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Augmenting Anki: Gamification of Software to Promote Retrieval Practice with Spaced Repetition

CIMED Research Day 2021

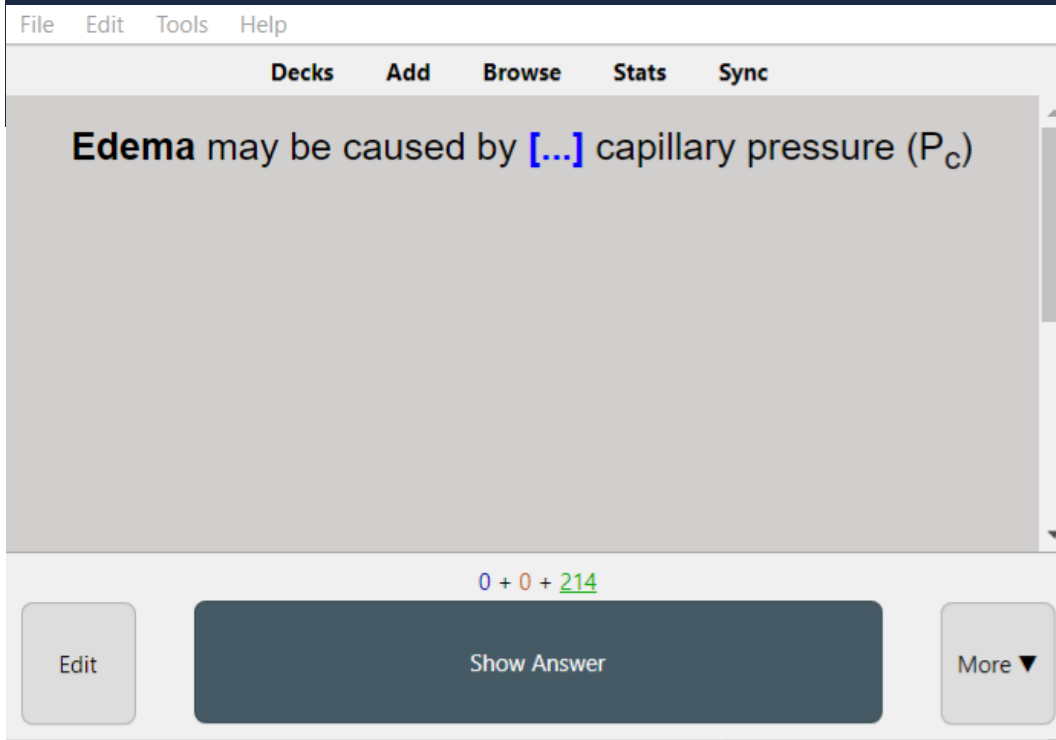
Joseph Policarpio, Bailey MacInnis, Robert C. Wallon PhD

Motivation for Innovation

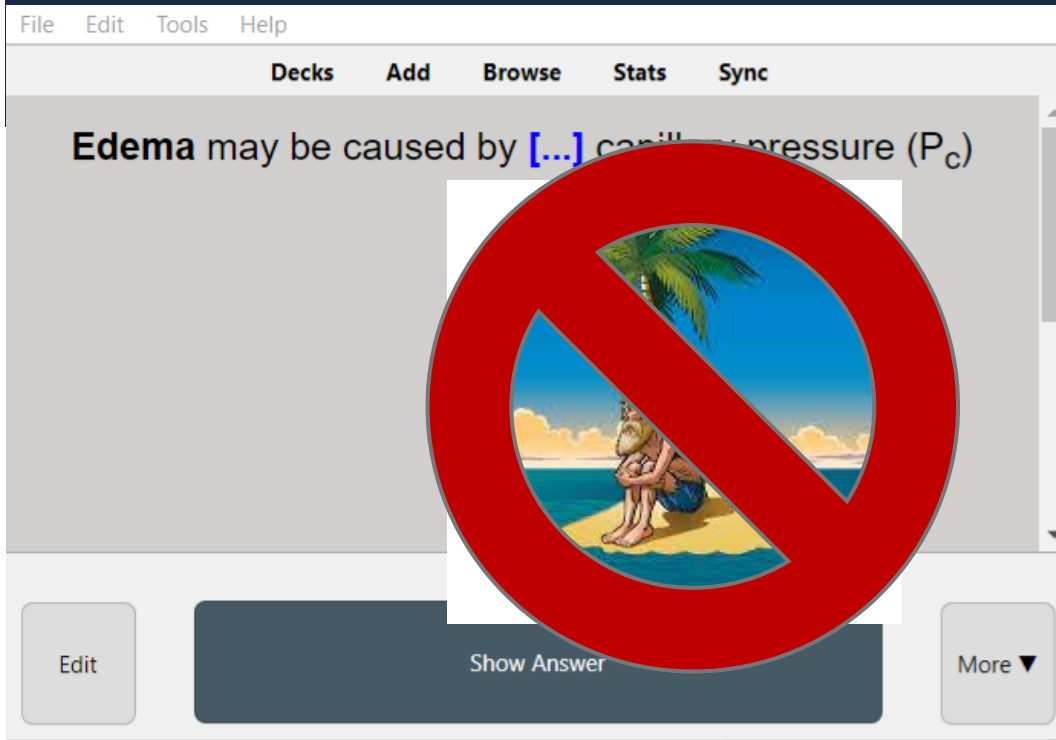


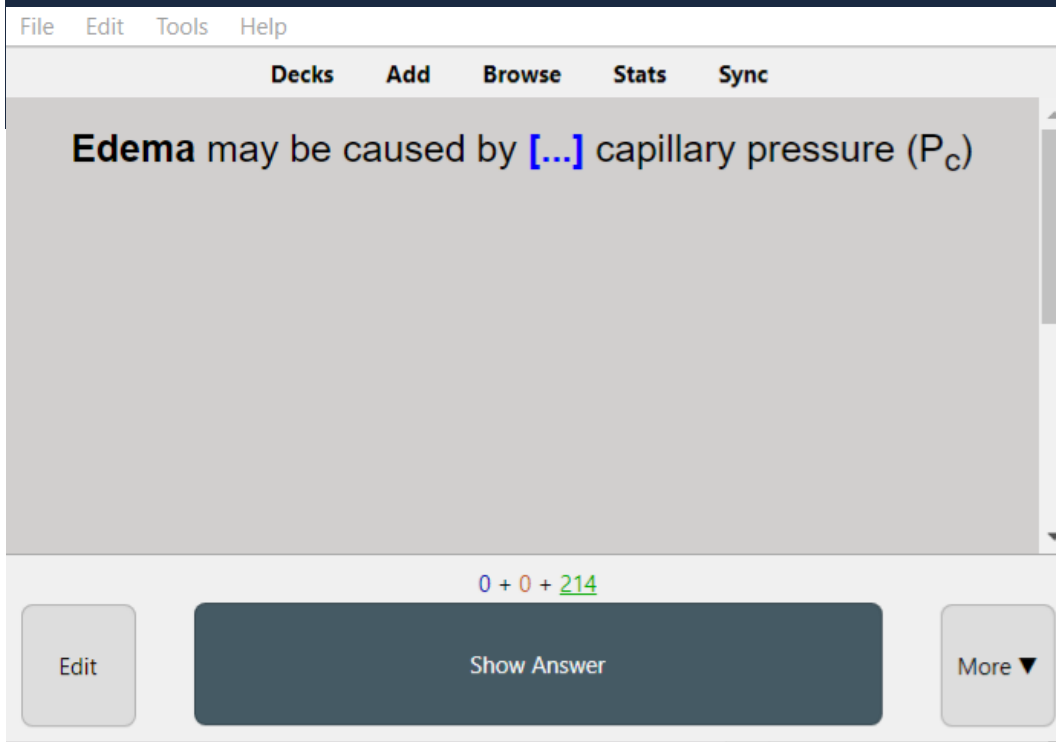
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Motivation for Innovation



Motivation for Innovation





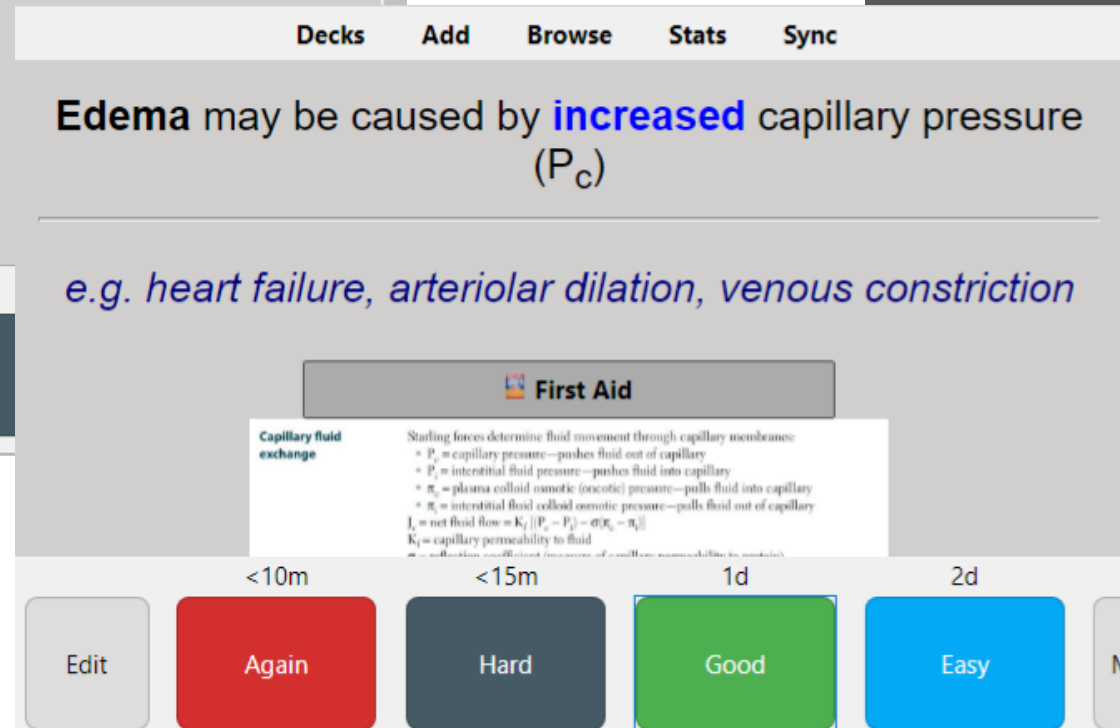
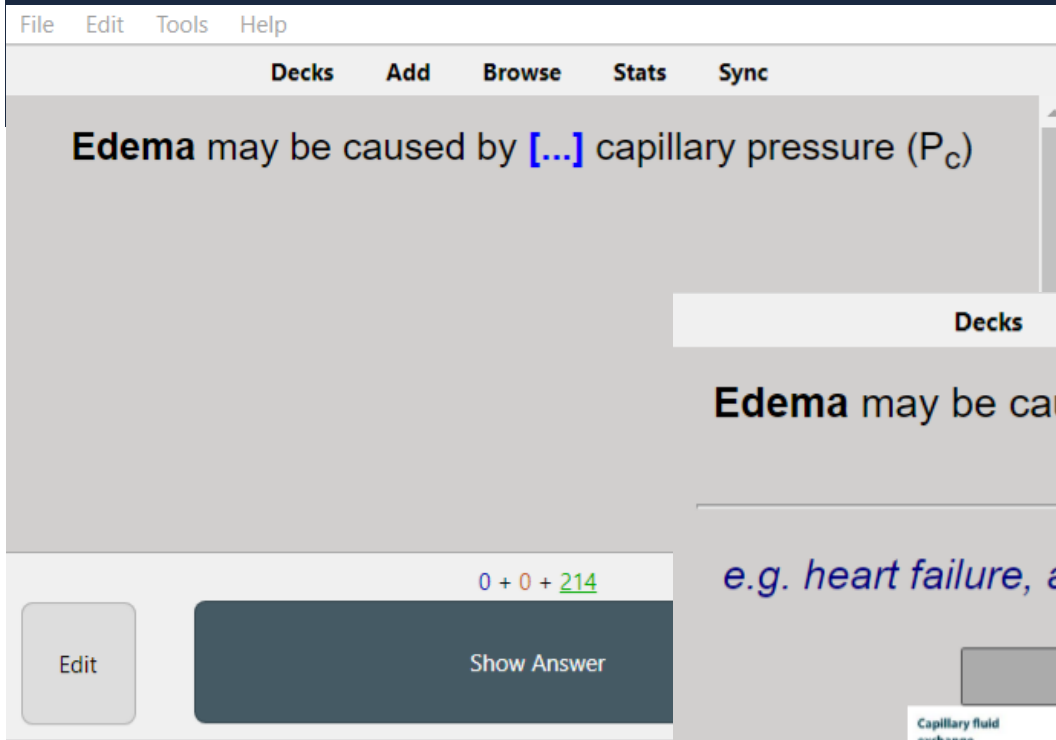
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1. Background

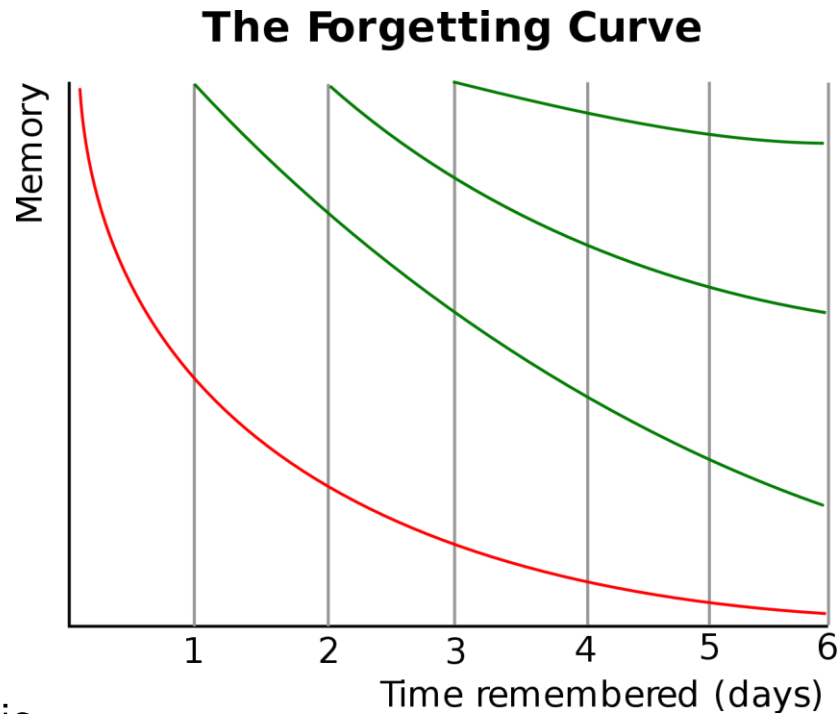
2. Our add-on to Anki

3. Future directions

Anki Background



Anki Background



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- Spaced repetition
- Correct answers advance to longer interval
Easy → Less frequent
Older
- Incorrect answers return to shortest interval
Difficult → More frequent
Newer

Gamification



Examples

- Points
- Badges
- Leaderboard
- Time Constraint
- Narrative

Benefits

- Feelings of relatedness
- Autonomy
- Competence

Download our add-on

Battle Anki

Welcome to [Battle Anki!](#)

Name	Status
Player 1	Away
Player 2	Ready
Player 3	In Battle
Player 4	Ready
Player 5	Ready
Player 6	In Battle

Current Options:
 100 Review cards
 Due today only including overdues
 In order of relative overdueness
 Yes reschedule
 Yes accept joins in battle

Change Options

Away Status Show Badges Join Battle Send Request

v2.12

Control "Battle" settings

Battle Anki Options

Please note: some older, infrequently used options and future options are temporarily disabled.

100 cards
Max 500 cards

Card Type for both players	Card Order for you only
<input checked="" type="checkbox"/> Review	<input type="radio"/> Random
<input type="checkbox"/> Both	<input type="radio"/> Order Due
<input type="checkbox"/> New	<input checked="" type="radio"/> Relative Overdueness

Apply rescheduling?
if left unchecked, these cards won't count

Bailey Mode
cards due today and overdue

Accept joins while in battle

Apply

v2.12

1. Send a request to up to 6 online players

Anki

Nice work! You are almost an AnKing!

OK

Battle Anki

The Anki Battle is on!!!

Player 3	53%
Player 5	67%
Player 1	65%
Player 4	56%
Player 2	63%

2. Accept an invitation

Battle Anki Request

Hello,

would like your help
 ndying a Battle Deck with these options:

Deck size: 10
 atched (identical cards): False
 New cards: True
 Review cards: True
 Mature cards: False
 Reschedule based on answers: True
 Due today only: True

Would you like to play?

Yes No



Customization of Gamification



Badges	# of cards
★	>0
🛡️	250
🛡️	500
🛡️	750
🛡️	1000
🛡️	2500
🛡️	5000

Summary

- 500th download from Ankiweb TODAY!
- At least 7 GitHub repository clones
- May increase
 - Intrinsic motivation
 - Autonomy
 - Relatedness to colleagues



Scan for Anki
website:

apps.ankiweb.net

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Scan for Ankiweb add-on page:

ankiweb.net/shared/info/613520216



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Future Directions

Research Study

- Crossover design
 - Control period
 - Intervention period
- Subjective survey of each period
- Objective usage metrics



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Thank you



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