Break Out Dev Diary

- Assignment Requirements:
  - Player controlled paddle
  - A bouncing ball
  - Destructible blocks
  - A score keeping mechanism
  - Object-oriented implementation
  - A README.md with a description of the game.
  - A GameDev Diary (this document)

- Optional Features:
  - Splash and Game Over screens
  - Power ups / Negative effects
  - Multiple balls
  - Multiple game modes
  - Additional paddles
  - More advanced physics / collisions
  - Art assets / animation
  - Sound effects / music

- My process:
  - Made a new file for the paddle: paddle.py
  - Made a new file for the Breakout Game: breakout_game.py
  - Spent way too much time trying to get the eventMap and bounce_paddle function working. (like, almost 3 hours for each)
  - Got tired of that so worked on the bricks.
  - Making the bricks go into place was surprisingly easy and gave me a big confidence boost.
  - Got help from someone on slack for displaying the score text on screen.
  - Went to John office hours.
    - Decided to drop Ball vs AABB physics and EventMaps.
  - Decided against making Paddle and Brick sub-classes of Rectangle as the ball collision must do different things for each.
  - Got the brick destruction working.

    - Made an automized way of setting up the bricks so you can just type how many rows and columns you desire. (breakout_game.py lines 51-52)
    - I changed my mind about the eventMap and got it working (against Johns warning.)
    - Finished the score up, and thus the rest of the game, but felt like there was more to be done.
    - Made game over screen for when the ball hits the ground.
    - Made win screen appear when score = rows X columns.
    - Decided the code was good enough.
    - Finished the README file and uploaded this into the folder (presumably.)

- New knowledge learned:
    - How to display text on screen in pygame.
    - How to create many varying objects with while and if statements (initializing the bricks.)
    - How to make an eventMap (kinda.)
    - That godforsaken vector math.
    - Importing classes from one file to another (in python.)

- Old knowledge dusted off:
    - General object oriented programing.
    - Excessive commenting.
    - Creating object initialization functions.

- Easiest/Most fun:
    - While statement to make brick objects.
        - (breakout_game.py lines 58-71)
    - Making the win screen and having it appear
    - Making the text of the win/lose screen scale with the window size.
        - (breakout_game.py lines 95-96, 164, and 169)

- Struggles:
    - Implementing Ball Vs AABB collision, and the eventMap (both of which I gave up on by request of John. (and both of which I did anyways because I am clinically insane.))
    - Finishing on time.
    - Dealing with the regret of having not written this in Markdown.