**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