

Study Snake

A Flash-Card App for Android

Goal : Improve Retention of Information learned in school

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Implementation:

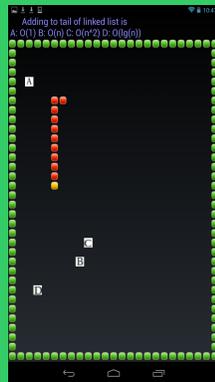
Approach:

Flash-cards are useful, but they are also boring. Classic arcade games are addicting, but they are also useless.

StudySnake is an app that solves these problems.

Gameplay:

- Multiple choice questions are displayed one by one at the top of the screen. The user plays the snake, and must eat the correct answer. There are 4 apples, A, B, C, and D.



- If the user answers a question correctly, the snake grows, and gets faster, as in traditional snake.

- If the answer is incorrect, or the snake runs into itself, or the wall, it is reset to the starting small, slow snake.

- Incorrectly answered questions will return before the end of the quiz, with the previous wrong answer no longer available.

Ui: swiping in a direction turns the snake.

Spaced Repetition :

A learning technique in which the student is presented with facts at intervals of increasing length. This technique exploits the psychological "spacing effect."

When a new fact is heard, it is retained for a short amount of time, unless it is heard again within that window of time. These windows get longer until they are years long.

Time a fact will be remembered for after each repetition:



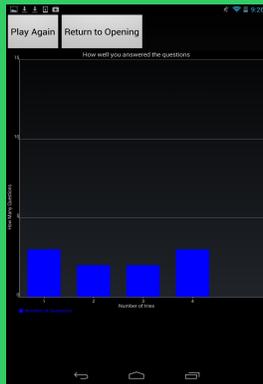
There are varying theories as to what intervals are most effective.

Flash-Cards are an effective medium for using spaced repetition, and an App can assist in reminding the user when the next useful time has come to repeat the fact.

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Score Reporting:

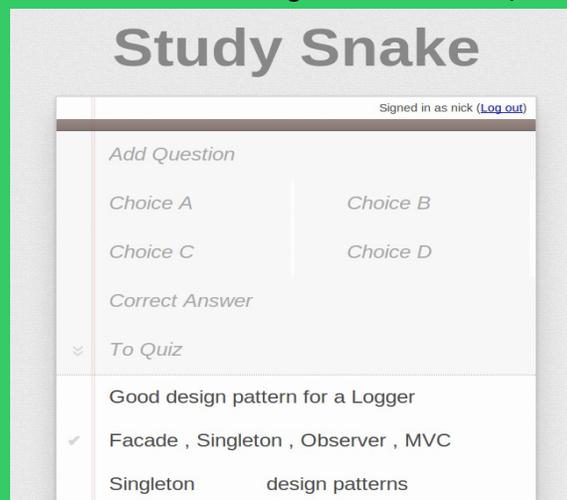
At the end of the quiz, the user can view a graph of the questions and how many tries it took to answer them correctly, as well as the correct answers.



The user can also choose to immediately take a quiz of only the questions they answered incorrectly.

Data Storage: Uses Parse, a service that provides back-end for mobile apps.

Quiz Generation: A webapp allows the user to login and create quizzes.



Platform: targeted at Google's Nexus 7

Poster Credit : http://en.wikipedia.org/wiki/Spaced_repetition

Future Directions:

- Implement Spaced Repetition Algorithm with reminders to the user to take the quiz at the needed intervals.
- Compare different spacing patterns by effectiveness.
- Allow different classes of users (like QuizMaster and participant) to enable score reporting.