public class TicTacToeObjects

{

String p1name;

String p1colstring;

String p1rowstring;

int p1col;

int p1row;

String p2name;

String p2colstring;

String p2rowstring;

int p2col;

int p2row;

}

/\*Aaron Knestaut

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\* Period A

\*

\* \*\*\*\*\*Program Description\*\*\*\*\*

\* This is a Tic Tac Toe program, where 2 players input their names then play the game

\*

\* \*\*\*\*\*Variable Dictionary\*\*\*\*\*

\* int count - tracks what block is being saved to in the array

\* int count2 - tracks how many turns hav taken place

\* int col - determines what column is being written to

\* String gb [] [] - the array that is the gameboard

\* TicTacToeObjects list [] - calls the objects

\* TicTacToeObjects names - for saving the names of the players

\* int row - determines what row is being written to

\*/

import javax.swing.JOptionPane;

public class TicTacToe

{

public static void main (String args [])

{

String gb [] [] = new String [4] [4];

TicTacToeObjects list [] = new TicTacToeObjects [10];

TicTacToeObjects names = new TicTacToeObjects ();

for (int row = 1; row <= 3; row++)

for (int col = 1; col <= 3; col++)

gb [row] [col] = " ";

menu (names);

game (gb, list, names);

}

public static void menu (TicTacToeObjects names)

{

JOptionPane.showMessageDialog (null, "Welcome to Tic-Tac-Toe!\nClick OK to input player names.");

names.p1name = JOptionPane.showInputDialog ("Player 1's name?");

names.p2name = JOptionPane.showInputDialog ("Player 2's name?");

JOptionPane.showMessageDialog (null, names.p1name + " will be X's, and " + names.p2name + " will be O's\n");

JOptionPane.showMessageDialog (null, "On each turn, select what row and what column you would like to place your letter in.\n" +

"There will then be a window showing the current board.\nIf the spot you have chosen is already taken, you will need to input again.");

}

public static void game (String gb [] [], TicTacToeObjects list [], TicTacToeObjects names)

{

int count = 1;

int count2 = 0;

while (count <= 9)

{

TicTacToeObjects pointer = new TicTacToeObjects ();

list [count] = pointer;

list [count].p1rowstring = JOptionPane.showInputDialog (null, names.p1name + ": In what row do you want to place X?");

list [count].p1row = Integer.parseInt (list [count].p1rowstring);

list [count].p1colstring = JOptionPane.showInputDialog (null, names.p1name + ": In what column do you want to place X?");

list [count].p1col = Integer.parseInt (list [count].p1colstring);

if (gb [list[count].p1row] [list[count].p1col] == ("O"))

{

JOptionPane.showMessageDialog (null, "This grid spot is already taken.\nChoose again.");

list [count].p1rowstring = JOptionPane.showInputDialog (null, names.p1name + ": In what row do you want to place X?");

list [count].p1row = Integer.parseInt (list [count].p1rowstring);

list [count].p1colstring = JOptionPane.showInputDialog (null, names.p1name + ": In what column do you want to place X?");

list [count].p1col = Integer.parseInt (list [count].p1colstring);

gb [list[count].p1row] [list[count].p1col] = "X";

}

else

gb [list[count].p1row] [list[count].p1col] = "X";

JOptionPane.showMessageDialog (null, "==Current Board==\n"+gb[1][1]+" | "+gb[1][2]+" | "+gb[1][3]+"\n"+gb[2][1]+" | "+gb[2][2]+" | "

+gb[2][3]+"\n"+gb[3][1]+" | "+gb[3][2]+" | "+gb[3][3]);

if (gb[1][1] == "X" && gb[1][2] == "X" && gb[1][3] == "X")

{

JOptionPane.showMessageDialog (null, names.p1name + " Wins!");

return;

}

else if (gb[2][1] == "X" && gb[2][2] == "X" && gb[2][3] == "X")

{

JOptionPane.showMessageDialog (null, names.p1name + " Wins!");

return;

}

else if (gb[3][1] == "X" && gb[3][2] == "X" && gb[3][3] == "X")

{

JOptionPane.showMessageDialog (null, names.p1name + " Wins!");

return;

}

else if (gb[1][1] == "X" && gb[2][1] == "X" && gb[3][1] == "X")

{

JOptionPane.showMessageDialog (null, names.p1name + " Wins!");

return;

}

else if (gb[1][2] == "X" && gb[2][2] == "X" && gb[3][2] == "X")

{

JOptionPane.showMessageDialog (null, names.p1name + " Wins!");

return;

}

else if (gb[1][3] == "X" && gb[2][3] == "X" && gb[3][3] == "X")

{

JOptionPane.showMessageDialog (null, names.p1name + " Wins!");

return;

}

else if (gb[1][1] == "X" && gb[2][2] == "X" && gb[3][3] == "X")

{

JOptionPane.showMessageDialog (null, names.p1name + " Wins!");

return;

}

else if (gb[1][3] == "X" && gb[2][2] == "X" && gb[3][1] == "X")

{

JOptionPane.showMessageDialog (null, names.p1name + " Wins!");

return;

}

count2 = count2 + 1;

if (count2 == 9)

{

JOptionPane.showMessageDialog (null,"It's a draw! Nobody has won!");

return;

}

list [count].p2rowstring = JOptionPane.showInputDialog (null, names.p2name + ": In what row do you want to place O?");

list [count].p2row = Integer.parseInt (list [count].p2rowstring);

list [count].p2colstring = JOptionPane.showInputDialog (null, names.p2name + ": In what column do you want to place O?");

list [count].p2col = Integer.parseInt (list [count].p2colstring);

if (gb [list[count].p2row] [list[count].p2col] == ("X"))

{

JOptionPane.showMessageDialog (null, "This grid spot is already taken.");

list [count].p2rowstring = JOptionPane.showInputDialog (null, names.p2name + ": In what row do you want to place O?");

list [count].p2row = Integer.parseInt (list [count].p1rowstring);

list [count].p2colstring = JOptionPane.showInputDialog (null, names.p2name + ": In what column do you want to place O?");

list [count].p2col = Integer.parseInt (list [count].p1colstring);

gb [list[count].p2row] [list[count].p2col] = "O";

}

else

gb [list[count].p2row] [list[count].p2col] = "O";

JOptionPane.showMessageDialog (null, "==Current Board==\n"+gb[1][1]+" | "+gb[1][2]+" | "+gb[1][3]+"\n"+gb[2][1]+" | "+gb[2][2]+" | "

+gb[2][3]+"\n"+gb[3][1]+" | "+gb[3][2]+" | "+gb[3][3]);

if (gb[1][1] == "O" && gb[1][2] == "O" && gb[1][3] == "O")

{

JOptionPane.showMessageDialog (null, names.p2name + " Wins!");

return;

}

else if (gb[2][1] == "O" && gb[2][2] == "O" && gb[2][3] == "O")

{

JOptionPane.showMessageDialog (null, names.p2name + " Wins!");

return;

}

else if (gb[3][1] == "O" && gb[3][2] == "O" && gb[3][3] == "O")

{

JOptionPane.showMessageDialog (null, names.p2name + " Wins!");

return;

}

else if (gb[1][1] == "O" && gb[2][1] == "O" && gb[3][1] == "O")

{

JOptionPane.showMessageDialog (null, names.p2name + " Wins!");

return;

}

else if (gb[1][2] == "O" && gb[2][2] == "O" && gb[3][2] == "O")

{

JOptionPane.showMessageDialog (null, names.p2name + " Wins!");

return;

}

else if (gb[1][3] == "O" && gb[2][3] == "O" && gb[3][3] == "O")

{

JOptionPane.showMessageDialog (null, names.p2name + " Wins!");

return;

}

else if (gb[1][1] == "O" && gb[2][2] == "O" && gb[3][3] == "O")

{

JOptionPane.showMessageDialog (null, names.p2name + " Wins!");

return;

}

else if (gb[1][3] == "O" && gb[2][2] == "O" && gb[3][1] == "O")

{

JOptionPane.showMessageDialog (null, names.p2name + " Wins!");

return;

}

count = count + 1;

count2 = count2 + 1;

}

}

}