

Checkers Game Data Model Concept

Description: create a data model concept for the game of Checkers (Draughts).

Purpose: Gain experience with creating data models.

Requirements:

Our ultimate goal is to develop a Checkers (Draughts) game. The app will allow both human and computer players in any combination: human-human, computer-human, computer-computer. The app is to do the following:

- Collect and display the player names.
- Determine who moves first and gets assigned the black (dark) pieces.
- Display a board with pieces the user can interact with if one or both players are human.
- Prevent illegal moves.
- Identify when there is a winner, loser, or if a draw has occurred.

The goal of this challenge is to create a concept for a data model for the Checkers (Draughts) game.

The data model is a representation of the Checkers game as data and methods without any reference to UI elements.

In coming up with the data model you need to consider the best data representation for the state of the game (the pieces on the board) so that it is easy to:

- determine what moves are possible/allowable.
- determine if a move is illegal.
- determine a winner, loser, or a draw condition.
- implement the algorithms (outside of the model) for the computer (AI) to determine moves.
- implement a UI representation of the game and game play.

The data model is to include not only the data to represent the pieces on the board but all of the data needed for playing the game.

The data model is to include methods for changing/managing the state of the model. These methods are to be used to change and determine the state of the game.

The challenge says to come up with a data model concept. This means that you don't have to write all of the code yet. You need to describe the data representation as well as the methods that need to be implemented.

Submit your concept as a PDF, Word Document, RTF, or plain text file.