

Features of Tic Tac Toe

- [NEW] A log containing all players' scores is kept in an xml format. After each game is finished, it will be updated. It can be view by the admin.
- [NEW] A top 10 player list can be viewed. It contains player names and the number of games he has won in total.

Related classes (Score and XmlIO) are in the model package.

- Different gaming levels: Three difficulty levels are available for the game namely,
 - Easy: In this level random moves are made.
 - Medium: In this level, Computer keeps the human player from making a combination of 3 in horizontal, vertical and diagonal direction. If possible computer will make such move to win. Otherwise the middle cell will be picked if free or a random move will be made
 - Hard: In this level, the minimax algorithm will be used to calculate the next possible move. The computer will never lose in this level. The best move is selected by generating all possible game states and evaluating the outcome. To keep the game interesting if there are multiple best options, computer will pick one randomly.

Levels are selected using the Strategy pattern. Related classes are in the control package.

- Background music: Different playback music is played for each mode. PlayMusic class is in the control package.
- Mark Choice: Player has the ability to choose the mark in both modes.
- Victory celebrated: The victory message is displayed in both modes and includes a gift icon on the screen. In the one player mode it is only displayed if human wins.
- Turn Choice: The player has the ability to choose who will make the first move in both modes.
- New game: User has the ability to start a new game at any point of time.
- Multiple game rounds: Multiple gaming levels are available in both game modes namely 1, 3 or 5.
- Scoreboard displayed: The scoreboard is displayed on the screen in both modes.
- Game exit: User has the ability to exit the game at any point of time, before which he needs to make a confirmation.
- Player name: The player name can be chosen in both modes.
- Help Menu: Help menu is available to guide the human player to become familiar to the game.
- Error message: If user tries to mark in an already occupied cell, a message will be displayed indicating a wrong move.