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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 <u><persona></u>, I want to <u><capability></u> so that <u><outcome/value></u>.*

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

Epic / Feature	Locks, S
Business Value	Summarize major eras in lock evolution; map materials/tol
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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' *eq* 'complexity' in lock history.

☐ File notes in your study repo; tag 'Foundations'.

Epic / Feature	Locks, S
Business Value	Explain modern shifts: precision manufacturing, electr
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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)

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

Epic / Feature	Locks, S
Business Value	Master core terminology (keying, tolerances, shear line, fals
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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)

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ Build a glossary of ≥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.

Epic / Feature	Locks, S
Business Value	Classify tools (diagnostic, destructive, non-destructi
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

Epic / Feature	Locks, S
Business Value	Relate metallurgy and machining to defeat resistanc
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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

Epic / Feature	Locks, S
Business Value	Describe key evolution (bit→lever→wafer/pin→dimpl
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

Epic / Feature	Locks, S
Business Value	Explain blank manufacturing and why profile dif
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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)
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.   •   **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

Epic / Feature	Locks, S
Business Value	Contrast manual vs code vs electronic cutt
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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]

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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).

Epic / Feature	Locks, S
Business Value	Outline evidence-preserving approaches to lawful key p
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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⬚

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

Epic / Feature	Locks, S
Business Value	Identify features (sidebars, telescoping pins, rotat
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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]

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

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

Epic / Feature	Locks, S
Business Value	Explain master keying, hierarchies
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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

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.   •   **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

Epic / Feature	Locks, S
Business Value	Identify cylinder, cam, housing f
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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

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.   •   **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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

Epic / Feature	Locks, S
Business Value	Describe warding principles and conc
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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 |

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

Epic / Feature	Locks, S
Business Value	Explain levers, gates, stump/bolt,
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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)

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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, S
Business Value	Contrast single vs double-sided
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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.*

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.   •   **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

Epic / Feature	Locks, S
Business Value	Explain pin stacks, tolerances, secu
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

Epic / Feature	Locks, S
Business Value	Survey cam, rim, mortise, padlocks,
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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)

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.   •   **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

Epic / Feature	Locks, S
Business Value	Identify solenoids, motors, sensors, power
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

21

Epic / Feature	Locks, S
Business Value	Distinguish electromagnet vs permanent-magnet s
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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)

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

Epic / Feature	Locks, S
Business Value	Summarize auth models (rolling code, chall
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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.   •   **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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).

Epic / Feature	Locks, S
Business Value	Describe credential lifecycle (provision→
Priority / Estimate	P
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

Epic / Feature	Locks, S
Business Value	Explain firmware, key space, update i
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

Epic / Feature	Locks, S
Business Value	Map regulated environments (utilities, healthcare, c
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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

Epic / Feature	Locks, S
Business Value	Conduct scene-safe documenta
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

Epic / Feature	Locks, S
Business Value	Read manufacturer specs to f
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

Epic / Feature	Locks, S
Business Value	Recognize class vs individual cl
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

Epic / Feature	Locks, S
Business Value	Evaluate keys for wear/duplication
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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

Epic / Feature	Locks, S
Business Value	Classify bypass families; tie eac
Priority / Estimate	P
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

Epic / Feature	Locks, S
Business Value	Explain how tolerances enable manipulation a
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

Epic / Feature	Locks, S
Business Value	Describe principles, evidence patterns,
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

Epic / Feature	Locks, S
Business Value	Explain sources for decoding (visu
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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

Epic / Feature	Locks, S
Business Value	Identify destructive categories and jus
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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

Epic / Feature	Locks, S
Business Value	Distinguish resistance classes
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

Epic / Feature	Locks, S
Business Value	Explain tumblers, flys, fences, dialing t
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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).

Epic / Feature	Locks, S
Business Value	Describe destructive categories and hazar
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

Epic / Feature	Locks, S
Business Value	Summarize manipulation/testing a
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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

Epic / Feature	Locks, S
Business Value	Navigate standards bodies and protocols;
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have ex
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

Epic / Feature	Locks, S
Business Value	Perform threat modeling; prioriti
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

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

Epic / Feature	Locks, S
Business Value	Layer perimeter, portal, detection, respons
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.

Epic / Feature	Locks, S
Business Value	Explain sensing modalities, alarm paths, s
Priority / Estimate	Pr
Persona	lawful trainee
Dependencies	Training locks you own or have exp
Assumptions / Risks	All activities are lawful, ethical, and documented; no practice on unowned prop

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. • **Definition of Done:** All ACs pass; tests green; artifacts archived.

☐ 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.