Name: Balance the Blocks

Description: wooden blocks of different sizes are created and fall from the top of the screen, user can either let the blocks fall to the bottom of the screen by themselves, or click on them and move them around the canvas using the arrow keys or dragging them with the mousepad, goal is to build the tallest tower of blocks, if the tower falls over the user loses, points are how many blocks the user has successfully placed

Competitive Analysis: Online I saw one project in particular that inspired me towards choosing my current term project. The project consists of the user standing in front of the computer camera, wearing a colored glove. Colored rectangles of various shades then fall from the top of the screen and the user, using the colored glove, can grab them and move them to anywhere along the bottom of the screen to place them near rectangles of the same, or similar, shade. My project is similar in that the user will be able to grab falling blocks that appear at the top of the screen and drag them around the screen or move them with the arrow keys. However, it will be different in that the users will place each block on top of the others to build a tall pile. If the user places a block off center the pile will tilt and potentially tip over, causing the user to lose. Although my idea of the user grabbing the falling blocks and moving them around the screen is similar to a prior project, I take my project further to have the user build a pile of blocks that relies on balance to not tip over.

Structural Plan:

Functions:

timerFired

* generareBlock
* moveBlock

redrawAll

* draw blocks
* like tetris, once a block reaches the bottom row, stops moving and blocks can land on top of it
* draws the start screen, the game screen and the ending screen

keyPressed

* move around the blocks using the down, left and right arrow keys
* user presses a key to begin the game

mousePressed

* user clicks on the blocks and drags them around

validMove

* tests if the move of the block is valid, if the block will go off of the screen or collide with another block

createBlock

* generates new blocks to fall from the top of the screen

Class Block:

draw

* Draw a block with a randomly chosen size

generateBlock

* Choose a random column for the new block to fall from
* Must be a column where the block will not go off of the screen

moveBlock

* moveBlock down one row
* if block reaches the bottom, place it on the board

**Algorithmic Plan**:

Timeline Plan:

Basic game without blocks tipping/falling over: Tuesday, 4/17

Game with the blocks tipping/falling over: Wednesday, 4/25

Version Control Plan: To back up my code I’ll use GitHub and terminal. I made a new repository on GitHub for my term project and each time I work on my project, I’ll commit the files to my GitHub account.

Module List: None

<http://www.thegamehomepage.com/play/super-stacker/>

<http://datagenetics.com/blog/may32013/index.html>