**COMPUTING HONOURS PROJECT SPECIFICATION FORM**

**Project Title:** *A study into whether a game with puzzles can be healthy for you brain whilst still capturing your interest in a horror genre.*

**Student:** Darren Griffiths **Banner ID:** B00303592

**Supervisor:** Dr Gavin Baxter

**Moderator:** Dr Thomas Hainey

**Outline of Project:**

**BACKGROUND (WHAT GOT YOU THINKING ABOUT THE RESEARCH?)**

Since the very first video game was designed in October 1956 by Physicist William Higinbotham. The quality of video games has evolved quite erratically, especially when comparing the first to recent years. They have been developed in many different ways, covering a range of genres between fiction and non-fiction. To the point where it may actually be tough from telling the difference between what’s real and what’s not. Therefore, you could say games as a whole have grown beyond expectation. Video games are headlining everywhere, mostly because of its popularity in figures (source) but also headlining for the unattractive and unintentional reasons. “Video game violence & glorification must be stopped—it is creating monsters!” (Donald J. Trump, 2012).

*However, if you look deeper into the effect video games have on a human brain you will see some positive results that may not be classed as a glorification headline such as Mr. Trumps quote, but non the less are very different and considered extremely healthy.*

**THEORETICAL RESEARCH (WHAT ARE YOU PLANNING ON DOING TO CHALLENGE THE BACKGROUND?)**

A review \* of existing academic literature surrounding the interest in art work classed as horror and other existing academic literatures surrounding the effects various puzzles type. In which effects they can have on a human brain whilst exploring the positive possibilism of a collaboration may bring. Doing so will help determine whether the collaboration of the two can be a positive mix when developed in Unity engine.

**PRACTICAL RESEARCH (WHAT YOU ARE GOING TO DO TO TEST THE REACTION?)**

To help determine if you could collaborate the two genres for positive effects, a game will be developed with various puzzles based within a horror story. With the question in mind, *can a game with puzzles be healthy for you brain whilst still capturing your interest in a horror genre*? The game is tailored to challenge the players emotion and logic. This can be achieved by relating to the reviewed academical papers that back the theories and facts that should achieve the same results by implementing their findings into the game.

**ANALYLITICAL ACTION (HOW WILL YOU COLLECT DATA OF THE REACTIONS?)**

There will be surveys after the game play which will include a series of questions which the answers will be collected as a group of data that will then be used to be compared against those with there in-depth research. The first survey will be a general survey that will allow the accessor to determine the type of user with some general questions. The second survey will be a post survey, the first part will be focusing on the horror aspect of the game and will be aiming to determine the emotions the player encountered when playing the game. The second part of the second survey will cater to the puzzle side of the game. The game and survey will be directed to those within the video games area of the university.

**A Passable Project will:**

1. Review the literature surrounding puzzle and horror games.
2. Develop a game that has elements of the literature review.
3. Perform an evaluation of the game via conducting a survey to collect data.
4. Analyse the data for answers and compare them to research found.

**A First-Class Project will:**

1. Undertake an in-depth review of academic literature surrounding puzzle and horror games with the psychological effect they both have on human brains.
2. Create a game and technical design document.
3. Develop a game that reflects the theoretical research carried out.
4. Document the games development and changes via **GITHUB**.
5. Document the testing of the game using the white box method.
6. Perform an evaluation of the game via conducting a comprehensive survey to collect data.
7. Analyse and evaluate the collection of data results, comparing them to research found.
8. Provide recommendations for further encouraged research.

**References:**

First Video Game - <https://www.aps.org/publications/apsnews/200810/physicshistory.cfm>

Figure Source - <https://www.bigfishgames.com/blog/2017-video-game-trends-and-statistics-whos-playing-what-and-why/>

Trump Claims - <https://www.sciencealert.com/trump-gun-violence-video-games-science>

**Reading List:**

Puzzle games can improve mental flexibility, study shows

Date:

June 24, 2014

Source:

Nanyang Technological University

<https://www.sciencedaily.com/releases/2014/06/140624092528.htm>

Can gaming mend damaged brains?

Date:

February 24, 2016

Source:

Taylor & Francis

<https://www.sciencedaily.com/releases/2016/02/160224133524.htm>

Effects of Violent Video Games on Aggressive Behavior, Aggressive Cognition, Aggressive Affect, Physiological Arousal, and Prosocial Behavior: A Meta-Analytic Review of the Scientific Literature

Craig A. Anderson, Brad J. Bushman,

<http://journals.sagepub.com/doi/abs/10.1111/1467-9280.00366>

The effects of video game playing on attention, memory, and executive control

Acta Psychologica

Volume 129, Issue 3, November 2008, Pages 387-398

<https://www.sciencedirect.com/science/article/pii/S0001691808001200>

Effects of video-game play on information processing: A meta-analytic investigation

Psychonomic Bulletin & Review

December 2013, Volume 20, Issue 6, pp 1055–1079

<https://link.springer.com/article/10.3758/s13423-013-0418-z>

**Source Online top 10:**

**<https://www.everydayhealth.com/columns/zimney-health-and-medical-news-you-can-use/keeping-your-brain-active-10-tips-for-improving-your-brain/>**

**Resources Required:**

**Software**

Windows 10

Unity

3D Software (Blender or Maya)

Microsoft Word

**Hardware**

Monitor

Speakers

Keyboard

Mouse

GeForce GTX 980

Intel i7-6820HK

32GB of Ram

**Marking Scheme:**

**Scheme 1**

**Area Marks**

Introduction 10

Literature Review 15

Game Design 15

Game Implementation 35

Testing and evaluation 10

Conclusion 10

Critical Self-Appraisal 5

**Scheme 2**

**Area Marks**

Introduction 10

Literature Review 15

Design 20

Implementation and Testing 20

Evaluation 15

Conclusion 10

Critical Self-Appraisal 10

**Scheme 3**

**Area Marks**

Abstract 5

Introduction 10

Literature Review 15

Requirements and Design 10

Implementation 15

Testing 10

Evaluation 15

Conclusion 10

Critical Self-Appraisal 10

**Signed:**

**Student Supervisor Moderator Year Leader**

**IMPORTANT: *By signing this form all signatories are confirming that any potential ethical issues have been considered and necessary actions undertaken and that Mark Stansfield (Module Coordinator) and Malcolm Crowe (Chair of School Ethics Committee) have been informed of any potential ethical issues relating to this proposed Hons Project.***