GAD173 Game Programming
A Breakout Hit

	Deadline and Milestones: Week 3	Duration: 3 Weeks	Autonomy Level: Facilitator Directed

Overview

Behind the often slick vaner of our games and game engines lies a multitude complex interconnected elements. The architecture and design choices made will have a long lasting impacts on the properties, performance, behaviour, and possibility space for both players and content creators.

As Games Programmers, we need to understand the algorithms, trade offs, and industry standards that underpin all our games and simulations. Working with a simple, 2D, low level, game engine will be our initial foray into this field. After which we will be able to make better choices around existing software, and the creation of our own engines, tools or systems.

Learning Outcomes associated to this project

L01,L02,L03

Project Brief and Process / Workflow

For this project, your facilitator will provide you with a simple 2D, C++ framework / engine. Your facilitator will also be guiding the initial technical designs that you are to implement. This will resemble a simple breakout style game.

Project Requirements

You will be extending the provided framework in accordance with the technical documentation guided by your facilitator.

Using this framework as your starting point, you will design and implement the engine, system, and game logic for:
Creation and Destruction of required Game Objects
Move Objects based on player input
Basic Object interaction, such as overlap response
Track and respond to game state, such as lives, score, remaining objects
A loaded or generated level layout

A Breakout Hit

You will be using the techniques shown in class and via assigned readings. These will include; use of language features, design patterns, technical design, software architecture, mathematical and geometrical formulae, and game logic.

While the resulting application must fulfil the Criteria outlined above, you are encouraged to go beyond that. Your facilitator will assist in identifying areas for enhancement.

You will need to keep your technical design, including diagrams, up to date with the code that is being written. And, you will need to use a repository and source control to manage the projects files.

Project Deliverables

Technical Design and Planning

Archive of repository and all working files.

Release build of the project.

Readme and instructions for playing your game.

Checklist

Milestones:
1.
A Build of your breakout style game. This also needs to include; documentation of minimum and extra features or elements.Technical design and planning for your application. Full copy of repository and working files.
You will also need to confirm with your facilitator that access to any required assets or online tools has been granted.

Naming Convention

Your folder should be named:

"GAD173.1_<Student Name>

Your zip file(s) should be named:

"GAD173.1_<Student Name>_<Contents>.zip"

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Log of Changes to Project Brief

Version Number and Trimester of Introduction	Description of changes
101 - 19T2	Document created
102 - 19T2	Re-org to remove scheme of work related material.

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