```java
import java.io.*;

class TicTacToe
{
    public static void main(String[] args)
    {
        new InputStreamReader(System.in);
        BufferedReader theKeyboard = new BufferedReader(new InputStreamReader(System.in));

        Board Game = new Board();


        System.out.print("Enter 1 to play with computer;" +
                         "\nEnter 2 to play with other people.\nPlease enter 1-2: " );

        int players =1;
        String input = "";
        boolean badInput = false;

        do // get the number of players -- only accept 1 or 2
        {
            try
            {
                input = theKeyboard.readLine();
            }
            catch(IOException e)
            {
                System.out.println("input error:" + e);
                System.exit(1);
            }
            if(input.equals("1"))
            {
                badInput = false;
                players = 1;
            }
```

```
36              else if(input.equals("2"))
37              {
38                  badInput = false;
39                  players = 2;
40              }
41              else badInput = true;
42
43              if(badInput) System.out.print("Enter a number, 1 or 2: ");
44          }
45          while(badInput);
46
47
48          System.out.println("TicTacToe Game starts."+
49                             " Please enter 1-9 to make your choice.");
50
51          int [] move = new int [2];
52          char winner;
53          int getTurn = 1;          // The initialization of turns
54
55          System.out.println(Game); // print the board for first time
56
57          while(true)               // loop only breaks when X or O wins, or a cat's game
58          {
59              // Player X's turn
60              if(getTurn%2 != 0)
61              {
62                  if (players == 2) {
63
64                      System.out.print("Player X, Enter 1-9 to make choice: ");
65                      while(true)
66                      {
67                          move = getMove();
68                          // can't take occupied space
69                          if(!Game.elementMarked(move[0], move[1])) break;
70                          System.out.println("That space is occupied.");
```

```
71                      }
72
73                  }
74
75                  else // Or computer player
76                  {
77                      move = ComputerPlayer.makeMove(Game.copyBoard(), getTurn);
78                  }
79
80
81                  Game.markFirst(move[0], move[1]); // mark an X on the board
82
83                  winner = Game.win(); // Check if win
84
85                  if(winner != 'N')
86                      break;
87                  System.out.println(Game);
88
89                  getTurn++;    //return turn to the other player
90              }
91
92              // Player O's turn
93              System.out.print("Player O, Enter 1-9 to make choice: ");
94
95              while(true)
96              {
97                  move = getMove();
98                  if(!Game.elementMarked(move[0], move[1]))
99                      break;
100                 System.out.println("This square has been chosen." +
101                                    " Please enter a new square.");
102             }
103
104             Game.markSecond(move[0], move[1]);
105
```

```
106             winner = Game.win();    // Check if win
107
108             if( winner != 'N')
109                 break;
110             System.out.println(Game);
111
112             getTurn++;    //return turn to the other player
113         }
114
115         System.out.println(Game);
116
117         if(winner == 'C')
118             System.out.println("This is a cat's game.");
119
120         if(winner != 'C')
121             System.out.println("The winner is: " + winner);
122
123     }
124
125     // getMove gets the users choice and translates it into rows and columns
126     public static int[] getMove()
127     {
128         new InputStreamReader(System.in);
129         BufferedReader theKeyboard = new BufferedReader(new InputStreamReader(System.in));
130
131         String input = "";
132         int [] move = new int[2];
133         boolean errorInput = false;
134         do
135         {
136             try
137             {
138                 input = theKeyboard.readLine();
139             }
140             catch(IOException e)
```

```
141             {
142                 System.out.println("input error:" + e);
143                 System.exit(1);
144             }
145                  if(input.equals("1")) {move [0] = 0; move[1] = 0; errorInput = false;}
146             else if(input.equals("2")) {move [0] = 0; move[1] = 1; errorInput = false;}
147             else if(input.equals("3")) {move [0] = 0; move[1] = 2; errorInput = false;}
148             else if(input.equals("4")) {move [0] = 1; move[1] = 0; errorInput = false;}
149             else if(input.equals("5")) {move [0] = 1; move[1] = 1; errorInput = false;}
150             else if(input.equals("6")) {move [0] = 1; move[1] = 2; errorInput = false;}
151             else if(input.equals("7")) {move [0] = 2; move[1] = 0; errorInput = false;}
152             else if(input.equals("8")) {move [0] = 2; move[1] = 1; errorInput = false;}
153             else if(input.equals("9")) {move [0] = 2; move[1] = 2; errorInput = false;}
154             else errorInput = true;
155 
156             if(errorInput)
157                 System.out.print("Error input. Enter a number within 1-9: ");
158         }
159         while(errorInput);
160 
161         return move;
162     }
163 }
164 
```