SOEN 6011- Software Engineering Processes
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Project Team: SmartTech

Assignment 3- Domain Model
On
"Tic-Tac-Toe"

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1. Purpose

Domain model is used to represent significant conceptual classes in a problem domain which represents real world concepts. A domain model is considered most important object oriented artifact and its development involves distinguishing a rich set of applied classes, and is at the heart of object oriented analysis. It is a visual representation of the deterioration of a domain into individual conceptual classes or objects.

2. Domain Model

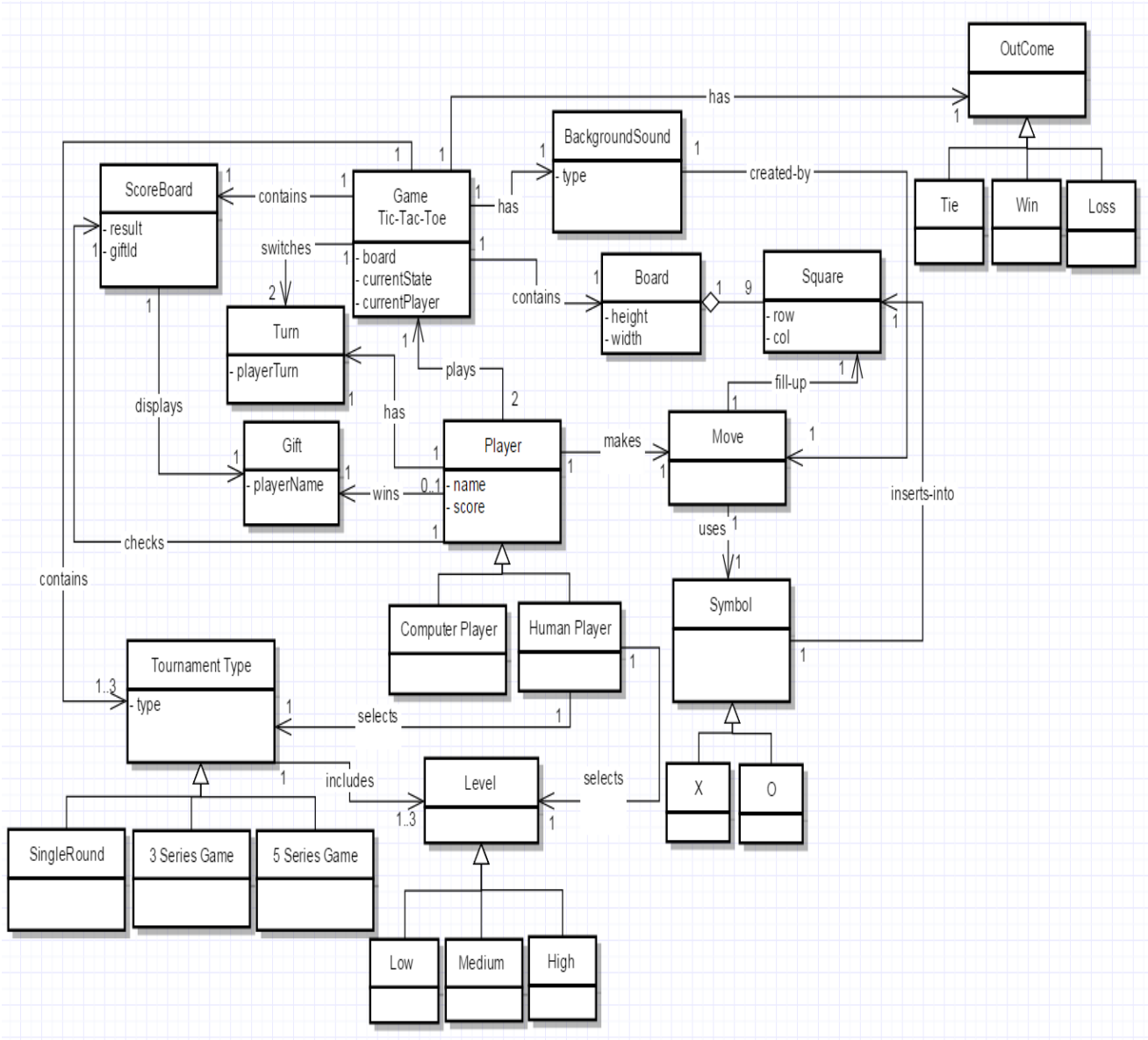

Figure 1: Domain Model for Tic-Tac-Toe Game

2.1 Domain Model Description

As it is known that the domain model captures the most important types of objects in the context of the business. Also, domain model represents the 'things' that exist or events that transpire in the business environment. One must never forget that the domain model focuses on semantics and becomes as the basis for use case / workflow modelling.

The main features of a domain model as known to all are the domain classes, attributes, the associations and any additional rules that are defined. In our domain model, the player remains at the centre of our domain model. As it depicts, the player is mainly of two types in our system, it could either be a human playing the game or a computer as another player against the human. Hence, in this game the player initiates a game consisting of board and nonetheless the game could also be associated with a tournament type which could either be a single round, a 3 series game, 5 series game. Also, the player has to select the difficulty level of the game and set it to either low, medium or high. Then turns is used by the computer system to determine which player has to make the move in order to fill up the empty square and a background sound will be produced corresponding to the player's move, and a score board is used to display the result of the played game and corresponding virtual gifts for the winner.

Moving on with the functionality of the game, the board consists of 9 squares on which the player makes move using either an "X" or an "O" as symbol. As a result the outcome of the game, players alternate turn in putting their symbol in any unoccupied box (square) on the board. The first player to finish three of its symbols in (1) a horizontal row, (2) a vertical column, or (3) in either of the two cross diagonals wins the game. Otherwise the game proceeds with the other player's turn. If all of the fields or squares are filled with symbols and no one won, the game closes in a draw. Also, to the player's surprise, a gift is displayed to the player upon winning.

3. References

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