

HideAndSeek.java

```
1 /*
2  * Written by JJ Shepherd
3  */
4 import java.util.Scanner;
5 import java.util.Random;
6 public class HideAndSeek {
7
8     public static final int BOARD_SIZE = 10;
9     public static final int COLD_DIST = (BOARD_SIZE/2)*(BOARD_SIZE/2);
10    public static final int WARM_DIST = (BOARD_SIZE/4)*(BOARD_SIZE/4);
11
12    public static final char EMPTY = '_';
13    public static final char PLAYER = 'X';
14    public static final char WALKED_PATH = '#';
15    public static final char GOAL = '_';
16
17    public static void main(String[] args) {
18        Scanner keyboard = new Scanner(System.in);
19        Random r = new Random();
20
21        int pX = 0;
22        int pY = 0;
23
24        int gX = r.nextInt(BOARD_SIZE);
25        int gY = r.nextInt(BOARD_SIZE);
26
27        char[][] board = new char[BOARD_SIZE][BOARD_SIZE];
28        for(int i=0;i<board.length;i++)
29        {
30            for(int j=0;j<board[i].length;j++)
31            {
32                board[i][j] = EMPTY;
33            }
34        }
35
36        board[pY][pX] = PLAYER;
37        board[gY][gX] = GOAL;
38
39        System.out.println("Welcome to hide and seek!");
40        boolean gameOver = false;
41        while(!gameOver)
42        {
43            for(int i=0;i<board.length;i++)
44            {
45                for(int j=0;j<board[i].length;j++)
46                {
47                    System.out.print(board[i][j]);
48                }
49                System.out.println();
50            }
51            int distance = (pX-gX)*(pX-gX)+(pY-gY)*(pY-gY);
52            if(distance > COLD_DIST)
53            {
54                System.out.println("You are getting colder");
55            }
56            else if(distance > WARM_DIST)
57            {
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58         System.out.println("You are getting warmer");
59     }
60     else
61     {
62         System.out.println("You are getting hotter!");
63     }
64     System.out.println("Enter either -1, 0, or 1 to move in the x");
65     int dX = keyboard.nextInt();
66     System.out.println("Enter either -1, 0, or 1 to move in the y");
67     int dY = keyboard.nextInt();
68     if(dX < -1 || dX > 1)
69     {
70         System.out.println("That is invalid");
71         dX = 0;
72     }
73     if(dY < -1 || dY > 1)
74     {
75         System.out.println("That is invalid");
76         dY = 0;
77     }
78     board[pY][pX] = WALKED_PATH;
79     pX += dX;
80     pY += dY;
81
82     if(pX < 0)
83     {
84         pX = 0;
85     }
86     else if(pX > BOARD_SIZE-1)
87     {
88         pX = BOARD_SIZE-1;
89     }
90     if(pY < 0)
91     {
92         pY = 0;
93     }
94     else if(pY > BOARD_SIZE-1)
95     {
96         pY = BOARD_SIZE-1;
97     }
98     board[pY][pX] = PLAYER;
99     if(pX == gX && pY == gY)
100    {
101        System.out.println("You win!");
102        gameOver = true;
103    }
104    }
105 }
106
107 }
108
```