

## COMP 3609 – Game Programming

### 2022/2023 Semester 2

#### Assignment 2

*Date Due:*

*Wednesday March 8, 2023 @ 11:55 pm*

#### Description

Design and implement a game with the following features:

- (1) It uses graphics files (e.g., jpg, png, gif) and double buffering for the background and most of the game entities. You *may* use the Java 2D API for drawing some of the game entities.
- (2) It uses graphics files and optionally, the Java 2D API, to display 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.
- (3) It should have two or more animations, at least one of which plays a role in the game (i.e., it has a specific purpose in the game play).
- (4) It should have two or more special effects, at least one of which plays a role in the game (i.e., it has a specific purpose in the game play).
- (5) It should make good use of at least five sound clips during the game.
- (6) It should have a more advanced game play than that of Assignment 1.

Additionally, you must do the following:

- Include a 2-Page PDF document where the first page describes the game play and how to score points and the second page identifies your sources of images and sound clips.
- Produce a video showing the game play. You should store the video on the cloud and provide a link to the video in the PDF document.

#### Programming Guidelines

- (1) You can reuse the game concept that you created for Assignment 1. However, the game play must be enhanced to incorporate the additional requirements of Assignment 2.
- (2) You should use the code in *BatAlienGame-ImageEffects-Animation* as a starting point. You can add or modify classes as you wish.

## Mark Scheme

Marks will be awarded for this assignment as follows:

### Meets Specified Requirements (45 marks)

- Requirement #1 [15 marks]
- Requirement #2 [5 marks]
- Requirement #3 [5 marks]
- Requirement #4 [5 marks]
- Requirement #5 [5 marks]
- Requirement #6 [10 marks]

### Contains Expected Features (20 marks)

- Handling user input (keyboard and/or mouse) [5 marks]
- Handling screen boundaries [5 marks]
- Collision detection [10 marks]

### 2-Page PDF document (5 marks)

- 1 page describing the game [3 marks]
- 1 page identifying sources of images and sound clips [2 marks]

Video showing game play (10 marks) [10 marks]

Game Runs Correctly (20 marks) [20 marks]

**Total:** [100 marks]