public class SuperAwesomeGame {
    private LocationManager locationManager;
    private RegistrationManager registrationManager;
    private int r = 0; // represents the game clock

    // player names
    String name1, name2;

    // players
    protected Player player1, player2;

    public SuperAwesomeGame() {
        registrationManager = new RegistrationManager();
    }

    public void initializeGame() {
        locationManager = LocationManager.initialize();
        // get the info for Player1
        System.out.println("Please enter a name for Player 1:");
        Scanner in1 = new Scanner(System.in);
        name1 = in1.nextLine();
        player1 = new Player(name1);
        // get the info for Player2
        System.out.println("Please enter a name for Player 2:");
        Scanner in2 = new Scanner(System.in);
        name2 = in2.nextLine();
        player2 = new Player(name2);
    }

    public void playGame() {
        // set r to 0
        r = 0;
        // keep playing while both players are alive and timer less than 100
        while (player1.alive() == true && player2.alive() == true && r < 100) {
            System.out.println("Player 1's move");
            player1.move();
            if (player1.alive() == false) break;
            if (!locationManager.getGameBoard().getLocations().setLocation(player1, player1.location()).legal()) {
                System.out.println("Player 1 made an illegal move.");
                break;
            }
        }

        System.out.println("Player 2's move");
        player2.move();
        if (player2.alive()) {
            if (!locationManager.getGameBoard().getLocations().setLocation(player2, player2.location()).legal()) {
                System.out.println("Player 2 made an illegal move.");
                break;
            }
        } else break;
    }
}
String a = player1.location();
String b = player2.location();
if (a.equals("(0,0)")) {
    System.out.println("Player 1 is at the origin");
} else {
    int x = Integer.parseInt(a.substring(1, a.indexOf(",")+1));
    int y = Integer.parseInt(a.substring(a.indexOf(","), a.length()));
    int dist = Math.sqrt(x*x + y*y);
    System.out.println("Player 1 is " + dist + " from the origin");
}
if (b.equals("(0,0)")) {
    System.out.println("Player 2 is at the origin");
} else {
    int x = Integer.parseInt(b.substring(1, b.indexOf(",")+1));
    int y = Integer.parseInt(b.substring(b.indexOf(","), b.length()));
    int dist = Math.sqrt(x*x + y*y);
    System.out.println("Player 2 is " + dist + " from the origin");
}
// decrement r
r++;

// if we get here, the game must have ended
if (player1.score() > player2.score()) {
    System.out.println("Player 1 won by " + (player1.score() - player2.score()) + " points");
} else if (player1.score() < player2.score()) {
    System.out.println("Player 2 won by " + (player2.score() - player1.score()) + " points");
} else {
    System.out.println("The game has ended in a tie.");
}

public boolean register() {
    System.out.print("Please enter your name: ");
    Scanner in = new Scanner(System.in);
    String name = in.nextLine();
    try {
        registrationManager.register(name);
        System.out.println("Registration was successful");
    } catch (RegistrationFailedException re) {
        System.out.println("Registration failed: " + re.getReason());
        return false;
    }
    return true;
}