

## COMP 3609 – Game Programming

### 2024/2025 Semester 2

#### Assignment 2

*Date Due:*

*Saturday March 15, 2025 @ 11:30 pm*

#### Description

Design and implement a single-threaded game with the following features (based on the topics covered in Weeks 1-5 of the course):

- (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 special effects, at least one of which plays a significant role in the game (i.e., it has a specific purpose in the game play).
- (4) 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).
- (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:

- (7) Include a 2-Page PDF document containing the following:
  - Page 1: Describe the game play and how to score points.
  - Page 2: (a) Give a table showing the extent to which each requirement has been met.  
(b) Identify your sources of images and sound clips.
- (8) 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

- (a) 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.
- (b) It is recommended that you use the code in *BatAlienGame-ImageEffects-Animation* (from Lab #5) 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 (50 marks)

- Requirement #1 [10 marks]
- Requirement #2 [5 marks]
- Requirement #3 [5 marks]
- Requirement #4 [5 marks]
- Requirement #5 [5 marks]
- Requirement #6 [20 marks]

### Contains Expected Features (15 marks)

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

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

- Page 1 [3 marks]
- Page 2 [2 marks]

### Video showing game play (5 marks)

[5 marks]

### Game Runs Correctly (25 marks)

[25 marks]

### Total:

**[100 marks]**