# Introduction

This final chapter aims to summarise the project and quantify whether or not the project did meet the goal that was set in Chapter 3: New Ideas, beyond this the impact of the application will be discussed relating to the professional, ethical, social and legal issues that an application of this nature represents, finally the chapter is rounded out with a look toward any potential future work that could be conducted as a result of this projects completion.

# Project summary

Chapter 5: Results investigated several metrics which would suggest whether the presented application was successful in achieving the aim of the project. Of these metrics only the hypotheses, developed through following the Lean UX project methodology, would be considered as a point of contention when suggesting the project aim had been met with the application presented in Chapter 4: Implementation. This is due to the fact these hypotheses have yet to be confirmed or proved false, as discussed in that section of Chapter 5: Results this is due to the lack of data present during the testing of this solution. Based on this then the project should be considered successful in achieving its aim this being; To create a socially interactive mobile based game targeted at older adults, that gives the player character an in-game advantage determined by fitness data captured through their mobile device, as the solution presented both passes the test plan, and achieves all of the objectives as defined in Chapter 3: New Ideas, as this is the case the project aim has been achieved.

However, the project should be considered in the larger context of similar work in the field and whether the project was able to build off of this similar work to add something entirely new. Consolvo et al. (2006) suggested that a well-designed fitness based application should “support social influence”, “give proper credit for user activity” and “consider the practical constraints of the user’s lifestyle”. The presented application meets all of these ideals, step targets are set slightly above the high-end average of a user’s average everyday step total (Tudor-Locke and Bassett,2004), highscore recording is implemented in order to promote some social interaction between users, and the user is provided with an in game benefit for completing the fitness goal set for that day. The results from the study conducted by Lin et al. (2006) showcased the importance that any solution had to be built as not encumber the user, to this end the application was built using an API available to all Android users requiring no additional downloads or set up on the part of the end user. The work for Warburton et al. (2007) showed that a contributing factor to a user’s motivation to participate in fitness activity is an element of fun and enjoyment, the application presented has been developed as a game for this reason.

The above research all contributed to formation of this solution, however the method in which the fitness elements are implemented is what makes this a novel solution. Where other fitness applications set the primary focus of the solution to be purely around improving the user’s fitness, this solution instead has the fitness functionality as an accompaniment to other functionality present in the application that can be used without burden, if the user has no interest in improving their fitness. The hope of this, is that users with limited motivation to take part in fitness activities will develop this through typical use of this application. Whilst the implications of this are not explored in this project, there is scope to do so in future work, this is discussed in the section below.

## PESL issues

### Professional

Within the scope of the project, there are no foreseeable professional issues that require consideration, because of this the project will have a low professional impact.

### Social

The proposed application is an attempt to improve the fitness and lifestyle of its user base, this beneficial social impact needs to be at the forefront of development and be promoted to the users of the system, for this reason the project will have a high social impact.

### Ethical

The way in which this application attempts to motivate it’s userbase to take part in fitness based activities could be considered manipulative, despite the intentions of this being for the benefit of the user if in future work this method proves effective it could lead to more sinister implementations. Because of this any future work within the realms of this projects scope should plan for a prominent level of Ethical impact.

### Legal

Due to the way the application functions, user data is stored within a database, this requires the project follow laws surrounding data protection. The primary law in the UK for dealing with data protection is the Data Protection act 1998, which states a user’s data must only be used for “limited and specifically stated purposes” and “kept for no longer than is absolutely necessary” (Data protection, 2016 -add this reference from the PPD). As the legal implications for mishandling a user’s personal data are so high, the legal impact of this project is considered high, to minimise the potential risk the Data Protection act must be studied and adhered to always during the project.

# Future work

## Scientific questions

In Chapter 3: New Ideas several scientific questions were raised as possible areas of study based off the concept of this project underlying idea, these areas of study were deemed to be out of the scope of this project but the exploration of these ideas in future work could prove to be scientifically significant, the questions raised in the chapter are discussed in the sections below.

### Question 1

Will users will make use of an application with this type functionality above currently available alternatives?

As discussed in the New Ideas chapter an application that takes a passive approach to fitness has not been explored before, this could be as there is no need for such an application, however the question is worthy of exploration with further research.

### Question 2

Will users with little or no desire to take part in regular fitness develop motivation to do so through use of this application?

Studies have shown that enjoyable social applications can motivate an individual to take part in a more active lifestyle (Lin et al., 2006), the question posed above, is again based on the notion that an application of this style hasn’t been explored currently. Perhaps results will show that this type of application where the fitness elements are available on choice rather than at the forefront of the solution, will be able to provide more motivation for users to take part in more fitness activities.

### Question 3

Will users who currently spend real world money on in game rewards be more or less likely to make use of this applications reward system when compared to individuals who spend no money on virtual game rewards?

The video game industry generates vast amounts revenue as a result of small transactions made within a game that grant the player some improvement to their gameplay experience. The application this project is thematically based around, Candy Crush Saga generates a dailyrevenue of an estimated $581,995 (Think Gaming, 2017a), whilst not all of this is based on these in-game transactions it is reasonable to assume at least a small percentage is. It would be interesting to test whether this application with its in game purchase system being based around fitness activity as opposed to financial cost, would be seen as more attractive to individuals who actively partake in the purchasing of in game benefits. This can be expanded further to test if the aforementioned individuals would be more likely to make use of the in-game reward system when compared to individuals who do not purchase in game benefits.

## Application release

An additional area of future work that could be explored, would be to release the application onto publicly available application stores. To proceed with this however the application would require further development, with at the very least an attempt to produce a cross platform implementation of the application in order to open up to a wider potential userbase. Beyond this further development of the features present in game would also be highly desired. Whilst the current feature set is enough to meet the aim of the project, in this authors opinion these features would require expansion in order to appeal to the general public.

# References

Data protection (2016) Available at: https://www.gov.uk/data-protection/the-data-protection-act (Accessed: 24 October 2016).