Jhayla Battle

The CIA Triad is a foundational model in cybersecurity, representing three essential principles: Confidentiality, integrity and availability. Confidentiality is ensuring that information is only accessible to authorized individuals. An example of this includes encrypted communication between a user and a banking website. The next principle is integrity ensuring the accuracy and consistency of data over its entire lifecycle. For example, there are digital signatures that are used to verify that a downloaded file has not been tampered with. The final principle is availability ensuring that information is readily accessible to authorized users when needed. An example of this is cloud storage services ensuring minimal downtime for user access.

Authentication vs. Authorization

- Authentication is the process of verifying the identity of a user. It ensures the user is who they claim to be. An example is entering a username and password to log into a secure website.
- Authorization is the process of determining what actions or resources the authenticated user is allowed to access. For example, after logging in, a user can access their personal account details but not an admin panel.