



University
of Glasgow | School of
Computing Science

THRIVE: PROMOTING PHYSICAL ACTIVITY FOR MENTAL WELL-BEING

Honours Individual Student Project

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Objectives

Create

Create a collaborative fitness tracking game

Support

Support physical activity to combat negative effect on mental wellbeing and the decline in physical activity due to COVID-19

Evaluate

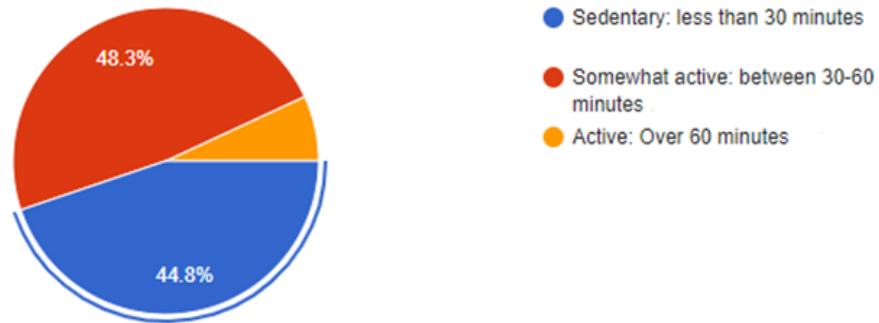
Evaluate if the mobile app had a positive effect on mental wellbeing



COVID-19 Impact Survey

Weekly physical activity level post-COVID 19?

29 responses

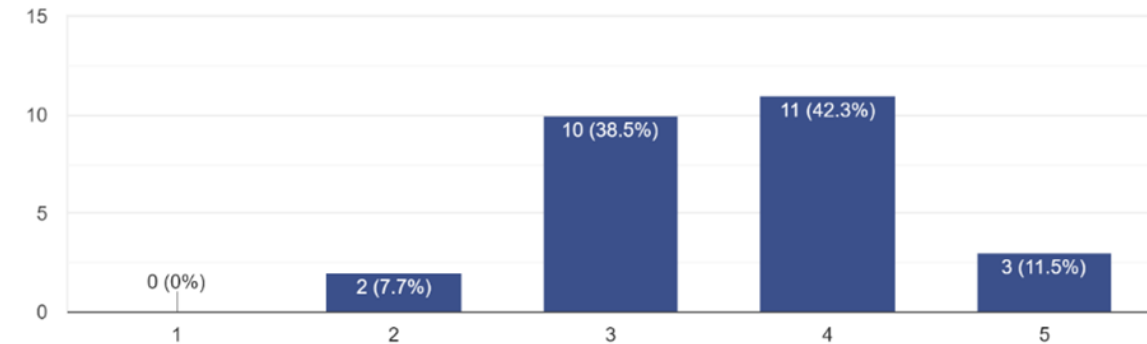


Physical activity impact

- Before pandemic: 24%
- After pandemic: 44%
- 20% increase in sedentary behavior

How has COVID-19 effected your mental health?

26 responses



Mental health impact

- 42% negative impact
- 7% positive impact



Features to support behaviour change



TEAM SETTING



COLLECTIVE GOALS



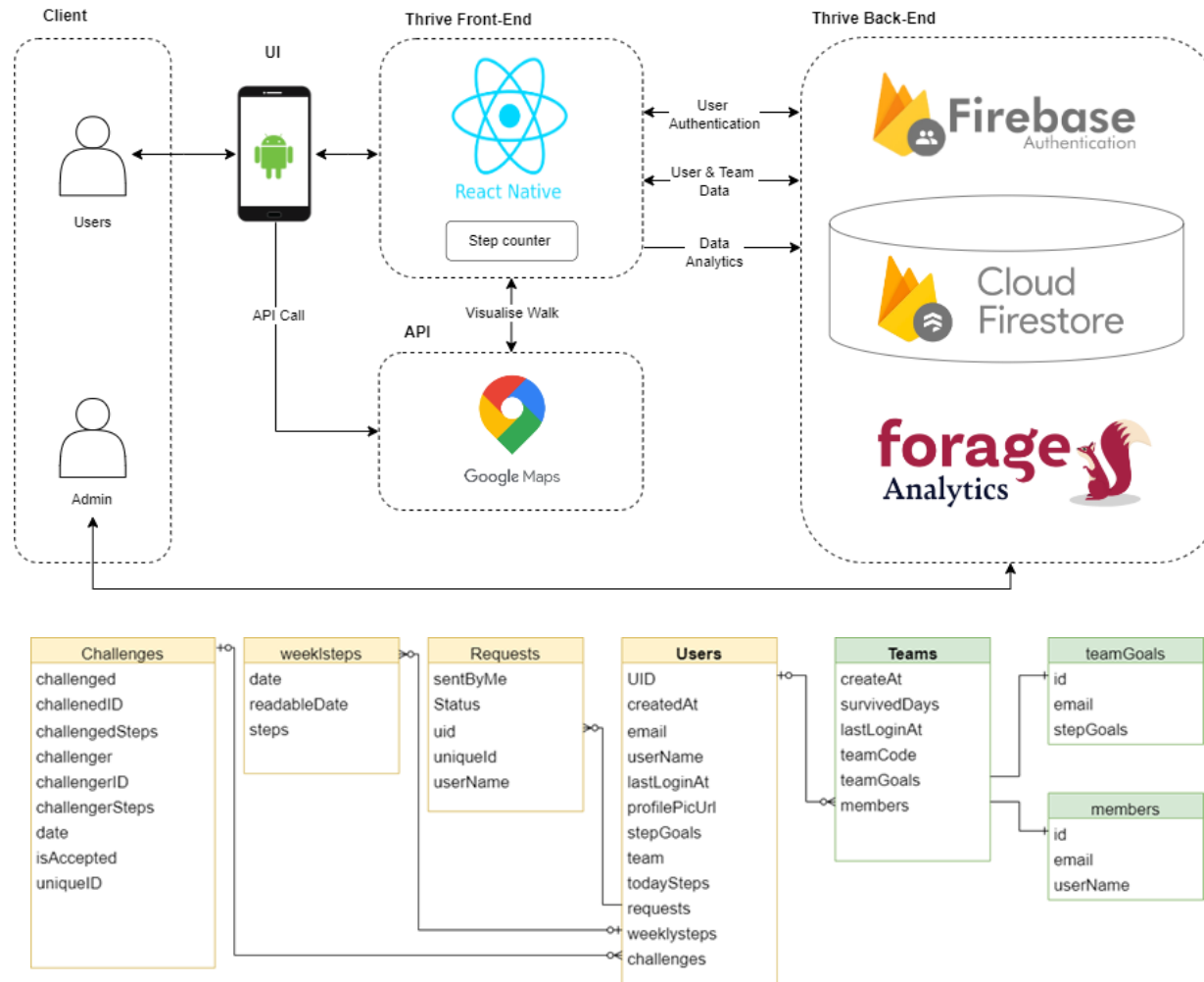
REWARDS



SELF DEFINED
GOALS



Implementation



Back-end Implementation

- Firebase
- Forage

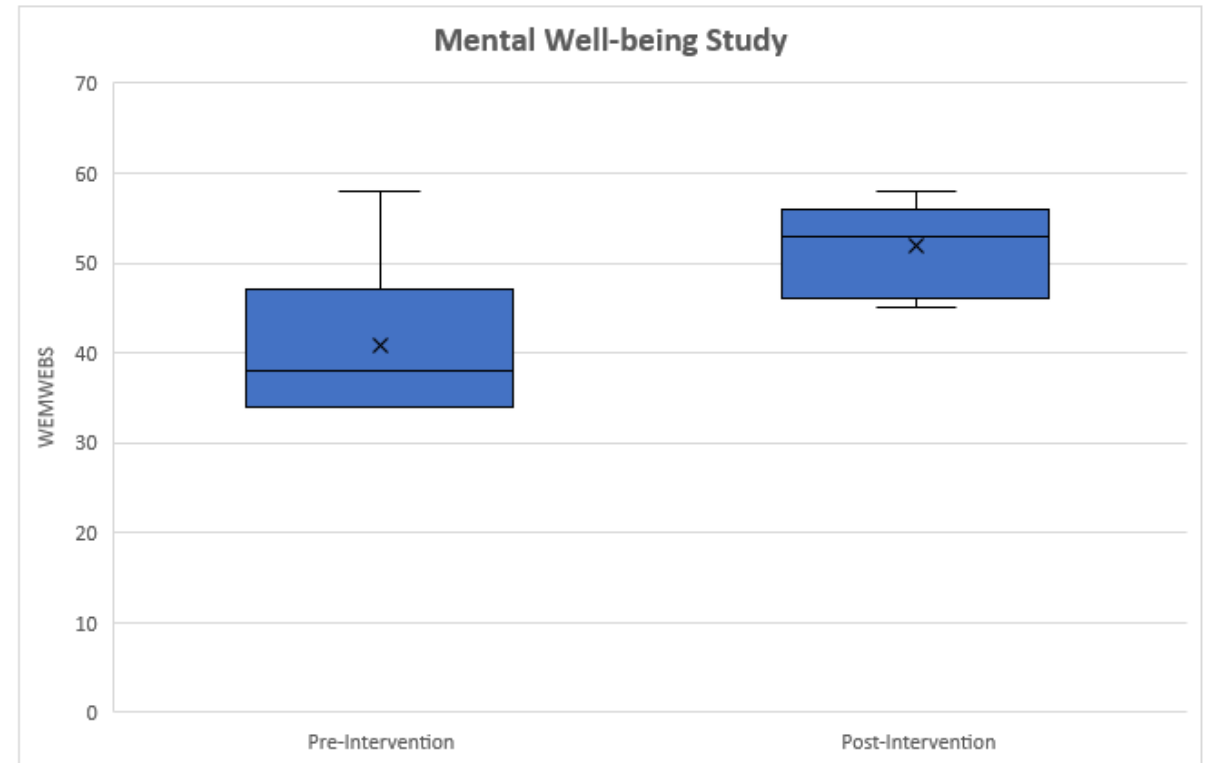
Front-end Implementation

- React Native
- Google Maps
- Step Counter



Evaluation Results

- Warwick-Edinburgh Mental Wellbeing Scale
- Statistically significant increase of 11 points
- 89% usability score
- Interview- competitiveness, health benefits

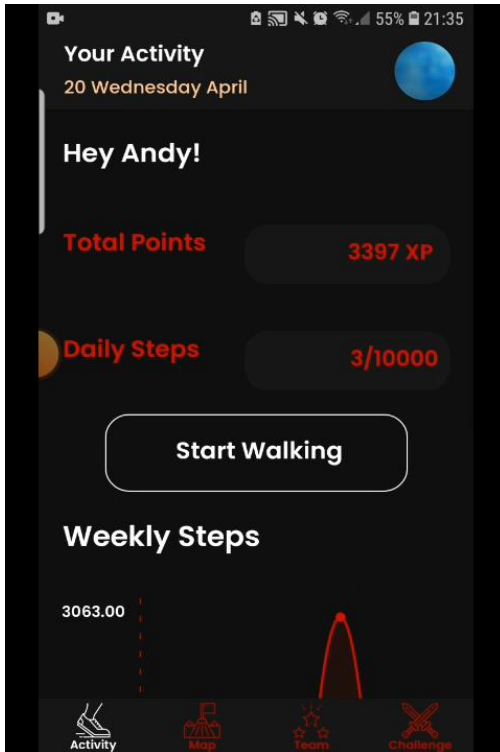


Conclusion

- Physical activity lead to a positive increase in mental wellbeing score
- A longer study needs to be carried out and the clinical significance should be investigated with a larger sample of participants
- Improvements to application: refine step counter, Cloud Storage, add long term rewards from points gathered by players



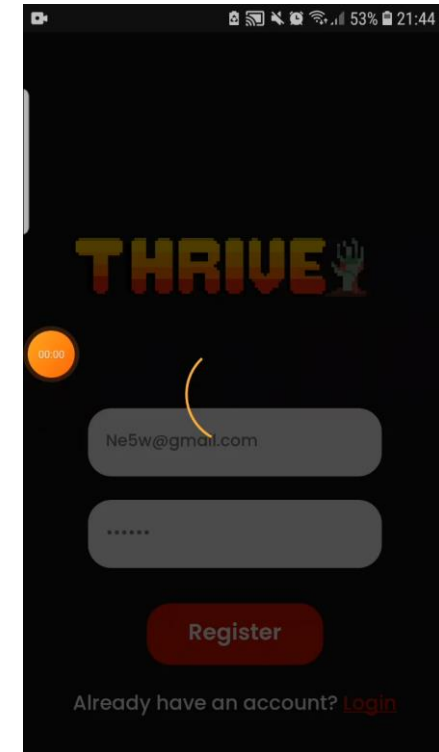
Demonstration



Step Tracker



App
Walkthrough



Join a team