

# Principles -

<https://pagesonsecurity.blogspot.com/>

*Kerckhoffs's principle*

Only keep hidden the key.  
(e.g., make the design public)

*Principle of simplicity*

Keep everything simple.  
(e.g., unnecessary complexity brings in risks)

*Principle of minimal trust*

Minimise the number of trusted entities, don't trust easily.  
(e.g., do not say your secrets to anyone)

*Security by design*

Build in security from start.  
(e.g., integrate security in all design and development stages)

*Principle of sufficient keys*

The number of possible keys must be large.  
(e.g., avoid brute force)

*Principle of diversity*

Use different types of ... e.g., cryptographic algorithms.  
(e.g., avoid same attacks against all)

*Principle of the weakest link*

A system cannot be more secure than its weakest component (link).  
(e.g., secure all components)

*Principle of modularization*

Keep things modular.  
(e.g., easily change one component with another)

*Principle of (key) separation*

Use different keys for different contexts, compartmentalize.  
(e.g., minimise the damage of a leak)

*Security by default*

Keep default configuration as secure as possible.  
(e.g., deny access by default)

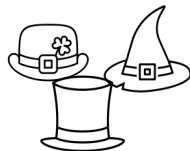
*Principle of least privilege*

Grant the exact privileges required to perform the job.  
(e.g., do not grant less or more privileges)

*Defence in depth*

Use diverse security strategies at different layers.  
(e.g., use physical and technological security)

**Ethics!**



*Security through obscurity (?)*

Oblivious Transfer, Obfuscation, Covert Channels, ... ; Kleptography; Standardisation ...