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Bool Dogs Final Proposal

Proposal #1) Game based on Connect 4

1. **What can the user do with the program?**

The user will be able to play a game based on the board game Connect 4. In this program the user will be able to use special items during gameplay to make the game a bit more challenging. It will be a new take on a classic game to include a bit more action. Some new takes include eliminating rows, eliminating columns, hidden blocks that activate bonuses, piece swaps and more.

1. **What features will the product include?**

The product will include player vs player, Player vs A.I. and A.I. vs A.I.

If time allows we would like to add custom game features that allow players to play connect 5, connect 6 etc. and allow players to choose custom size of the board

We plan to get creative on the special items we design to work with this game.

1. **What are your Goals for the design of the product?**

We plan on stating relatively simple with a functional board displayed on screen using ‘x’ and ‘o’. Once we have a fully functional game we hope to be able to add better designs with color and incorporate sounds if possible. Since we are adding features in terms of “power ups” we plan on somehow displaying an inventory box. We also hope to design a game that is balanced in gameplay that still takes skill and strategy to win.

1. **What assumptions will you make when designing the project?**

We assume that the A.I. portion of the game will give us the most issues. We believe we will need to study actual game play to design an algorithm that imitates human gameplay.

We assume we will have to use a two dimensional array to simulate the game board.

We will have to create algorithms to catch possible win conditions and errors. We understand there is plenty of codes in the real world for connect 4 but I believe adding many of these new features will make it a different game.

1. **What we hope to learn?**

We hope to learn how to program A.I. as we do not have experience in this. On our feedback we were told this would be the most difficult so hope to have a good time trying to solve this issue. We hope to learn how to code as an efficient team as we plan on dividing the code up into sections that we can work on individually.