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21, February 2014

GridTool Prototype Justification

GridTool is a tool to create arbitrary size game boards of various types. It takes in width and length to determine size and it also takes in a starting (x, y, z) coordinate to center the board at. GridTool also has methods that snap objects to its nearest valid position. It has bool options to apply a colored checkered pattern or to have piece snap to either the corners of each square or to the center of each square.

I chose to make a tool that could be used for board games because for my game prototype I would like to implement a variation of chess that is modular. Where the board would behave as if wrapped around a cylinder. So a pieces could move off the right side off the board and move on to the left side of the board. I'm an avid chess player and I challenged a friend to this game type after we got bored of regular chess and wanted to try something new. We thoroughly enjoyed the variation this provided albeit we had difficulty imagining the board as modular.

In approaching the problem of viewing the board as modular I considered two options. The first actually holding the board twice in memory and viewing it as if it were on a cylinder or on a conveyer belt. The other option is to display just the board and offer the option to scroll left or right where scrolling left copies the most right line of squares into a temp object and adding it onto the left side while deleting the right side. GridTool was made with the idea of implementing the second method of copying, deleting, and re-adding a line of squares at a time.

GridTool has a 2d array containing each squarePrefab that has its associated information with it. By having GridTool not only instantiate the board but also keep track of the board implementation. It is easier to translate one edge of the board to the other side of the board by using the 2d array.

The square that GridTool tiles the board with is a public variable that is modifiable from outside the script. GameSquare is used by default and it contains a wood texture and a script meant to hold a given game piece. If the bool checkered is not chosen then each GameSquare is tan, otherwise they are tiled black and red.

Given more time I would have liked to expand on having the grid have methods to move and destroy pieces associated with each square. I would add this to implement capture type board games easily. Though I feel that this would be difficult to add until game pieces are more defined.

Overall I think this tool can help anyone who is trying to implement a capture style board game like chess, checkers, go, etc. while allowing for customization.