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CSE 210

Programming with classes

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Lucas Heil’s Final C# project

For my final project I will be recreating a chess board game as a video game. This will include taking several classes. A class that will run a menu to ask the player if they would like to play a game. In order to reduce complexity my game will only have user inputs and opt out of a computer-based opponent. In the menu the player will be asked if they would like to start a new game, load a previous game, or to quit the program. If a player selects a new game a chess board should be displayed on their screen with a box that will ask which side they would like to play on. There is also an option to randomize which player is white and which player is black.

From there the game starts. A move box will appear in which a player can send in a specific code such as (Kx d4) which will send a Kight to the location of d4. The game will check if the move is legal and is available to move. If the move matches a move associated with the piece [x], the box is empty, or the opponent is in the place [x] then the Knight or piece will be able to move to that location. If a player was capturing when moving the opponent’s piece is removed from play. There are other rules such as the king cannot move when in check, or a piece cannot move when pinned to a king. I am willing to let these rules slide and if the players’ situation falters, they will lose. This will also decrease the difficulty of the match.

I will need all uses of abstraction, encapsulation, inheritance, and polymorphism in order to make this game. Most of this will come into play as I create a class that contains all the rules for each individual piece. Each piece has a set of moves and a color. That will vary as I create the game. This will require me to create a class that uses polymorphism to let each piece use this class.