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Final Project Proposal: CSIS 220 Advanced Programming, Spring 2020

<u>Program Proposals:</u>

<u>Snake:</u> We are interested in implementing a snake game using a "snake" object that is controlled by the four arrow keys on the keyboard. The snake will have a shape and size and can be moved around the gameboard with arrow keys that move its head. The snake will then move around a designated play area constructed upon game initiation. As the snake moves around the game board, it will eat various "fruit" objects that will determine how to grow the snake when traveling around the game board. The snake also cannot hit the edges of the gameboard or itself, so the game will end upon one of those conditions being met. We will implement the Key event listeners, a new Java event listener we have not had much experience with, to move the head of the snake and determine when a fruit is eaten, adding to the score of the player.

<u>Mancala:</u> Like the physical board game, two players compete to move marbles from the individual tills (holes on the game board) from one to the next, eventually dropping them in their own individual tills while doing so. The player with the most marbles in their own till at the end of the game wins. We were going to implement the normal way to play Mancala, however, if there is more than 1 marble in each till, it will display the number of marbles in the till until there is only 1. We will have a "marble" object that will be used to move the pieces on the board. We also plan to make the mouse look closer to that of the player's hand when dropping the marbles into the tills. When the user picks a till to start with, the marbles in the till are automatically dispersed into the next tills until the player runs out of possible moves, changing the gameplay to the second player. This will repeat until the game tills are empty.

<u>Timeline for Project Completion:</u>
4/15/2020 - Proposal due and submitted to Github
4/19/2020 - Outline/Set-up done for Snake and Mancala
4/23/2020 - Finish the snake program
4/30/2020 - Finish the mancala program
5/1/2020 - 5/3/2020 - Finishing touches on programs
5/4/2020 - Final completed project pushed to GitHub

<u>Breakdown of points:</u>
We are currently thinking that we should break up the points so that Snake and Mancala programs are both worth around 150 points each, however as we progress we might want one to be worth slightly more than the other.