

## COMP 3609 – Game Programming

### 2021/2022 Semester 2

#### Assignment 1

Date Due:

Monday February 14, 2022 @ 11:55 pm

#### Description

Design and implement a game with the following features:

- (1) It uses the Java 2D API to draw the game entities on the screen (similar to *Alien.java* and *Bat.java*).
- (2) It uses the keyboard and/or the mouse to interact with the game entities. For example, the arrow keys may be programmed to move game entities around the screen (not necessarily all of them).
- (3) It displays simple scoring information on the screen as the game progresses (using a *JPanel*). This information could be time remaining, points gained, lives remaining, lives lost, etc.
- (4) It should have a simple but interesting game play.
- (5) It should be developed according to the object-oriented design embodied in *GamePanel-Bat-Alien2*.

NB: The game must NOT use any graphics files (e.g., GIF, PNG, JPG, etc.). Graphics files will be heavily used in the remaining assignments.

#### Mark Scheme

Marks will be awarded as follows:

- Game concept [15 marks]
- Game entities which are drawn on the screen using the Java 2D API. The game entities must move on their own or based on user input [15 marks]
- Handling user input [10 marks]
- Collision detection:
  - Identifying when game entities collide with each other [5 marks]
  - Doing something interesting when a collision occurs (e.g., loss of life) [10 marks]
  - Handling screen boundaries correctly (based on game play) [5 marks]
- Scoring [10 marks]
- Executes correctly [25 marks]
- 1 Page PDF document describing what the game is about and how to score points [5 marks]

**Grand Total:**

**[100 marks]**