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Training Day 12 Report– 4 July 2025
 Introduction
 Day 12 introduced cryptographic fundamentals: hashing, symmetric and asymmetr
 encryption, and key management basics which are critical for protecting data
 and transit.
 Key Concepts Discussed
 We examined the differences between hash functions and encryption, how symmet
 ciphers (AES) and asymmetric schemes (RSA/ECC) are used, and why secure key m
agement and KMS strategies are essential.
 Lab Preparation in Theory
 The class discussed using standard libraries and avoiding home-grown cryptogr
lutions. Key lifecycle: generation, distribution, rotation, and destruction we
 in theoretical steps.
 Practical Understanding (Theory)
 We explored how cryptography integrates with authentication, integrity checks
cure channels. We stressed the importance of using vetted algorithms and corre
 of operation.
 Key Takeaways
 Cryptography is foundational but easy to misuse; using standard, well-reviewe
mentations and following best practices is mandatory.
 Conclusion
 Next we will focus on wireless security – a common and risky attack surface i
 environments.
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