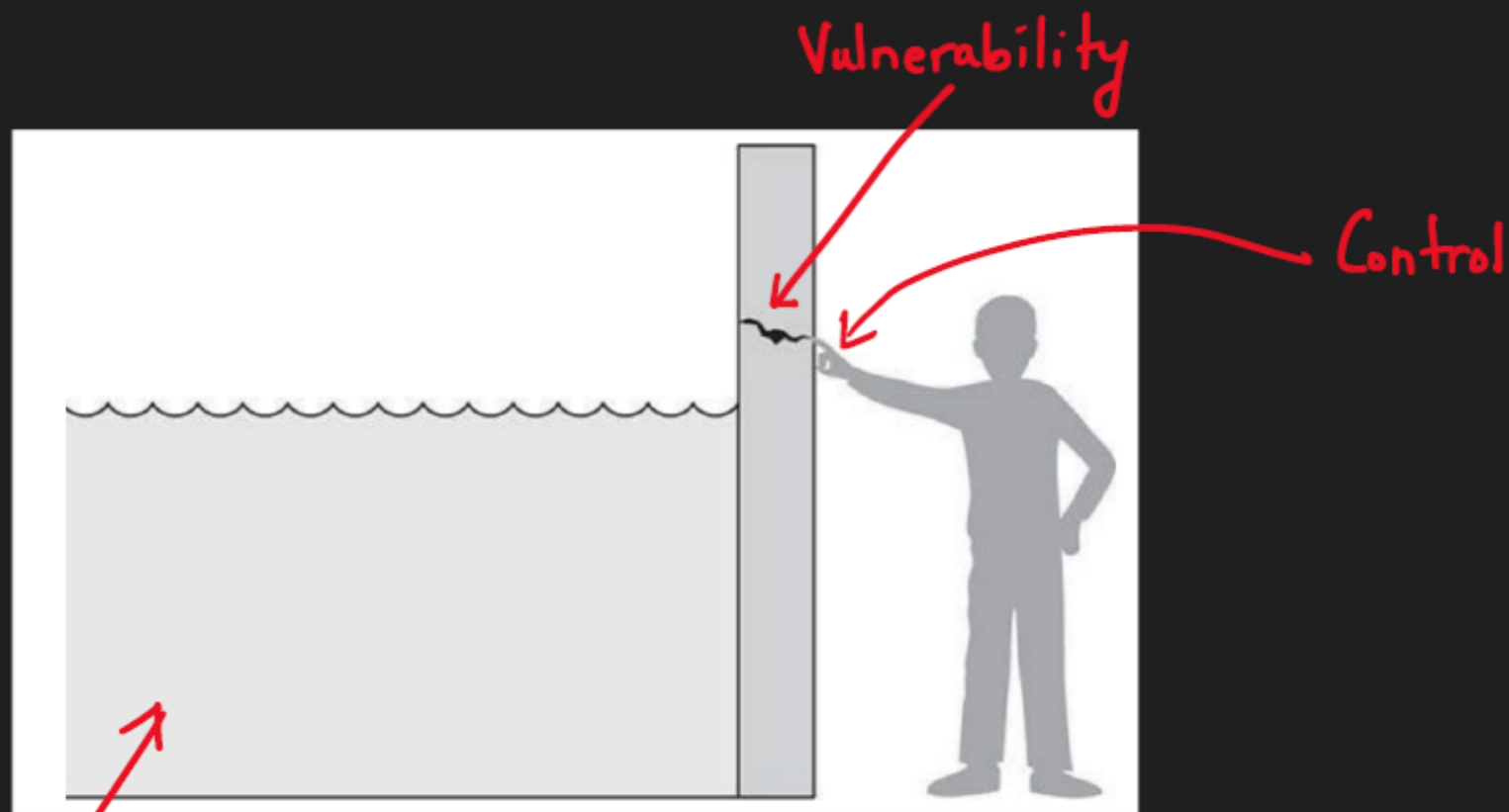# Vulnerability

A vulnerability is a weakness in the system, for example, in procedures, design, or implementation, that might be exploited to cause loss or harm. For instance, a particular system may be vulnerable to unauthorized data manipulation because the system does not verify a user's identity before allowing data access.

Threat

A threat to a computing system is a set of circumstances that has the potential to cause loss or harm.

Control

Controls prevent threats from exercising vulnerabilities.

Vulnerability

Control

Threat

Threat Vs Vulnerability Vs Control

Here, a wall is holding water back. The water to the left of the
wall is a threat to the man on the right of the wall:

The water could rise, overflowing onto the man, or it could stay beneath the height of the wall, causing the wall to collapse.

So the threat of harm is the potential for the man to get wet, get hurt, or be drowned. For now, the wall is intact, so the threat to the man is unrealized

However, we can see a small crack in the wall—a vulnerability that threatens the man's security. If the water rises to or beyond the level of the crack, it will exploit the vulnerability and harm the man.