Study Plan — *Locks, Safes and Security: An International Police Reference* (2nd ed.)

User Story Cards (Template + Detailed Examples)

Contents

How to write effective user stories (quick guide)

Template *As a <persona>, I want to <capability> so that <outcome/value>.*

BDD Acceptance Criteria use **Given/When/Then**:
Given the preconditions **When** the action/event occurs **Then** the observable outcome happens.

Quality tags add small "pills" for non-functional goals (Security, Safety, Reliability, Accessibility, Privacy, i18n, etc.).

Definition of Ready / Done appear at the bottom of each card to keep scope clear and testable.

Part I — Fundamentals of Locks, Safes, and Security / A. General Introduction to Locks and Keys

LSS-01 — The Lock: Four Thousand Years of Technology

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Summarize major eras in lock evolution; map materials/tolerance limits to security properties; identify recurring attack/defense patterns.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study The Lock: Four Thousand Years of Technology so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance | Security | Reliability | Safety | Documentation

Acceptance Criteria (BDD)
Scenario Happy path
Given authorized training equipment and this chapter's reading notes
When the hands-on objectives and tasks on this card are completed and evidence is recorded
Then the stated outcomes are observable (artifacts committed to repo, checklists/templates produced)

Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Create a one-page timeline with 8 milestones and a security lesson per milestone.
- ☐ Capture photos/diagrams of 3 historical mechanisms with callouts on how design constrained attacks.
- ☐ Write a 150-word takeaway on why 'assurance' ≠ 'complexity' in lock history.
- ☐ File notes in your study repo; tag 'Foundations'.

LSS-02 — The Last Twenty-Five Years

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Explain modern shifts: precision manufacturing, electromechanical systems, disclosure culture; contrast 'features' vs 'assurance'.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study The Last Twenty-Five Years so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

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- ☐ Select 3 modern mechanisms; for each, list one design advance and one residual risk.
- ☐ Summarize how standards/testing changed vendor claims in 200 words.
- ☐ Draft 3 procurement questions that surface assurance (not marketing).
- ☐ Update glossary with 10 modern terms.

LSS-03 — Definitions of Terms

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Master core terminology (keying, tolerances, shear line, false gate, manipulation); distinguish reliability vs security vs safety vs usability.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Definitions of Terms so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

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- ☐ Build a glossary of $\geq$40 terms with a simple diagram for 10 of them.
- ☐ Create flashcards (CSV/Anki) for all terms.
- ☐ Write 5 trick-question pairs that force distinguishing reliability, safety, and security.
- ☐ Lint the glossary for ambiguous wording.

LSS-04 — Tools and Supplies

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Classify tools (diagnostic, destructive, non-destructive, evidence handling); define lawful use and documentation practices.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Tools and Supplies so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance | Security | Reliability | Safety | Documentation

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- ☐ Create a tools matrix: tool → lawful purpose → risks → PPE → evidence implications.
- ☐ Draft storage/transport SOP (locked cases, serial logging, audits).
- ☐ Assemble a training kit checklist with vendor part numbers.
- ☐ Add a 'permission & safety' pre-check to each future lab.

LSS-05 — Materials and Processes

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Relate metallurgy and machining to defeat resistance; identify common failure modes; connect tolerances to attack surface.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Materials and Processes so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

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- ☐ Compare two cylinders (different alloys); measure play and document wear.
- ☐ Record micro-photos of pins/wafer edges after 100 cycles.
- ☐ Summarize how heat-treat and surface finish change tool marks.
- ☐ Add 'material notes' section template to your case notes.

Part I / B. Keys and Keying Systems

LSS-06 — The Development of Keys

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Describe key evolution (bit→lever→wafer/pin→dimple/laser→electronic) and relate form factors to decoding/duplication risk.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study The Development of Keys so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

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Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Photograph 6 key types; annotate bitting/wards/features.
- ☐ Table: key type → typical bypasses/risks → allowable contexts.
- ☐ Draft signage for 'no photography' policy around sensitive keys.
- ☐ Update glossary: 10 key form-factor terms.

LSS-07 — Producing Blank Keys

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Explain blank manufacturing and why profile differences matter; identify QC attributes that affect longevity and fit.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Producing Blank Keys so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

Acceptance Criteria (BDD)
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Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Microscope compare 3 blanks; tabulate dimensional variance.
- ☐ Document 'close but wrong' profile failure symptoms.
- ☐ Write a purchasing checklist: metallurgy, profile, vendor QC, lot tracking.
- ☐ Add 'blank provenance' field to key logs.

LSS-08 — Methods of Cutting Keys

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Contrast manual vs code vs electronic cutting workflows; plan chain-of-custody for forensic defensibility.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Methods of Cutting Keys so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

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Given authorized training equipment and this chapter's reading notes
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Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Draw workflow diagrams for manual vs code vs electronic cutters.
- ☐ Write evidence-preserving key issuance & record policy.
- ☐ Create a log template with operator, machine, code source, and test results.
- ☐ Draft calibration schedule for cutters (intervals, gauges).

LSS-09 — Producing Keys for Specific Locks

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Outline evidence-preserving approaches to lawful key production; recognize risks of indirect decoding (wear/optics/impression).
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Producing Keys for Specific Locks so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

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Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Document three non-invasive measurement techniques on your trainer.
- ☐ List evidence signatures expected from each technique.
- ☐ Write a 'do-not-attempt' checklist for unowned property.
- ☐ Record a practice session with photos and chain-of-custody notes.

LSS-10 — High-Security Locks and Keys

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Identify features (sidebars, telescoping pins, rotating elements, paracentric profiles); map objectives to real assurance.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study High-Security Locks and Keys so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

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Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Compare 3 high-security platforms: features, known issues, lifecycle costs.
- ☐ Draft policy for key control (issuance, audit, emergency revoke).
- ☐ Summarize why 'high-sec' ≠ 'immune' in 150 words.
- ☐ Create procurement questions probing security features vs bypass history.

LSS-11 — Keying Systems

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Explain master keying, hierarchies, cross-keying risks; model issuance/audit/revocation.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Keying Systems so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

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Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Design a small building keying plan (5 doors, 3 roles).
- ☐ Add revocation playbook and lost-key response SOP.
- ☐ Map key symbols to physical doors; verify no unintended cross-keying.
- ☐ Create audit checklist for quarterly review.

LSS-12 — Basic Lock Configurations: Hardware

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Identify cylinder, cam, housing forms; map configuration to failure/attack surfaces.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Basic Lock Configurations: Hardware so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

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Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Disassemble two housings; diagram interfaces and wear points.
- ☐ Checklist fit/finish: plug clearance, cam travel, retaining clip.
- ☐ Photo catalog of components with part numbers.
- ☐ Write replacement procedure with torque specs.

Part I / C. Basic Locking Mechanisms

LSS-13 — The Warded Lock

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Describe warding principles and conceptual bypasses; recognize acceptable low-risk contexts.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study The Warded Lock so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

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Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Document ward geometry on a trainer; show why certain keys work.
- ☐ List three deployment contexts where warded tech is acceptable.
- ☐ Capture photos of tool marks typical of warded keys.
- ☐ Draft signage advising against warded locks for restricted areas.

LSS-14 — Lever Tumbler Locks

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Explain levers, gates, stump/bolt, curtain; relate tolerances and lift order to resistance.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Lever Tumbler Locks so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

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Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Measure lever travel and gate alignment at open/closed on a trainer.
- ☐ Create failure tree: overset, underlift, false gate, binding order.
- ☐ Record notes on temperature effects on lift repeatability.
- ☐ Update glossary with 8 lever-lock terms.

Part I / D. Specialized Locking Systems and Applications

LSS-15 — Wafer Locks

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Contrast single vs double-sided wafers; identify wear patterns and failure modes.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Wafer Locks so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

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- ☐ Inspect two wafer cores; capture wear maps and decode hints.
- ☐ Draft maintenance interval and lube policy for fleet locks.
- ☐ Write a short brief on automotive wafer vulnerabilities (lawful use only).
- ☐ Prepare customer guidance for low-risk deployments.

LSS-16 — Pin Tumbler Locks

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Explain pin stacks, tolerances, security pins; relate pinning charts to service and rekeying.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Pin Tumbler Locks so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

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Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Re-pin a trainer to three bitting levels; note feel differences.
- ☐ Document how spool/serrated pins change feedback.
- ☐ Write rekeying SOP with pinning chart template.
- ☐ Add risk note on master-pin proliferation.

LSS-17 — Traditional Mechanical Locking Systems

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Survey cam, rim, mortise, padlocks, cabinet mechanisms; map to deployment and risk tier.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Traditional Mechanical Locking Systems so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

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Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Build a selection guide: mechanism → best-fit use cases.
- ☐ Photo/measure three padlocks; compare shackle and body materials.
- ☐ Write environmental suitability notes (corrosion, dust, ice).
- ☐ Add spare-parts BOM for each mechanism.

LSS-18 — Electromechanical Locks

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Identify solenoids, motors, sensors, power/logic dependencies; discuss fail-safe vs fail-secure tradeoffs.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Electromechanical Locks so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

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Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Draw power & fault tree for a sample smart lock.
- ☐ List failure modes for battery-backed designs.
- ☐ Draft emergency egress plan and test schedule.
- ☐ Security baseline checklist: firmware, creds, audit.

LSS-19 — Magnetic Locks

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Distinguish electromagnet vs permanent-magnet systems; explain holding force ratings and egress code considerations.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Magnetic Locks so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

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Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Calculate holding force for a given door and traffic scenario.
- ☐ Write inspection & cleaning SOP to maintain holding force.
- ☐ Compile code/egress requirements summary for your jurisdiction.
- ☐ Plan for power loss scenarios with response steps.

LSS-20 — Wireless Exchange of Coded Information

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Summarize auth models (rolling code, challenge-response); identify attack classes (replay, relay, jamming).
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Wireless Exchange of Coded Information so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

Acceptance Criteria (BDD)
Scenario Happy path
Given authorized training equipment and this chapter's reading notes
When the hands-on objectives and tasks on this card are completed and evidence is recorded
Then the stated outcomes are observable (artifacts committed to repo, checklists/templates produced)

Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Create a test plan that validates anti-replay features on a demo system.
- ☐ Diagram threat paths for relay/jamming and mitigations.
- ☐ List logging requirements for incident response.
- ☐ Draft RF hygiene checklist (antenna, shielding, update policy).

LSS-21 — Intelligent Keys and Locks

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Describe credential lifecycle (provision→use→revoke); explain audit/evidence logging requirements.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Intelligent Keys and Locks so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

Acceptance Criteria (BDD)
Scenario Happy path
Given authorized training equipment and this chapter's reading notes
When the hands-on objectives and tasks on this card are completed and evidence is recorded
Then the stated outcomes are observable (artifacts committed to repo, checklists/templates produced)

Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Draft a key-revocation SOP, including emergency disable.
- ☐ Define least-privilege roles and scope for users and admins.
- ☐ Design log retention and tamper-evidence controls.
- ☐ Write a lost-credential response runbook.

LSS-22 — Programmable Locks and Keys

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Explain firmware, key space, update integrity; plan secure configuration baselines and backups.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Programmable Locks and Keys so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

Acceptance Criteria (BDD)
Scenario Happy path
Given authorized training equipment and this chapter's reading notes
When the hands-on objectives and tasks on this card are completed and evidence is recorded
Then the stated outcomes are observable (artifacts committed to repo, checklists/templates produced)

Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Write a configuration hardening checklist for a programmable cylinder.
- ☐ Define update/signing process and rollback plan.
- ☐ Create backup/restore procedure and test it on a trainer.
- ☐ Add inventory fields for firmware and config versions.

LSS-23 — Specialized Industry Applications

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Map regulated environments (utilities, healthcare, cash handling) to lock requirements; identify environmental constraints.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Specialized Industry Applications so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

Acceptance Criteria (BDD)
Scenario Happy path
Given authorized training equipment and this chapter's reading notes
When the hands-on objectives and tasks on this card are completed and evidence is recorded
Then the stated outcomes are observable (artifacts committed to repo, checklists/templates produced)

Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Pick one sector; produce a two-page security profile & control map.
- ☐ List compliance artifacts needed (standards, tests, audits).
- ☐ Draft deployment checklist per environment conditions.
- ☐ Write vendor questions unique to the sector.

Part II — Methods of Entry / A. Investigation

LSS-24 — Investigation & Evidence Involving Locks and Keys

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Conduct scene-safe documentation; preserve/package/label lock & key evidence.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Investigation & Evidence Involving Locks and Keys so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

Acceptance Criteria (BDD)
Scenario Happy path
Given authorized training equipment and this chapter's reading notes
When the hands-on objectives and tasks on this card are completed and evidence is recorded
Then the stated outcomes are observable (artifacts committed to repo, checklists/templates produced)

Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Build an evidence collection checklist tailored to locks/safes.
- ☐ Draft photo sequencing guide (angles, lighting, scale).
- ☐ Create packaging labels and chain-of-custody template.
- ☐ Write a contamination-avoidance SOP.

LSS-25 — Forensic Exam: Specifications, Operation, Security

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Read manufacturer specs to form hypotheses; plan non-altering test methods.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Forensic Exam: Specifications, Operation, Security so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

Acceptance Criteria (BDD)
Scenario Happy path
Given authorized training equipment and this chapter's reading notes
When the hands-on objectives and tasks on this card are completed and evidence is recorded
Then the stated outcomes are observable (artifacts committed to repo, checklists/templates produced)

Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Collect/manufacture spec sheets; extract testable claims.
- ☐ Write an examination plan that preserves evidentiary surfaces.
- ☐ Define pass/fail criteria aligned to claims and standards.
- ☐ Review plan with counsel/chain-of-custody requirements.

LSS-26 — Forensic Exam: Tool Marks & Trace Evidence

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Recognize class vs individual characteristics; choose lighting, casting, microscopy.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Forensic Exam: Tool Marks & Trace Evidence so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

Acceptance Criteria (BDD)
Scenario Happy path
Given authorized training equipment and this chapter's reading notes
When the hands-on objectives and tasks on this card are completed and evidence is recorded
Then the stated outcomes are observable (artifacts committed to repo, checklists/templates produced)

Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Practice oblique lighting photography on known test marks.
- ☐ Cast a non-evidentiary impression and label it properly.
- ☐ Create a reference library of tool mark exemplars.
- ☐ Document microscope settings for reproducibility.

LSS-27 — Forensic Examination: Keys

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Evaluate keys for wear/duplication artifacts; maintain custody and comparison controls.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Forensic Examination: Keys so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

Acceptance Criteria (BDD)
Scenario Happy path
Given authorized training equipment and this chapter's reading notes
When the hands-on objectives and tasks on this card are completed and evidence is recorded
Then the stated outcomes are observable (artifacts committed to repo, checklists/templates produced)

Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Compare a new key vs a worn key; note measurable differences.
- ☐ Checklist for documenting duplication artifacts and burrs.
- ☐ Define fit-test protocol that avoids altering evidence.
- ☐ Write retention policy and destruction process post-case.

Part II / B. General Introduction to Bypass

LSS-28 — General Introduction to Bypass

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Classify bypass families; tie each to conditions and expected evidence signatures.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study General Introduction to Bypass so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

Acceptance Criteria (BDD)
Scenario Happy path
Given authorized training equipment and this chapter's reading notes
When the hands-on objectives and tasks on this card are completed and evidence is recorded
Then the stated outcomes are observable (artifacts committed to repo, checklists/templates produced)

Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Build a decision tree: pre-conditions → allowable method classes.
- ☐ Define 'stop conditions' that force escalation/notification.
- ☐ Write a legal/ethical disclaimer for training labs.
- ☐ Create a template for post-test reporting and lessons learned.

LSS-29 — Picking

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Explain how tolerances enable manipulation and how security pins respond; identify lawful training scenarios.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Picking so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

Acceptance Criteria (BDD)
Scenario Happy path
Given authorized training equipment and this chapter's reading notes
When the hands-on objectives and tasks on this card are completed and evidence is recorded
Then the stated outcomes are observable (artifacts committed to repo, checklists/templates produced)

Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Maintain a logbook of trainer sessions (mechanism, observations).
- ☐ Record feedback differences across security pin types.
- ☐ Define safety/permission controls for any live-site testing.
- ☐ Summarize ethical guidelines and prohibited scenarios.

LSS-30 — Impressioning

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Describe principles, evidence patterns, and lawful training setups; plan evidence-preserving tests.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Impressioning so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

Acceptance Criteria (BDD)
Scenario Happy path
Given authorized training equipment and this chapter's reading notes
When the hands-on objectives and tasks on this card are completed and evidence is recorded
Then the stated outcomes are observable (artifacts committed to repo, checklists/templates produced)

Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ On a sacrificial trainer, document surface changes after staged impressions.
- ☐ List conditions that invalidate results (contamination, tool changes).
- ☐ Write a 'no live-site' policy statement for impressioning.
- ☐ Add disposal procedure for impressioning materials.

LSS-31 — Decoding: Theory, Procedures, Technologies

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Explain sources for decoding (visual, mechanical, electronic) and evaluate traces/risks.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Decoding: Theory, Procedures, Technologies so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

Acceptance Criteria (BDD)
Scenario Happy path
Given authorized training equipment and this chapter's reading notes
When the hands-on objectives and tasks on this card are completed and evidence is recorded
Then the stated outcomes are observable (artifacts committed to repo, checklists/templates produced)

Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Create a decoding risk matrix (signal needed, traces left, constraints).
- ☐ Define validation steps to confirm decoded values.
- ☐ Draft operator training checklist and dual-control steps.
- ☐ Write incident response triggers if decoding is suspected.

Part II / C. Destructive Entry

LSS-32 — Destructive Entry: Tools & Techniques

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Identify destructive categories and justification; plan safety controls and evidence preservation.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Destructive Entry: Tools & Techniques so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

Acceptance Criteria (BDD)
Scenario Happy path
Given authorized training equipment and this chapter's reading notes
When the hands-on objectives and tasks on this card are completed and evidence is recorded
Then the stated outcomes are observable (artifacts committed to repo, checklists/templates produced)

Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Draft a destruct-entry authorization form and approval workflow.
- ☐ Create a JSA (Job Safety Analysis) with PPE & hazards.
- ☐ Outline evidence capture during destructive work (photos, fragments).
- ☐ Write an after-action report template.

Part III — Locks, Safes, Vaults, Secure Areas

LSS-33 — Origins, Development & Design of Safes/Vaults/Strong Rooms

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Distinguish resistance classes; explain burglary vs fire vs mixed-mode ratings.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Origins, Development & Design of Safes/Vaults/Strong Rooms so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

Acceptance Criteria (BDD)
Scenario Happy path
Given authorized training equipment and this chapter's reading notes
When the hands-on objectives and tasks on this card are completed and evidence is recorded
Then the stated outcomes are observable (artifacts committed to repo, checklists/templates produced)

Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Build a buyer's guide mapping use cases to rating standards.
- ☐ Compare two safe construction approaches (materials, seams, fillers).
- ☐ Define installation checklist (anchoring, environment, egress).
- ☐ Draft service/inspection cadence and record form.

LSS-34 — Combination Locks

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Explain tumblers, flys, fences, dialing tolerances; identify failure modes and audit considerations.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Combination Locks so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

Acceptance Criteria (BDD)
Scenario Happy path
Given authorized training equipment and this chapter's reading notes
When the hands-on objectives and tasks on this card are completed and evidence is recorded
Then the stated outcomes are observable (artifacts committed to repo, checklists/templates produced)

Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Using a legal dial trainer, chart tolerance windows at different speeds.
- ☐ Write SOPs for combination changes and custody of records.
- ☐ Define evidence indicators for manipulation attempts.
- ☐ Create an operator training quiz (10 questions).

LSS-35 — Destructive Entry of Safes

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Describe destructive categories and hazard controls; plan scene safety and post-entry documentation.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Destructive Entry of Safes so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

Acceptance Criteria (BDD)
Scenario Happy path
Given authorized training equipment and this chapter's reading notes
When the hands-on objectives and tasks on this card are completed and evidence is recorded
Then the stated outcomes are observable (artifacts committed to repo, checklists/templates produced)

Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Write a full JSA and permit checklist for forced entry warrants.
- ☐ Define fragmentation/heat/noise control barriers and PPE.
- ☐ Prepare a photography and debris labeling plan.
- ☐ Draft post-entry repair/securement steps.

LSS-36 — Non-Destructive Methods of Entry (Safes)

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Summarize manipulation/testing approaches and prerequisites; anticipate error sources.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Non-Destructive Methods of Entry (Safes) so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

Acceptance Criteria (BDD)
Scenario Happy path
Given authorized training equipment and this chapter's reading notes
When the hands-on objectives and tasks on this card are completed and evidence is recorded
Then the stated outcomes are observable (artifacts committed to repo, checklists/templates produced)

Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Create a manipulation session record form (inputs, hypotheses, outcomes).
- ☐ Define quiet-environment and instrument calibration requirements.
- ☐ Write an escalation path when signal is ambiguous.
- ☐ Add ethics note: training only on owned/authorized equipment.

Part IV — Security

LSS-37 — Standards and Testing

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Navigate standards bodies and protocols; translate ratings to deployment/procurement requirements.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Standards and Testing so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

Acceptance Criteria (BDD)
Scenario Happy path
Given authorized training equipment and this chapter's reading notes
When the hands-on objectives and tasks on this card are completed and evidence is recorded
Then the stated outcomes are observable (artifacts committed to repo, checklists/templates produced)

Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Build a compliance matrix: component → applicable standard/test.
- ☐ Collect citations for each standard; note acceptance criteria.
- ☐ Draft acceptance-testing scripts for incoming hardware.
- ☐ Write vendor attestation questions and evidence requests.

LSS-38 — Security: Analysis and Reduction of Risk

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Perform threat modeling; prioritize mitigations with cost/benefit and mission impact.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Security: Analysis and Reduction of Risk so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

Acceptance Criteria (BDD)
Scenario Happy path
Given authorized training equipment and this chapter's reading notes
When the hands-on objectives and tasks on this card are completed and evidence is recorded
Then the stated outcomes are observable (artifacts committed to repo, checklists/templates produced)

Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Deliver a risk register with $\geq$10 identified risks and owners.
- ☐ Map threats to layered controls and detection.
- ☐ Define KPIs/KRIs and reporting cadence.
- ☐ Write a 'top 5 improvements' memo.

LSS-39 — Security: Physical and Protective Measures

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Layer perimeter, portal, detection, response, and policy controls; plan maintenance and change control.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Security: Physical and Protective Measures so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

Acceptance Criteria (BDD)
Scenario Happy path
Given authorized training equipment and this chapter's reading notes
When the hands-on objectives and tasks on this card are completed and evidence is recorded
Then the stated outcomes are observable (artifacts committed to repo, checklists/templates produced)

Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Produce a layered-defense diagram for a facility entrance.
- ☐ Create preventive maintenance schedule and checklists.
- ☐ Write visitor management and contractor access procedures.
- ☐ Draft change-control form for physical changes.

LSS-40 — Alarm Systems

Epic / Feature	Locks, Safes & Security Study Plan
Business Value	Explain sensing modalities, alarm paths, supervision, and testing; integrate with response and forensics.
Priority / Estimate	Priority: Must SP: 3
Persona	lawful trainee / security engineer / investigator
Dependencies	Training locks you own or have explicit permission for; basic tools; safety/PPE; logbook.
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned property. **Risks** Injury, property damage, or legal risk if misused; manage with SOPs and approvals.

Story *As a lawful trainee / security engineer / investigator, I want to study Alarm Systems so that I can apply its concepts to lawful training, forensic documentation, and secure deployments.*

Non-Functional Performance Security Reliability Safety Documentation

Acceptance Criteria (BDD)
Scenario Happy path
Given authorized training equipment and this chapter's reading notes
When the hands-on objectives and tasks on this card are completed and evidence is recorded
Then the stated outcomes are observable (artifacts committed to repo, checklists/templates produced)

Definition of Ready: Persona clear; AC drafted; Dependencies known; Estimate set. • **Definition of Done:** All ACs pass; Tests green; Security/a11y checks; Docs updated; Deployed/flagged.

- ☐ Draft an alarm validation & false-alarm reduction SOP.
- ☐ Define supervision/heartbeat checks and alerting thresholds.
- ☐ Create drill/response playbooks and training schedule.
- ☐ Table: sensor type → failure modes → tests.