

BU Computing Programmes 2015-2016

Undergraduate Project Proposal Form

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| Degree Title: Software Engineering | Student's Name: Michael Porter |
| | Supervisor's Name: Damien Fay |
| | Proposed Project Title: Gamifying Childhood - Motivating Children to Achieve Through Video Games |

1. What are the project's aims?

1.1 Problem definition - use one sentence to summarise the problem:

Parents often find it difficult to motivate children to perform chores in a timely manner.

1.2 Background - please provide brief background information, e.g., client:

I want to create a mobile application that will allow parents to assign tasks and rewards to their children in the form of 'quests' in a role-playing game. The quests can take the form of "Tidy your room" or "Complete your homework" and offer rewards of experience points and gold to level up the child's in-game avatar. Quests can have an expiry date and give an optional penalty if not completed in time or to a required standard.

The key interactions in this app will be the parent(s) inputting quests into the game and marking a quest as complete once they have inspected the work. The child will also be able to view quests, notify the parents that a quest requirement is ready for inspection and choose skills and equipment for their character.

1.3 Aims and objectives – what are the aims and objectives of your project?

Aim: To provide a fun, gamified way of motivating children to achieve more.

Objectives:

- Make a well designed Android application, adhering to the Android Developer specifications.
- Create a server that can handle many concurrent requests per minute to track the statistics of tasks being completed.

2. What is the artefact that you intend to produce?

The artifact will be an android app that provides a framework for parents to input chores for their children and assign them to be completed by a certain date. The app will also double up as a game that will allow children to earn rewards for completing the chores. In the interest of timesaving, the app will exist as a proof-of-concept only, and will not be a fully featured game. I will also need to create a server backend in either Java or Python to handle the statistics gathering involved in the application.

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3. How are you going to evaluate your work?

I plan on using several friends and acquaintances of mine who have children to assess the quality of the features before I begin work. I will also use friends who have a strong interest in video games to judge the quality of the gaming side of the app through traditional beta and usability tests.

I have opted not to use children to beta test the app in the interest of the University's ethics code.

4. Why is this project honours worthy?

To create this project, I will need to use all of the skills I have learned from my degree collectively.

I also believe this project is honours worthy as I intend to create software that I believe has real world applications in aiding parents to raise children.

5. How does this project relate to your degree title outcomes?

This project will have a strong emphasis on all stages of the software development process. I will need to have this project planned out in it's entirety before starting the project, due to the complex nature of the app.

I will need to use a wide variety of technologies to fulfill the task, including database design, Android/Java and Python development and security.

I will need to ensure that my project is sufficiently tested and meets the criteria for good quality software, which is a strong facet of the Software Engineering degree title.

6. What are the risks in this project and how are you going to manage them?

The key risk in this project is re-learning how to develop an Android application. Whilst I have recently worked with Java, it has been a long time since I have developed an Android app and this will certainly be the most complex app I will have created.

Another main risk is the 'trending tasks' feature, which will require data analysis to generate that I am not familiar with. However, to combat this, Damien has offered advice and help with this.

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Section 7: References – please provide references if you have used any

Section 8: Ethics Checklist (please delete as appropriate)

8.1 Have you submitted the ethics checklist to your supervisor? Yes

8.2 Has the checklist been approved by your supervisor? Yes

Section 9: Proposed Plan

