

Project #3: This is the final project in the course. Your turn to shine. The project requires you to write PSEUDOCODE as the first step, then program the smaller steps to complete this project.

The project is to recreate your own version of Breakout/Arkanoid/Brickbuster game. In this case, you need a minimum set of rules for the project:

- must use Python 3
- must use graphics module as per Edline
- must be your own code

Basic Breakout Clone type of program:

https://en.wikipedia.org/wiki/Breakout_clone

Example of a simple game built in Python, although it is coded differently than the way you are expected to code.

<https://www.youtube.com/watch?v=Hbak9Bho0l8>

For this project, you must create at least one level of the game. This requires:

- User paddle
 - moves left/right by keyboard input
 - does not exit the screen left or right
- Ball
 - moves up/down/left/right
 - collides with bricks/paddle/wall
 - bounces with a varying angle off of paddle.
- Bricks
 - created with three levels deep of bricks
 - collision with ball makes brick disappear

Marking Scheme:

	Excellent (5)	Good (4-3)	Weak (2-1-0)
Overall program	Code neat, tidy, easy to follow, documented with comments	Code can be read, but has redundant parts, not well documented, or confusing code	Code is not easily read, major lack of documentation, and code is ineffective
Paddle	Moves Left and Right Does not exit screen	Moves paddle but goes beyond edges of screen	Paddle does not move Paddle does not exist
Ball	Ball moves in any direction Detects collisions with paddle, wall, bricks	Ball moves on reflection only (no variation off paddle) Some collisions detected	Ball moves but does not respond properly to bounces Collisions not detected
Bricks	Three rows of bricks Bricks disappear on collision	Not all bricks present Not all bricks disappear Bricks disappear incorrectly	Bricks are non-functioning Bricks are non-existent
Game Elements	Score is Controlled in a working manner High Score maintained	Some scoring algorithm, but does not function quite right or no high score	No Scoring algorithm Scoring algorithm does not function
Pseudocode	Documented so that another student could develop the game easily from the pseudocode	Another student could develop a game, but there would be some struggle and guesswork to complete the game	Pseudocode is just a few scraps of ideas, non-existent, or does not describe enough of the program to get much code done.