10 Principles Bingo guide

Throughout camp, you will come across examples of the 10 First Principles of Cybersecurity. Your assignment is to fill in each of the boxes describing the principle as it has shown up in camp. The first principles are:

- Layering: When multiple functions are split across different modules with each module having well-defined interfaces with each other. Example: In a cafeteria, the cook takes clean dishes and puts food on them, the server takes dishes with food in them and gives them to customers, the busser takes dirty dishes and brings it to the dishwasher, and the dishwasher takes the clean dishes back to the cook.
- Resource encapsulation: Creating a well-defined interface to a piece of information or function. Example: A kitchen encapsulating the preparation of food.
- Abstraction: Arranging the complexity of a function into a single unit to reduce it to its set of essential characteristics so that it may be easily used. Example: The ignition, the steering wheel, the gas pedal, and the brakes are abstractions for turning on the car, turning the car, accelerating, and decelerating.
- Modularity: Separating functions into discrete, independent pieces. Example: Standard-sized batteries and power supplies in electronics
- Least privilege: Giving a minimal set of access to someone or something to perform a function. Example: Not giving the CEO of a company administrator access to install software on their machine. Not giving me access to your grades in other classes
- Domain separation: Ensuring a set of users from one class do not have unfettered access to the resources of users in another. Example: Democratic and Republican national committee members should not have access to each others' documents (on a good day at least)
- Process isolation: Ensuring two independent functions do not have any impact on each other. Example: Customers at separate bank tellers should not be able to interfere with one another nor have their information revealed.
- Information hiding: Encoding, encrypting, or otherwise cloaking data to keep it secret. Example: Microdots on printouts used to identify accused NSA leaker Reality Winner
- Simplicity: Implementing the bare minimum of functionality. Example: Removing unused or unnecessary functions from an application.
- Minimization: Reducing the risk and impact of that breaches will have. Example: Collecting only essential personal information from users on your site. Collecting only essential data in surveillance activity.