Problem and design report – 4th Lab Assignment

As a team, do the following.

**Problem statement**

Write in your own words a description of the system’s purpose.

**Design constraints:**

* You must use inheritance and polymorphism.
* You must use a hierarchy of chess pieces that reuse behavior
* Must override a method such as isValidMove
* Each class should have attributes and methods and be defined in a separate file.
* Must use packages, exception handling, and interfaces

**Design**

List the elements/parts/modules/ functions that you need to solve the problem and the purpose of each part.

***Write the pseudocode for each part FIRST. You shall NOT write any code until you finish the pseudocode as a TEAM.***

|  |  |  |
| --- | --- | --- |
| Part name | Purpose | Pseudocode |
| e.g. Chessboard | Define the size of the board and determine if a chess piece’s position is within the board. | - check if the chess piece (posX is between columns a and h) and (posY is between 1 and 8) |
| Pawn | Hold the color of the piece and its position, and determine if a target position is a valid position | - isValidPosition: if the color is white, the target position has a posY value greater than 1 for the current position and the same X value; if the color … |
| ChessFigure |  |  |
| … |  |  |
|  |  |  |

**Design Model**

<<Create your class diagram for LAB 4 and include attributes, methods, access levels, associations, and multiplicity. Describe your model.>>

1. **Model description**
2. **<< insert diagram >>**

**Design Limitations or Disadvantages.**

Write any disadvantages of this solution (Lab 4) compared to Lab 1, Lab 2, and Lab 3.

**Design benefits.**

Write any benefits of this solution (Lab 4) compared to Lab 3.