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ZeroX Game

Assignment 3: Domain Model

Submitted To: Nicolangelo Piccirilli
Dittimi Tamarafinide

Submitted By: Group 3

ZeroX Game - Domain Model

A domain model describes all the domain object types and the relationships among their instances, which collectively describe the domain space.

In the Domain diagram below, the Game c*onsists of* Board, *gives* Result and *displays* Score. The Player *plays* through the Game, *takes* Turn and eventually *makes* Move. The Player is a specialization class for Human or Computer player. Board for the game consists of Rows, Columns and Square. Based on Result a system *displays* eGift message to the winner and *updates* the Score. A Move can either be "X" or "O".

The various classes depicted in the domain diagram below are explained on the next page.

Domain Model: ZeroX Game
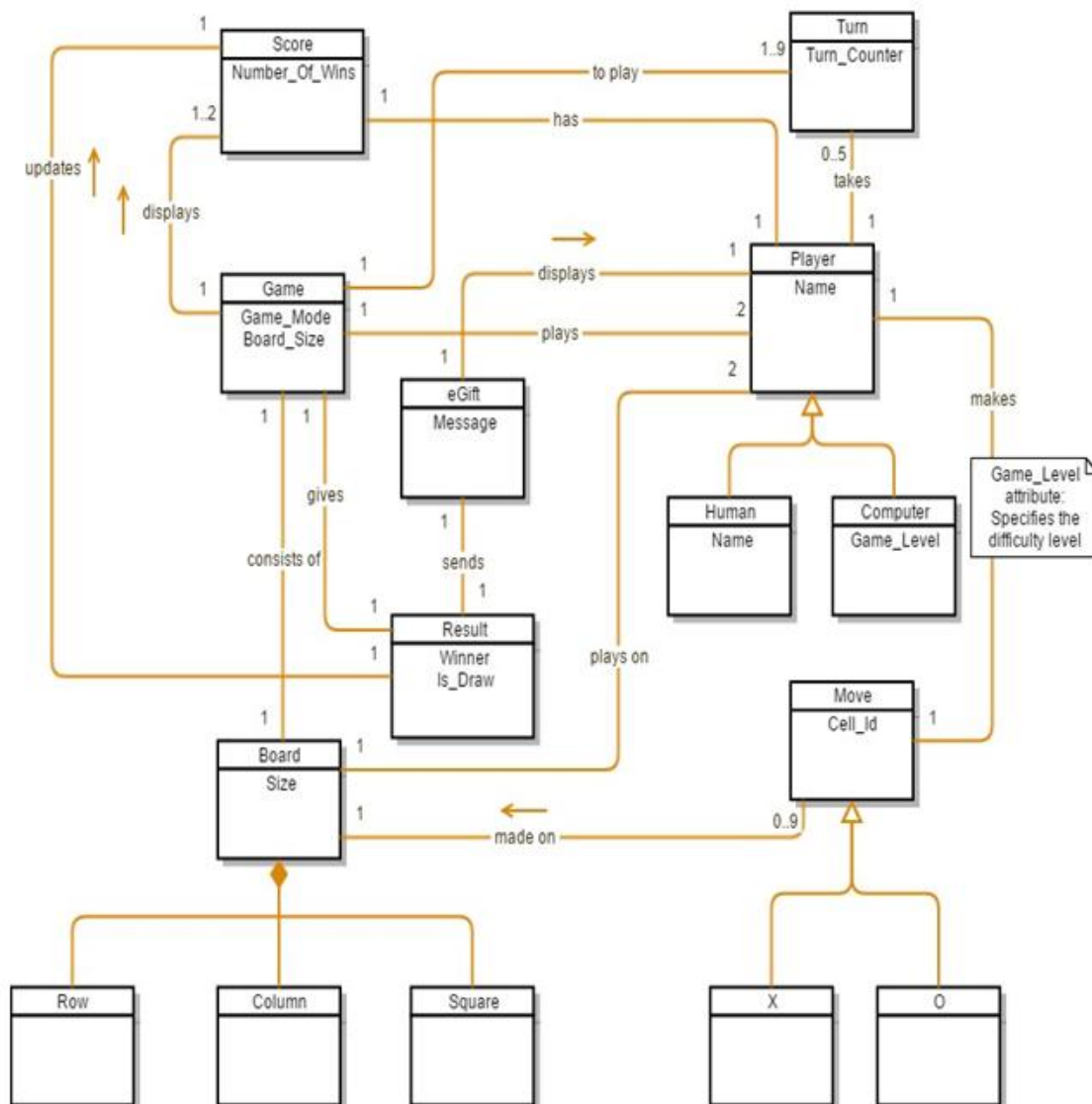
Domain Classes and Attributes

- **Game:** It is the main class and all other classes are dependent on this.

  - *Game_Mode:* This specifies if we want a player vs player or Computer vs player mode.

  - *Board_Size:* This specifies the size of the board.

- **Player**: It is a instance for players playing the game. It is sub-categorized as Human and Computer player.

  - *Name:* It is a variable for player name.

- **Turn:** Specifies the turn of the current player.

  - *Turn_Counter*: It is used to switch between two players.

- **Score:** It displays the score of the player after the game is finished.

  - *Number_Of_Wins:* It stores the count for the games won by the player.

- **e-Gift:** This class is invoked after the game ends and displays the message to winner.

  - *Message*: Stores the e-Gift message

- **Board:** This class is association class comprising of Rows, Columns and Square. Future release may include 3*3 with 5*5 option for the game.

  - *Size:* It specifies the grid size of the board.

- **Result:** This class is called after the game is finished and holds the game result.

  - *Winner:* Update with winner at game end.

  - *Is_Draw:* Boolean variable to specify if the game is a tie.

- **Move:** This class displays the symbol corresponding to the player selection.

  - *Cell_Id:* Index to specify the cell number.