CS in the City 2022 – Software Product Engineering

MedicRecall

Situational Judgement Test (SJT) Revision App

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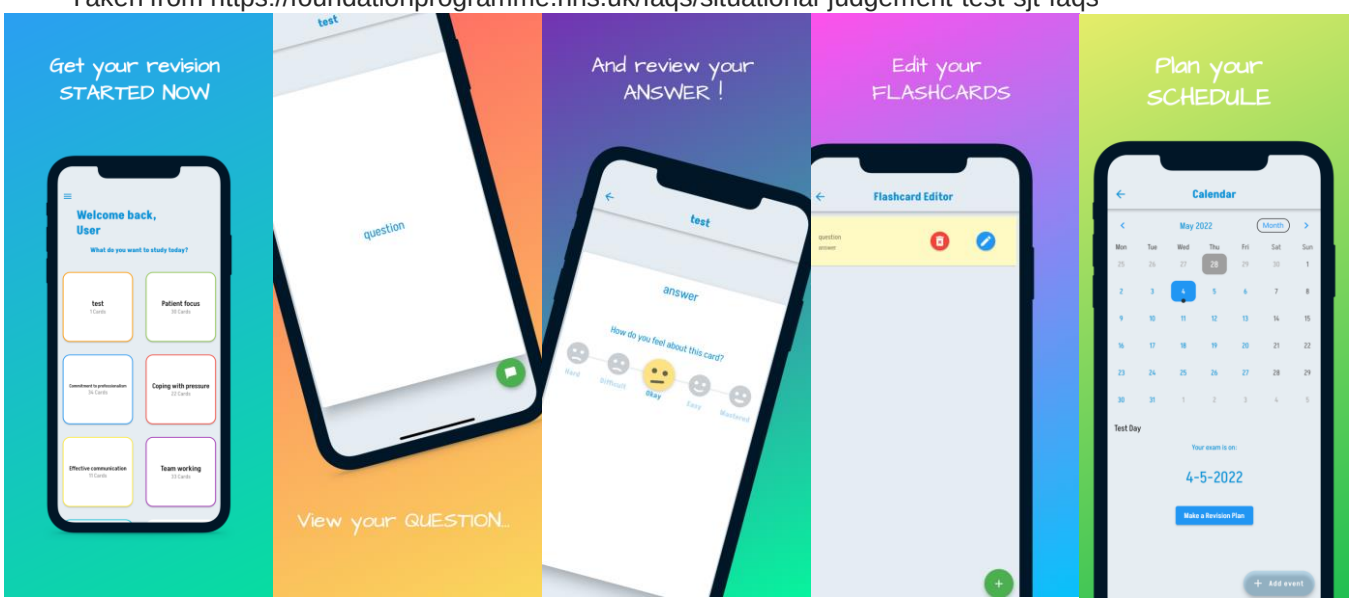
CONTEXT

The purpose of this project is to develop an application capable of helping medical students prepare for the Situational Judgement Test (SJT). This is done using flashcards that stimulate a recall of the information, encouraging memory retention of the content. This is further aided using our spaced-repetition algorithm, which rearranges the cards based on how difficult the user finds a card; harder ones are shown at a greater rate than easier ones.

The Situational Judgement Test is part of the selection process for entry to the Foundation and Specialised Foundation Programme (SFP), testing the attributes needed to work as a foundation doctor.[1] Our client William Harris is a final year medical student, who, upon using these study techniques scored very highly in the SJT, receiving a competitive placement for his junior doctor placement.

[1] Taken from https://foundationprogramme.nhs.uk/faqs/situational-judgement-test-sjt-faqs



FRAMEWORK CHOSEN

The project has been built using the Flutter framework, which allows us to build an app for mobile, desktop & the web from a single codebase. We are also using Google's Firebase REST API to handle app authentication and to store our flashcards and quizzes.

FUNCTIONS

Flashcard Algorithm: determine what cards get shown and how often

Calendar: provide an insight into a user's day to day activity as well as planning for their revision, quizzes and mock exam.

SJT Quiz allows students to practice mock SJT questions.

Flashcard Editor: allows for CRUD operations on individual flashcards.

Light/Dark mode: ability to toggle between light/dark mode.

Information Page: contains general info about the SJT

Website: more information about the project and marketing tool for the application.

ALGORITHM

Users have a freedom of choice. They decide when they want to study new material and when they want to revise. Each time a user sees a card, they can rate how difficult it was for them.

While revising, the algorithm is designed to persuade the users to engage with flashcards they have struggled the most. This is achieved by making the cards that are viewed less and have higher difficulty rating appear more often.

While studying or revising, the user has the discretion to choose the topic. The context mapping feature, working in sync with the calendar, allows users to track when they have revised a given topic and set reminders to plan spaced repetition. The user can use that feature to track their progress and understand the ideal times for revising topics they have studied before.

Once confident, the user has access to the quizzes and Mock Paper taken from the official test, allowing them to see the result of their hard work.

OUR LINKS

GitHub: https://github.com/spe-uob/2021-Flashcard

Website: https://spe-uob.github.io/2021-Flashcard/

Contact: gq20332@bristol.ac.uk

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