public class BattleshipObjects

{

int s1r1;

int s1c1;

int s1r2;

int s1c2;

int s1r3;

int s1c3;

int s1r4;

int s1c4;

int s2r1;

int s2c1;

int s2r2;

int s2c2;

int s2r3;

int s2c3;

int s3r1;

int s3c1;

int s3r2;

int s3c2;

boolean s1destroyed;

boolean s2destroyed;

boolean s3destroyed;

}

import javax.swing.JOptionPane;

public class Battleship

{

public static void main (String args [])

{

char gb [] [] = new char [9] [9];

for (int row = 1; row <= 8; row++)

for (int col = 1; col <= 8; col++)

gb [row] [col] = '~';

BattleshipObjects ships = new BattleshipObjects ();

menu ();

generator (ships);

JOptionPane.showMessageDialog (null, ships.s1r1+"/"+ships.s1c1+"\n"+ships.s1r2+"/"+ships.s1c2+"\n"

+ships.s1r3+"/"+ships.s1c3+"\n"+ships.s1r4+"/"+ships.s1c4+"\n\n"+ships.s2r1+"/"+ships.s2c1+"\n"

+ships.s2r2+"/"+ships.s2c2+"\n"+ships.s2r3+"/"+ships.s2c3+"\n\n"+ships.s3r1+"/"+ships.s3c1+"\n"

+ships.s3r2+"/"+ships.s3c2);

game (ships, gb);

JOptionPane.showMessageDialog (null, " ==Current Board==\n 1 2 3 4 5 6 7 8 \n1 " + gb[1][1] + " "

+ gb[1][2] + " " + gb[1][3] + " " + gb[1][4] + " " + gb[1][5] + " " + gb[1][6] + " " + gb[1][7] + " "

+ gb[1][8] + " \n2 " + gb[2][1] + " " + gb[2][2] + " " + gb[2][3] + " " + gb[2][4] + " " + gb[2][5] + " "

+ gb[2][6] + " " + gb[2][7] + " " + gb[2][8] + " \n3 " + gb[3][1] + " " + gb[3][2] + " " + gb[3][3] + " "

+ gb[3][4] + " " + gb[3][5] + " " + gb[3][6] + " " + gb[3][7] + " " + gb[3][8] + " \n4 " + gb[4][1] + " "

+ gb[4][2] + " " + gb[4][3] + " " + gb[4][4] + " " + gb[4][5] + " " + gb[4][6] + " " + gb[4][7] + " "

+ gb[4][8] + " \n5 " + gb[5][1] + " " + gb[5][2] + " " + gb[5][3] + " " + gb[5][4] + " " + gb[5][5] + " "

+ gb[5][6] + " " + gb[5][7] + " " + gb[5][8] + " \n6 " + gb[6][1] + " " + gb[6][2] + " " + gb[6][3] + " "

+ gb[6][4] + " " + gb[6][5] + " " + gb[6][6] + " " + gb[6][7] + " " + gb[6][8] + " \n7 " + gb[7][1] + " "

+ gb[7][2] + " " + gb[7][3] + " " + gb[7][4] + " " + gb[7][5] + " " + gb[7][6] + " " + gb[7][7] + " "

+ gb[7][8] + " \n8 " + gb[8][1] + " " + gb[8][2] + " " + gb[8][3] + " " + gb[8][4] + " " + gb[8][5] + " "

+ gb[8][6] + " " + gb[8][7] + " " + gb[8][8]);

}

public static void menu ()

{

JOptionPane.showMessageDialog (null, "Welcome to Battleship! This is a one player version of the game.\n"

+ "Three ships will be generated in the 8x8 grid: one that is 4 long, one that is 3 long, and one that is 2 long\n"

+ "Each turn you will pick a row and column, and drop a bomb in that spot. If you hit a ship,\n"

+ "the water tile (~) will be replaced with a star (\*). If you don't hit anything, the water tile\n"

+ "will be replaced with an equals sign (=). If you sink a ship, all the stars will be replaced with X's (X)\n"

+ "After each turn you will get to see the current gameboard. You have a maximum of 45 turns to\n"

+ "complete the game, or else you lose.\n"

+ " Good Luck!");

}

public static void generator (BattleshipObjects ships)

{

int count = 0;

int temp = 0;

int temp2 = 0;

ships.s1r1 = (int) (Math.random () \* 8) + 1;

ships.s1c1 = (int) (Math.random () \* 8) + 1;

if ((ships.s1r1)-3 >= 1)

{

ships.s1r2 = (ships.s1r1)-1;

ships.s1c2 = ships.s1c1;

ships.s1r3 = (ships.s1r1)-2;

ships.s1c3 = ships.s1c1;

ships.s1r4 = (ships.s1r1)-3;

ships.s1c4 = ships.s1c1;

}

else if ((ships.s1c1)-3 >= 1)

{

ships.s1c2 = (ships.s1c1)-1;

ships.s1r2 = ships.s1r1;

ships.s1c3 = (ships.s1c1)-2;

ships.s1r3 = ships.s1r1;

ships.s1c4 = (ships.s1c1)-3;

ships.s1r4 = ships.s1r1;

}

while (count == 0)

{

temp = (int) (Math.random () \* 8) + 1;

temp2 = (int) (Math.random () \* 8) + 1;

if (temp != ships.s1r1)

{

ships.s2r1 = temp;

ships.s2c1 = temp2;

count = 1;

}

}

count = 0;

if ((ships.s2c1)-2 >= 1)

{

ships.s2c2 = (ships.s2c1)-1;

ships.s2r2 = ships.s2r1;

ships.s2c3 = (ships.s2c1)-2;

ships.s2r3 = ships.s2r1;

}

else if ((ships.s2r1)+2 <= 8)

{

ships.s2r2 = (ships.s2r1)+1;

ships.s2c2 = ships.s2c1;

ships.s2r3 = (ships.s2r1)+2;

ships.s2c3 = ships.s2c1;

}

while (count == 0)

{

temp = (int) (Math.random () \* 8) + 1;

temp2 = (int) (Math.random () \* 8) + 1;

if (temp != ships.s1r1)

{

ships.s3r1 = temp;

ships.s3c1 = temp2;

count = 1;

}

}

count = 0;

if ((ships.s3c1)+1 <= 8)

{

ships.s3c2 = (ships.s3c1)+1;

ships.s3r2 = ships.s3r1;

}

else if ((ships.s3r1)-1 >= 1)

{

ships.s3r2 = (ships.s3r1)-1;

ships.s3c2 = ships.s3c1;

}

}

public static void game (BattleshipObjects ships, char gb [][])

{

int count = 0;

String rowstring = "";

int row = 0;

String colstring = "";

int col = 0;

while (count <= 45)

{

if (ships.s1destroyed == true && ships.s2destroyed == true && ships.s3destroyed == true)

{

JOptionPane.showMessageDialog (null, "You won!");

return;

}

JOptionPane.showMessageDialog (null, " ==Current Board==\n 1 2 3 4 5 6 7 8 \n1 " + gb[1][1] + " "

+ gb[1][2] + " " + gb[1][3] + " " + gb[1][4] + " " + gb[1][5] + " " + gb[1][6] + " " + gb[1][7] + " "

+ gb[1][8] + " \n2 " + gb[2][1] + " " + gb[2][2] + " " + gb[2][3] + " " + gb[2][4] + " " + gb[2][5] + " "

+ gb[2][6] + " " + gb[2][7] + " " + gb[2][8] + " \n3 " + gb[3][1] + " " + gb[3][2] + " " + gb[3][3] + " "

+ gb[3][4] + " " + gb[3][5] + " " + gb[3][6] + " " + gb[3][7] + " " + gb[3][8] + " \n4 " + gb[4][1] + " "

+ gb[4][2] + " " + gb[4][3] + " " + gb[4][4] + " " + gb[4][5] + " " + gb[4][6] + " " + gb[4][7] + " "

+ gb[4][8] + " \n5 " + gb[5][1] + " " + gb[5][2] + " " + gb[5][3] + " " + gb[5][4] + " " + gb[5][5] + " "

+ gb[5][6] + " " + gb[5][7] + " " + gb[5][8] + " \n6 " + gb[6][1] + " " + gb[6][2] + " " + gb[6][3] + " "

+ gb[6][4] + " " + gb[6][5] + " " + gb[6][6] + " " + gb[6][7] + " " + gb[6][8] + " \n7 " + gb[7][1] + " "

+ gb[7][2] + " " + gb[7][3] + " " + gb[7][4] + " " + gb[7][5] + " " + gb[7][6] + " " + gb[7][7] + " "

+ gb[7][8] + " \n8 " + gb[8][1] + " " + gb[8][2] + " " + gb[8][3] + " " + gb[8][4] + " " + gb[8][5] + " "

+ gb[8][6] + " " + gb[8][7] + " " + gb[8][8]);

rowstring = JOptionPane.showInputDialog (null, "What row?");

row = Integer.parseInt (rowstring);

colstring = JOptionPane.showInputDialog (null, "What column?");

col = Integer.parseInt (colstring);

if ((row == ships.s1r1 && col == ships.s1c1) || (row == ships.s1r2 && col == ships.s1c2) || (row == ships.s1r3 && col == ships.s1c3) || (row == ships.s1r4 && col == ships.s1c4))

{

JOptionPane.showMessageDialog (null, "You hit a ship!");

gb [row] [col] = '\*';

}

else if ((row == ships.s2r1 && col == ships.s2c1) || (row == ships.s2r2 && col == ships.s2c2) || (row == ships.s2r3 && col == ships.s2c3))

{

JOptionPane.showMessageDialog (null, "You hit a ship!");

gb [row] [col] = '\*';

}

else if ((row == ships.s3r1 && col == ships.s3c1) || (row == ships.s3r2 && col == ships.s3c2))

{

JOptionPane.showMessageDialog (null, "You hit a ship!");

gb [row] [col] = '\*';

}

else

{

JOptionPane.showMessageDialog (null, "You missed a ship!");

gb [row] [col] = '=';

}

if (gb[ships.s1r1][ships.s1c1] == '\*' && gb[ships.s1r2][ships.s1c2] == '\*' && gb[ships.s1r3][ships.s1c3] == '\*' && gb[ships.s1r4][ships.s1c4] == '\*')

{

JOptionPane.showMessageDialog (null, "You sunk a ship!");

ships.s1destroyed = true;

gb[ships.s1r1][ships.s1c1] = 'X';

gb[ships.s1r2][ships.s1c2] = 'X';

gb[ships.s1r3][ships.s1c3] = 'X';

gb[ships.s1r4][ships.s1c4] = 'X';

}

else if (gb[ships.s2r1][ships.s2c1] == '\*' && gb[ships.s2r2][ships.s2c2] == '\*' && gb[ships.s2r3][ships.s2c3] == '\*')

{

JOptionPane.showMessageDialog (null, "You sunk a ship!");

ships.s2destroyed = true;

gb[ships.s2r1][ships.s2c1] = 'X';

gb[ships.s2r2][ships.s2c2] = 'X';

gb[ships.s2r3][ships.s2c3] = 'X';

}

else if (gb[ships.s3r1][ships.s3c1] == '\*' && gb[ships.s3r2][ships.s3c2] == '\*')

{

JOptionPane.showMessageDialog (null, "You sunk a ship!");

ships.s3destroyed = true;

gb[ships.s3r1][ships.s3c1] = 'X';

gb[ships.s3r2][ships.s3c2] = 'X';

}

}

JOptionPane.showMessageDialog (null, "You lost! The three ship's ships were:\n");

return;

}

}