Assignment 1 – Instructions

This page includes instructions for Assignment 1 and a link (below the instructions) to submit the assignment for assessment.

Steering Behaviours Implementation

This assignment is worth 20% of your final grade. Submit it after you have completed Unit 3.

Assignment Specifications

This assignment consists of implementing a simple game in Java that showcases steering behaviours. For ideas about the design of your game look at some simple online games like Space Invader. The design of your game should be fairly simple and readable. Use modular programming by breaking up the program into different components. Keep the game simple graphically.

Your program must demonstrate the following elements:

- The program must require input from the user and have an ending state. This means that the user plays against the computer.
- Implement two basic steering behaviours. These steering behaviours may be seek(), arrive() flee(), wander(), etc. You may demonstrate more than two steering behaviours in your program. You may also opt to replace one of the steering behaviours with projectile physics (shooting, projectile moving, iterative targeting, etc.).
- Implement one complex steering behaviour that is a combination of other steering behaviours (i.e., flocking) or coordinated movement (i.e., formations).

You may look at examples from the textbook or the Internet (i.e., **OpenSteer** , **Boids** , **GameDev**) in order to understand the implementation of some of the algorithms, but you must write all of your game code yourself. Do not copy code directly from another source. If you are unsure whether you can use something in your program, please ask your instructor.

Submission Requirements

Submit the following files:

- your Java source code files
- an executable file for your game (.jar, .exe., etc.)
- any sound files used in your program
- any textures or images used in your program
- a description file containing the following information:
    - a description of the logic and design of your game
    - instructions on how to compile/run your game
    - a description of the steering behaviours that are implemented
    - instructions on how to cause the behaviours in your game
    - a list of any bugs or problems in your game

Marking

Your overall grade for this assignment is based on the following:

- demonstration of the required routines as outlined in the Assignment Specifications (25 marks)
- fulfillment of the requirement that your program be a working game (20 marks)
- creativity (10 marks)
- inclusion of a description file that contains all the required elements listed in the Submission Requirements (25 marks)
- Good code design and style: is your coding consistent, readable, commented and modularized? (20 marks)

Submission instructions

Submit your completed assignment to **Assignment 1** (submission link will be available upon your course contract start date) for assessment.

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Activity Details

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