Title: Pong (ADGP 101)

Start Date: 09/02/14

Assessment Date: 09/23/14

General description

You are to create a Pong Clone using the given framework. The major components of the game will be built up through application of programming concepts and class exercises. There will be opportunities for you to improve upon your game during the latter part of the course.

Through the completion of this assessment, you will be able to demonstrate the ability to design, plan and build a simple game, create and code "bug and error free" program and have a understanding of basic C++ programming constructs, functions and data structures.

Your game should resemble closely a pong game. A pong game is a game played by two players. Each player controls a paddle via a certain set of keys using the keyboard.

When the application is loaded, the user should be presented with a game menu that contains at least 3 options (Start Game, High Scores and Quit). A round is won when a player fails to stop the ball from hitting their side of the screen

The game screen should have two players and a ball. The current score should be displayed at a suitable location. When a game is over, the main menu screen will be shown to allow for a new game

You are to document all your code with comments and include a "how-to-play" text file containing player controls and instructions.

Knowledge and skills

Listed here is the knowledge and skills you'll be learning and on which you will be assessed.

- Demonstrate basic understanding and application of a programming language, syntax and rules
- Demonstrate ability to develop algorithms
- Demonstrate the use of control structure, selection and iteration of data variables
- Demonstrate and use of given framework
- Demonstrate basic understanding on the configuration of compiler settings and the setting of directories
- Demonstrate basic knowledge of debugging and compiling of a program

Evidence specifications

This is the specific evidence you must prepare for and present on assessment day to demonstrate you have competency in the above knowledge and skills. The evidence must conform to all the specific requirements listed below.

1. Use and demonstrate an understanding of the AIE Framework
2. Use the AIE framework to produce a pong-like game
3. Enable user input to affect change within the pong-like game
4. Demonstrate the use of structure, array index iteration, case statement and for loop
5. Program compiles without warning or errors
6. Comment and document script in a text file

Your roles and responsibilities as a candidate

- Understand and feel comfortable with the assessment process
- Know what evidence you must provide during your assessment
- Take an active part in the assessment process
- Be ready for the assessment at the nominated time

Assessment instructions for candidate

METHOD OF ASSESSMENT

Assessment will be conducted by you personally presenting evidence that demonstrates your competence in a short interview with your assessor. The evidence you must prepare and present is described above in this assessment criteria document. Assessments will be conducted on a specific day recorded above in this assessment criteria document.

ASSESSMENT CONDITIONS

You will have approximately 10 minutes to present your evidence that demonstrates your competence. It is your responsibility to be prepared. If you have forgotten something or made a small mistake you may correct it, however the assessor may choose to assess other candidates who are better prepared and return to you if time permits. Upon completion of the assessment you will be issued with feedback and a record of the assessment, which you will need to acknowledge that you have accepted the result. If you are absent on the nominated assessment day (without prior agreement or a sufficient documented excuse) you will be

assessed as not yet competent.

GRADING

The assessment you are undertaking will be graded as either *competent* or not *yet competent*.

REASSESSMENT PROCESS

If you are assessed as being not yet competent you will receive clear, written and oral feedback on what you will need to do to achieve competence. You will have one (1) week to prepare your evidence for a reassessment. You will be given only one reassessment opportunity. If you are unsuccessful after your reassessment you will be required to attend an intervention meeting with your Head of School to discuss your progress.

REASONABLE ADJUSTMENTS

We recognize the need to make reasonable adjustments within our assessment and learning environments to meet your individual needs. If you need to speak confidentially to someone about your individual needs please contact your teacher.

Assessment rubric

This table defines exactly what is required to be successfully deemed competent.

Evidence	Definition of Competent
1. Use and demonstrate an understanding of the AIE framework	Installed framework in visual studio and project is able to compile, display an OpenGL window and able to apply and understand the AIE coding standard and use it correctly. Able to work with teacher / colleagues to understand technical aspects of the framework
2. Use the AIE Framework to produce a pong-like game	A compiled pong-like game, with no compiler warnings and errors. Application does not crash or exit during the running of the program. Able to understand and implement assignment specifications. Able to apply feedback from fellow testers and to correct the program as required.
3. Enable user input to affect change within the pong-like game	User can interact with the game using keyboard to move player during the game play; game score is displayed during the game play
4. Demonstrate the use of structure, array index iteration, case statement and for loop	The right data structure is used to store game data for computation and for display, the code makes use of : • Structure to store game data • Array to store game data • Case statement for control of game flow • Switch statement for control of game flow • For loop for control of game flow
5. Program compiles without warnings or errors	The OpenGL and GLFW libraries are set up and linked correctly; during a build no warnings or errors are present
6. Comment and document script in a text file	Comments to explain complicated code segments, date of revisions and versions is located in the right section of the codes Help file and how-to-play instructions are given that covers • Information of PC configurations and for setting up the game where appropriate • Instructions on how to move the player • Information on game play or future release or credits