

Compiling

I use VSCode, what I do is the following:

```
- javac *.java - java GameController
```

Github link

<https://github.com/SpencerPresley/TicTacToe-WithGui>

tic-tac-toe game implementaion using a simple GUI and AI for computer moves

Model (GameModel.java)

- Manages game state and logic.
 - game board
 - current player
 - game status
 - move validity
- Independent of user interface. Doesn't contain logic related to how game state is displayed or how input is received.

View (GameView.java)

- Handles graphics of game. Includes:
 - Game window
 - Game board buttons
 - Satus labels
- Designed to display game state to user. Views reads from the model to present current game status without modifying model directly.
- Informs controller about user actions (such as button clicks)

Controller (GameController.java)

- Mediator between model and view.
- Processes user input from view, updates model, updates view to reflect new state
- Intializes the game by creating instances of both model and view.
- updates game state based on user interactions, changes view accordingly

Computer Move AI

- Uses minimax algorithm to explore all possible game outcomes from different move combinations
- 20% of the time it will not use the minimax algorithm to determine the best move and will instead make a random move