

Global Variables:

```
char tictactoe[9] //logical board
int turn = 0 // turn counter
int player = 0 // first player (0 for X/User, 1 for O/Computer)
int winner = 2 // 2 for running
int global_depth = 10 // Computer difficulty (-10: easy, 2: medium, 10: hard)
```

Move() : Takes int index as a parameter and updates the logical representation of the board and steps turn by one

Wincheck(): Checks the rows, columns and diagonals for a win. If no win then checks if turn is 5 (board full) for a draw. Updates winner to 1, 0, and -1 for X wins, draw, and O wins

`GetBestMove()` : Takes `global_depth` as a parameter. If `global_depth` is 10 it recursively parses through the entire state space, playing optimal moves for itself and the user to determine the best move returning the move with the highest score. If `global_depth` is 2 it goes to a recursive depth of two moves finding the optimal moves and at next depth it gives a random score for all moves at that depth (range is -2 to 2), introducing some randomness in the optimal move that is returned. If `global_depth` is -10 it returns a random valid move.

