**Project Summary: BreakoutFX**

<https://github.com/SecondLogic/Breakout>

BreakoutFX recreates the gameplay of “Breakout” by Atari using JavaFX as the application platform.

**Purpose**

This project will be submitted as graded coursework for CSPC-24500 @ Lewis University. This program will be created as an exercise of combining ideas learned throughout the course as well as be used to gain familiarity with JavaFX API.

**Key Members**

Amos Cabudol – Design, Implementation, Testing

**Project Timeline**

Start Date: *03/26/2021*

Estimated Completion Date: *TBD*

**Product Summary**

The goal of breakout is to break all the bricks in order to escape. When the game starts, the player is provided with a ball and a paddle to break the bricks. The ball moves around the room with speed and can bounce off of two side walls and the top wall. The bricks are placed around the room usually near the top wall. The ball can break a brick by colliding with it, deflecting the ball depending on where it hits the brick. There is a short paddle at the bottom of the room which can deflect the ball upwards and can be moved left and right by the player. The player can control the angle at which the ball deflects by hitting the ball at different parts of the paddle. The ball will angle more towards the left if hit closer to the left side, and angle more towards the right if hit closer to the right side. The ball will go slightly faster each time it hits the paddle up to a certain speed. If the ball goes past the paddle and hits the bottom of the room, the player loses a turn. Losing a turn also resets the ball to the initial speed. The player is allowed 3 turns to clear a room before it is game over. If the player clears the room by breaking all of the bricks successfully, they will advance to the next room. The starting menu of the game will let the player select from the rooms they have reached to start from.

**Rules Summary**

* Starting menu lets player choose which room to start from
* Player unlocks a room if they beat the previous room
* Unlocked rooms are saved when player reopens the game
* Upon selecting a room, room is shown with bricks, walls, ball, and paddle, as well as turns left
* Player can move paddle left and right
* Ball bounces off of walls, bricks, and paddle
* Ball deflects off of paddle at an angle depending on where it is hit
* Ball gets slightly faster each time it hits the paddle
* Ball resets position and speed when it hits the bottom of the room instead of the paddle
* Bricks get destroyed when hit by the ball
* Player advances to the next room if all bricks are destroyed in the current room
* Player has 3 turns at the start of the room
* Player loses a turn if the ball hits the bottom of the room instead of the paddle
* Player loses when they run out of turns and returns to the starting menu