```
1 import java.util.*;
2 class TicTacToe_ACM
3 | {
 4
 5
       Scanner in=new Scanner(System.in);
6
       char xox[][]=new char[3][3];
7
       int i,j,position=0,k;
8
       char team, comp;
9
       TicTacToe_ACM()
10
                                    //initializing the grid with '_'
            for(i=0;i<3;i++)
11
12
           {
13
                for(j=0;j<3;j++)
14
               xox[i][j]='_';
15
           }}
       void print()
16
17
                                      //printing the game board
           for(i=0;i<3;i++)
18
19
           {
20
               for(j=0;j<3;j++)
21
                {
22
                    if(j!=2)
23
                    System.out.print(xox[i][j]+" | ");
24
25
                    System.out.print(xox[i][j]);
26
                }
27
               if(i!=2)
               System.out.println("\n-- -- --");
28
29
30
           System.out.println();
31
       }
32
       void enterx(String player)
33
34
               if(player.equals("comp"))
                                                              //entering x by the system
35
               {
36
                   for(i=0;i<=9;i++)
37
38
               position=(int)(Math.random()*9)+1;
39
               if(xox[(position-1)/3][(position-1)%3] == '_')
40
                 \{xox[(position-1)/3][(position-1)%3]='x';
41
                     break;
42
                } }
43
               System.out.println("Here is the move:");
44
               print();
45
                }
               else if(player.equals("team"))
46
                                                             //entering x by the player
47
48
                    for(i=1;i<=3;i++)
49
50
                    System.out.println("Enter the position of x");
```

```
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                                                                                   Page 2
51
                    int position=in.nextInt();
52
                    if(xox[(position-1)/3][(position-1)%3] == '_')
53
                    {
54
                    xox[(position-1)/3][(position-1)%3]='x';
55
                    print();
56
                    break;
57
                    }
58
                    else
                    System.out.println("Invalid Move:( You got "+(3-i)+" more chance");
59
60
                }}}
        void entero(String player)
61
62
63
                                             //entering o by the system
64
               if(player.equals("comp"))
65
                   for(i=0;i<=9;i++)
66
67
               position=(int)(Math.random()*9)+1;
68
69
               if(xox[(position-1)/3][(position-1)%3] == '_')
70
                 \{xox[(position-1)/3][(position-1)%3]='o';
71
                     break:
72
                }}
73
                 System.out.println("Here is the move:");
74
               print();
75
76
               else if(player.equals("team"))
                                                                 //entering o by the player
77
                {
78
                    for(i=1;i<=3;i++)
79
                    {
80
                    System.out.println("Enter the position of o");
                    int position=in.nextInt();
81
82
                    if(xox[(position-1)/3][(position-1)%3] == '_')
83
84
                    xox[(position-1)/3][(position-1)%3]='o';
85
                    print();
86
                    break;
87
                    }
88
                    else
89
                    System.out.println("Invalid Move:( You got "+(3-i)+" more chance");
90
                }}}
91
        void row(char team, char comp)
                                             //checking the row
92
93
            for(i=0, j=0;i<3;i++)
94
                if((xox[i][j]==xox[i][j+1]) && (xox[i][j]==xox[i][j+2]) &&
95
    (xox[i][j]=='x'))
96
                {
97
                    if(team=='x')
98
                    System.out.println("Well played! You crowned it :)");
99
                    else if(comp=='x')
```

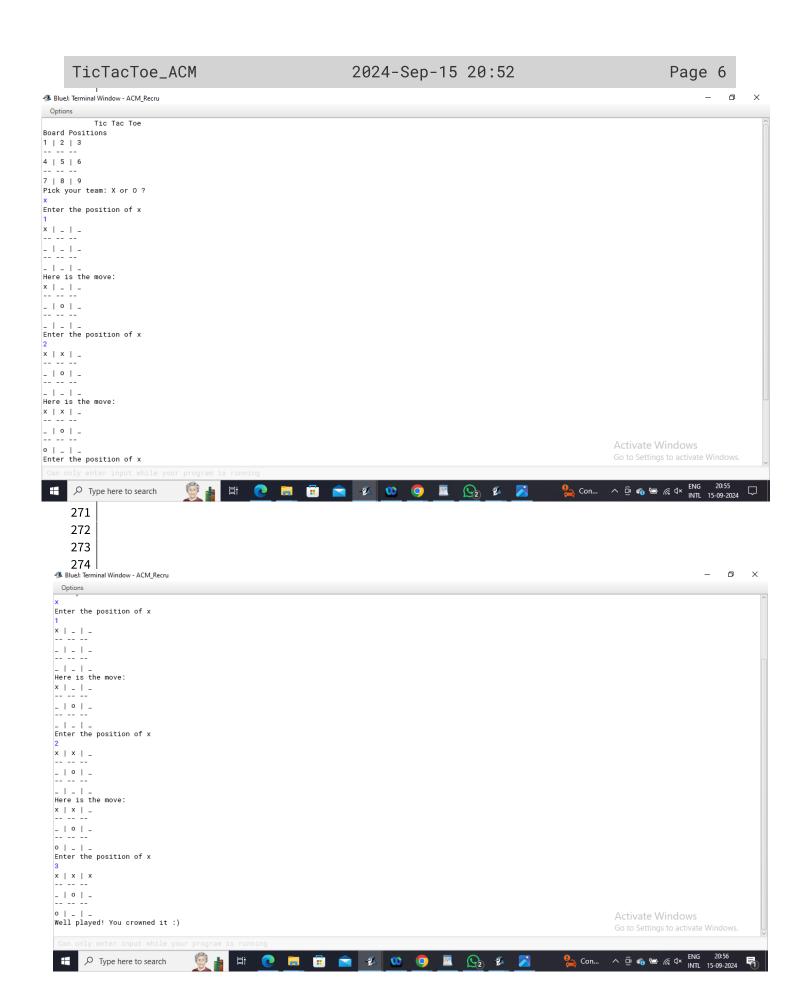
System.out.println("Good effort! But you got defeated :(");

100

```
101
                    System.exit(0);
102
                }
                else if((xox[i][j]==xox[i][j+1]) && (xox[i][j]==xox[i][j+2]) &&
103
    (xox[i][i]=='o'))
104
                {
105
                     if(team=='o')
106
                    System.out.println("Well played! You crowned it :)");
107
                    else if(comp=='o')
108
                    System.out.println("Good effort! But you got defeated :(");
109
                    System.exit(0);
110
                }}}
        void column(char team, char comp)
                                                   //checking the column
111
112
113
            for(j=0,i=0;j<3;j++)
114
                if((xox[i][j]==xox[i+1][j]) && (xox[i][j]==xox[i+2][j]) &&
115
    (xox[i][j]=='x'))
116
                {
117
                     if(team=='x')
118
                    System.out.println("Well played! You crowned it :)");
119
                    else if(comp=='x')
120
                    System.out.println("Good effort! But you got defeated :(");
121
                    System.exit(0);
122
                }
                else if((xox[i][j]==xox[i+1][j]) && (xox[i][j]==xox[i+2][j]) &&
123
    (xox[i][j]=='o'))
124
                {
125
                    if(team=='o')
126
                    System.out.println("Well played! You crowned it :)");
127
                    else if(comp=='o')
                    System.out.println("Good effort! But you got defeated :(");
128
129
                    System.exit(0);
130
                }}}
131
        void leftD(char team, char comp) //checking the left diagonal
132
        {
133
            i=0;j=0;
            if((xox[i][j]==xox[i+1][j+1]) && (xox[i][j]==xox[i+2][j+2]) &&
134
    (xox[i][j]=='x'))
135
            {
136
                if(team=='x')
137
                System.out.println("Well played! You crowned it :)");
138
                else if(comp=='x')
139
                System.out.println("Good effort! But you got defeated :(");
140
                System.exit(0);
141
            else if((xox[i][j]==xox[i+1][j+1]) && (xox[i][j]==xox[i+2][j+2]) &&
142
    (xox[i][i]=='o'))
143
                {
144
                    if(team=='o')
145
                    System.out.println("Well played! You crowned it :)");
146
                    else if(comp=='o')
```

```
148
                     System.exit(0);
149
                }}
150
        void rightD(char team, char comp)
                                            //checking the right diagonal
151
152
            i=0; j=2;
             if((xox[i][j]==xox[i+1][j-1]) && (xox[i][j]==xox[i+2][j-2]) &&
153
    (xox[i][j]=='x'))
154
              {
155
                if(team=='x')
                System.out.println("Well played! You crowned it :)");
156
157
                else if(comp=='x')
                System.out.println("Good effort! But you got defeated :(");
158
159
                System.exit(0);
160
            else if((xox[i][j]==xox[i+1][j-1]) && (xox[i][j]==xox[i+2][j-2]) &&
161
    (xox[i][j]=='o'))
162
                 {
163
                     if(team=='o')
                     System.out.println("Well played! You crowned it :)");
164
165
                     else if(comp=='o')
                     System.out.println("Good effort! But you got defeated :(");
166
167
                     System.exit(0);
                }}
168
169
        void main()
170
171
            TicTacToe_ACM game=new TicTacToe_ACM();
            System.out.println("
172
                                              Tic Tac Toe");
173
            System.out.println("Board Positions");
174
            k=1;
175
            for(i=0;i<3;i++)
176
            {
177
                for(j=0;j<3;j++)
178
179
                     if(j!=2)
180
                     System.out.print(k+" | ");
181
                     else
182
                     System.out.print(k);
183
                     k++;
184
                 }
185
                if(i!=2)
186
                System.out.println("\n-- -- --");
187
188
            System.out.println("\nPick your team: X or 0 ?");
            team=Character.toLowerCase(in.next().charAt(0));
189
            if(team!='x' && team!='o')
190
191
            {
192
                System.out.println("INVALID INPUT!");
193
                System.exit(0);
194
195
            if(team=='x') comp='o';
196
            else comp='x';
```

```
for(k=1;k<=9;k++)
197
198
199
                if(k%2==1)
200
                if(team=='x')
201
202
                game.enterx("team");
203
                else
204
                game.enterx("comp");
205
                }
206
                else
207
                {
208
                 if (team=='o')
209
                 game.entero("team");
210
211
                 game.entero("comp");
                }
212
                                                     //finding the winner
213
                game.row(team,comp);
214
                game.column(team,comp);
215
                game.leftD(team,comp);
216
                game.rightD(team,comp);
217
             }
218
             System.out.println("The game is a draw :|");
219
220
        }
221
222
223
224
225
226
227
228
229
230
231
232
233
234
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245
246
```



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