**PONG GAME Assignment MACD 1**

Weighting: 20%

Due date: FEB 14th 2022

Group size: individual report

Spec:

Design and build a pong game with increasing difficulty and game management using python, Raspberry Pi and sense hat.

Difficulty increase could include some of the following:

1, increase velocity

2, decrease bat size

3, ~~add another ball~~

4, ~~increase speed (reduce delay)~~

Game management could include:

1, ~~restart, wait for button press~~

2, ~~game over, lives count, high score~~

# Deliverables:

The deliverables for this assignment are a working demonstration of the game along with a written report.

Report should contain the following sections:

**~~Cover page~~**~~: including title, name, student number, date.~~

**~~Introduction:~~**

**~~Context/Rationale~~**~~: What is the purpose of the solution, etc.~~

**~~Specification:~~** ~~Explanation of what the program should do.~~

**~~Design~~**~~: Hardware diagram, program flowchart.~~

**~~Build~~**~~: Hardware/ Completed code with comments.~~

**~~Test:~~** ~~Screen shots of emulator test sequence.~~

**~~Conclusion~~**~~: Discussion of how project progressed and end result.~~

**Marking Scheme:**

Demonstration of physical build 30%

Report 70%:

Introduction 5%

Approx. half to a full page

Context/Rationale 5%

Approx. half to a full page

Specification 10%

Approx. 1 to 2 pages include diagrams

Design 25%

Hardware, schematic, brief background on Arduino. approx. 2 pages

Software flow chart and explanation, approx. 2 pages

Build 30%

Code and screenshots/pictures of hardware and explanations 3-4 pages

Test 15%

Screenshots/pictures documenting full test procedure

Conclusion 10% (individual section)

Approx. half to a full page