**Description:**

I made a version of the game “Brick Breaker”. The main objective of Brick Breaker is to use a paddle to bounce a ball into bricks to destroy them. When the game starts, the ball is in the middle of the screen, not moving. When the player is ready, they can start the ball moving in a random direction and speed. The player has to move the paddle left and right to prevent the ball from hitting the bottom of the screen, and to send the ball back towards the bricks. The ball will bounce if it hits the top or either side wall, a brick, or the paddle. If the ball hits the bottom of the screen, the player loses a life and the ball will reset. If the player reaches 0 lives, it is game over and the player can choose to restart if they wish. If the ball hits a brick, the brick will be destroyed and the player will gain some points. If the player can break all of the bricks without running out of lives, they win. The player can then choose to play again if they wish.

**Classes:**

AboutScene: Displays the “About” screen.

ActionScene: Creates all of the objects that will be used in the main game, including the ball, bat, boxes, collision detection, and the score board. Also handles checking for win/ lose conditions and their sound effects, and resetting the game.

Ball: Starts with a random speed and direction when the player chooses to start the ball moving. Also changes direction when it makes contact with one of the walls.

Bat: Moves the paddle left and right based on player input.

Box: Checks if the ball is making contact with it. If it is, it destroys itself and awards the user points.

CollisionDetection: Checks for collision between the ball and the bat, and changes the speed of the ball accordingly.

Explosion: Creates an animated explosion when a brick is destroyed.

Game1: Handles which menu option is selected, and hides/shows scenes.

GameScene: Abstract class that contains the definitions for “hide” and “show” for each of the different scenes.

HelpScene: Displays the “Help” screen.

HowToPlayScene: Displays the “How to play” screen.

MenuComponent: Handles drawing the text of each menu item.

ScoreBoard: Keeps track of the player’s score and lives. Also draws the “You win” and “Game over” messages.

Shared: For passing the game window size to other classes.

StartScene: Displays the main menu when the game is started.

**Class diagram:**



**Resources:**

Icon: 148apps.com

Sprites: Some from the Scratch drive, others I created myself in Photoshop

Sound effects: “Click” sound from the Scratch drive, the rest are from soundbible.com

Music: Game music is from the Final Fantasy 7 sound track, the others are from the Final Fantasy Tactics sound track