

Flashcards App Documentation

Leitner boxes, Weighted Priority, and Anki-like scheduling - all from a simple CSV deck.

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General

This is a lightweight, local-first flashcard web app. Users can paste a CSV or upload one from disk, study immediately, and keep progress saved in the browser. The same deck can be studied using three selection methods.

Deck input

- CSV needs a front prompt and a back answer. Recognized headers include front/back plus common synonyms (question/answer, term/definition).
- Optional id column: stable card identifiers. If omitted, ids are assigned by row order.
- Import: paste into the text area or use the Choose File control (CSV).

Progress and data

- Saved progress lives in your browser (localStorage). The storage key is based on Deck ID + a hash of the CSV text (same Deck ID + same CSV content reloads the same history).
- Tracked per card: attempts, correct, wrong, streak, and timestamps. Anki-like adds scheduler fields (state, due, interval, EF).
- Export progress: downloads a CSV including card stats and scheduler fields for analysis or backup.
- Reset session clears only today's counters; Reset deck deletes saved progress for the deck.

Study controls

- Start/Next selects the next card using the selected method.
- Flip toggles front/back; scoring is intended after revealing the answer.
- Keyboard: Space = flip, N = next, R = reset session. Scoring keys: Leitner/Weighted use 1 (incorrect) and 2 (correct). Anki-like uses 1-4 (Again, Hard, Good, Easy).

Leitner

Leitner mode implements a 5-box system where correctness moves cards toward longer spacing. In this mode, boxes are both the mastery representation and the scheduling mechanism.

How cards move

- Correct: move up one box (max Box 5).
- Incorrect: configurable - either send to Box 1 (fast re-exposure) or move down one box (gentler correction).
- Interpretation: lower boxes contain new/hard cards; higher boxes contain stronger cards.

How the next card is chosen

- Step 1: choose a box using draw weights; Step 2: choose a random card within that box. Empty boxes are skipped.
- Default draw weights (Box 1..5): 0.55, 0.25, 0.12, 0.06, 0.02 (Box 5 is rare but not zero).

Weighted

Weighted Priority mode chooses the next card using a continuous priority score. It strongly favors cards you miss or have not seen recently, while keeping every card eligible. Boxes are not used for selection in this mode; they are updated only for mastery display and to preserve continuity if you switch methods.

Selection formula

weight = base + alpha * error + beta * recency + gamma * streakPenalty

- base: minimum priority every card receives (prevents neglect).
- error: smoothed error rate (higher when you miss the card more).
- recency: increases as time since last shown grows; reaches 1 at the Recency target (minutes).
- streakPenalty: higher when streak is low (hard cards stay prioritized until stable).

Key settings

- Recency target (minutes): time window for recency to ramp to its maximum.
- Explore %: chance to ignore weights and pick a random card (prevents tunnel vision).
- Avoid repeats (recent N): soft guardrail to reduce immediate repeats.

Anki-like

Anki-like mode schedules cards by due dates and intervals (spaced repetition). This app uses an SM-2 style scheduler with learning steps. It is 'Anki-like' in behavior, but not a full replica of Anki's modern FSRS.

States and ratings

- States: new, learning, review.
- Ratings: Again (missed), Hard, Good, Easy.
- Learning steps (minutes): new or lapsed cards repeat quickly (e.g., 1,10). After finishing steps, the card graduates into review with day-based intervals.

Scheduling behavior

- Again: resets into learning steps (short re-exposure).
- Hard/Good/Easy: advance learning steps or grow the review interval (Hard grows less; Easy grows more).
- Ease factor (EF): updated after each rating; higher EF makes future intervals grow faster.
- Session caps: optional limits for new cards introduced and due reviews completed per session.
- Study ahead: if enabled and nothing is due, show the soonest-due card anyway.

Boxes in Anki-like mode

Boxes are display-only here. The app derives a 1-5 box label from the current interval (short intervals map to lower boxes; long intervals map to higher boxes) so the distribution table still communicates mastery.