Security Techniques Comparison Lab 7

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Objective

The goal of this lab is to compare different security techniques.
Three combinations were analyzed using encryption, steganography, and digital signatures.
The comparison focuses on security and performance factors.

Security Combinations

- **Combination A:** Encryption+ Steganography
- **Combination B:** Encryption only
- **Combination C:** Encryption+ Steganography +Digital Signature

Comparison Table

Criteria	Combination A	Combination B	Combination +c
Time	Medium	Fast	Medium
File Size	Larger,Because data is hidden inside an image	Smaller than others	Larger than the original file
Difficulty	Medium	Easy	Medium
Hiding Level	High-the file hidden inside an image	Low-encrypted file is visible	High-data is hidden inside an image
Integrity	Medium	High	Very High
Confidentiality	High	Very High	Medium
Authenticity	No	No	Yes(digital signature is used)

Best Combination

-**Combination C:**is the best option.

*It provides high security.

*It ensures integrity and authenticity.

*It is suitable for sensitive data.

When to Use Each Combination

-Combination A:
When hiding data is important.
-Combination B:
When fast and simple encryption is needed.
-Combination C:
When maximum security is required.

Conclusion

-Different security techniques serve different purposes.

-The choice depends on security requirements.

-Combining methods improves data protection.