

A dark blue vertical bar runs down the left side of the page. A blue arrow points to the right from the bar, containing the date.

5/7/2016

Omi Online

CO324 – Project II (Iteration2)

Several thin, curved lines in dark blue and light grey originate from the bottom left and sweep upwards and to the right.

Group No: 22

Problem

The card game which is better known locally as “Omi” is a popular Sri Lankan pastime. In this project we design and implement an Omi web application.

The game needs four players and uses a standard deck of 52 playing cards. The cards are ranked from highest to lowest *A K Q J 10 9 8 7 6 5 4 3 2*. Play begins by dealing the cards around the table until each player has 13 cards. Then select trump *suit* for that hand. The first player may begin the game by playing any card. The rest of the players must play the same suit as the card that leads the trick, if they can. Otherwise they may play any card. If a trump suit card is played, the highest trump wins. Otherwise the high card of the suit wins the trick. The winner of a trick leads the next turn. The first player to earn ten points wins the game.

Implementation

All clients need to login to the system first using their name. After that they are redirected to another page. In there they wait for four people to connect. Number of people is counted using session id. After connecting four players they can enter the game. Each player can play the game when the turn is active.

They can watch their current marks in the right side of the game page. If one player got more than 10 marks he wins the game.

If none of the players can score more than 10 within the first round then another round will start.

The front-end of the web sends HTTP GET and POST messages to the application server. The web server sends JSON and strings, encapsulated in HTTP responses to the web front-end.

Application messages

Request from the client

Always the front-end sends the HTTP get request using Server Sent Events. If the players play a card when their turn, it sends HTTP post request using jQuery.

Responses from the server

After starting game web front-end is continuously updated using Server Sent Event. Server keeps on sending JSON objects. These JSON strings contain the following fields.

Cards:

An array of card objects (Each card object should have an image field with the file name of the card) representing the cards in the player's hand.

card1:

String showing filename of the card played by the 1st player.

card2:

String showing filename of the card played by the 2nd player.

card3:

String showing filename of the card played by the 3rd player.

mycard:

String showing filename of the card played by current player.

trumpSuit:

String showing filename of trump suit.

showHand:

Boolean value stating whether the GUI should show cards in the player's hand.

showCards:

Boolean value stating whether the GUI should show the played cards. (card1, card2, card3, & mycard)

Player0:

String indicates 1st player name.

Player1:

String indicates 2nd player name

Player2:

String indicates 3rd player name

Player3:

String indicates 4th player name.

Mark0:

Integer indicates the 1st player's mark.

Mark1:

Integer indicates the 2nd player's mark.

Mark2:

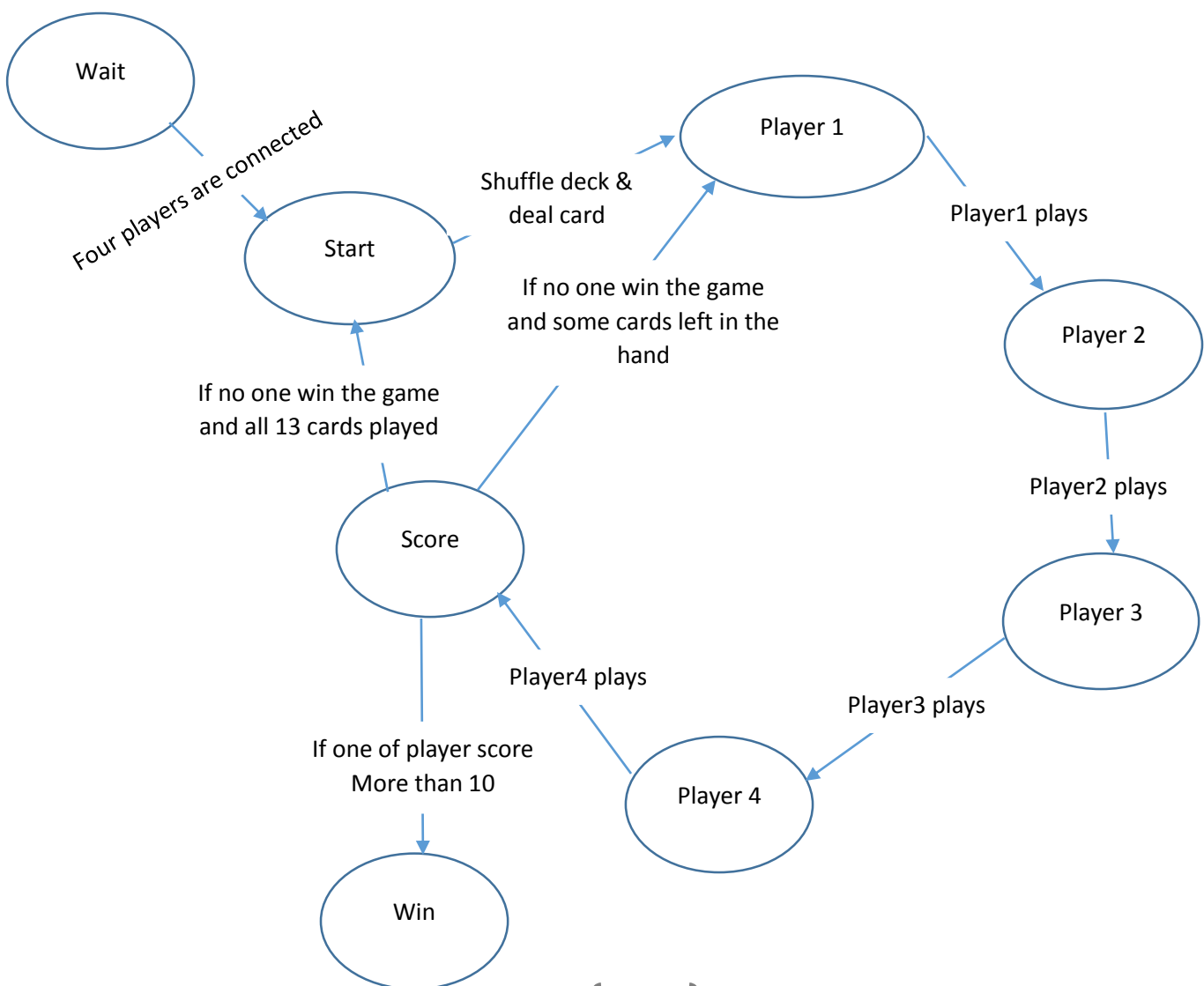
Integer indicates the 3rd player's mark.

Mark3:

Integer indicates the 4th player's mark.

message:

The status message that should be shown to each player.

STATE DIAGRAM

Reference

- <http://www.webterrace.com/cards/whist.htm>
- <http://viralpatel.net/blogs/html5-server-sent-events-java-servlets->
- <http://www.oracle.com/technetwork/articles/java/json-1973242.html>
- <http://learn.jquery.com>
- <http://knockoutjs.com/documentation>