

Client.java

```
1 package com.nxkundu.server.bo;
2
3 import java.io.Serializable;
4 import java.net.InetAddress;
5 import java.util.Date;
6
7 /**
8  *
9  * @author nxkundu
10  *
11  * @email nxk161830@utdallas.edu
12  * @name Nirmallya Kundu
13  *
14  * This is the Client BO (Business Object) Java beans
15  * Which holds the information about the client who logs in
16  * This client object is (broadcast) / sent in
17  * MessageTo Field
18  * MessageFrom Field
19  * as both will be client
20  *
21  * Methods:
22  *
23  * 1> lastSeen() -This method is used to calculate when this client was last seen (last online)
24  * by calculating from the lastTimestamp field
25  * Conditions for lastSeen:
26  * lastSeenTimestamp < 10 seconds => ONLINE
27  * lastSeenTimestamp > 10 seconds => OFFLINE and
28  * returns the lastTimestamp of the client in human readable format
29  *
30  *
31  */
32 public class Client implements Serializable{
33
34     /**
35      *
36      */
37     private static final long serialVersionUID = 1L;
```

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```
38
39 private String userName;
40 private String id;
41 private String name;
42 private String password;
43
44 private InetAddress inetAddress;
45 private int port;
46
47 private long lastSeenTimestamp;
48
49 /***** Constructors *****/
50
51 public Client(String userName) {
52     super();
53     this.userName = userName;
54 }
55
56 public Client(String userName, String password) {
57     super();
58     this.userName = userName;
59     this.setPassword(password);
60 }
61
62 public Client(String userName, String id, String name, InetAddress inetAddress, int port) {
63     super();
64     this.id = id;
65     this.name = name;
66     this.inetAddress = inetAddress;
67     this.port = port;
68     this.userName = userName;
69 }
70
71
72 /***** Object Methods *****/
73
74 /**
```

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```
75  * This method is used to calculate when this client was last seen (last online)
76  * by calculating from the lastTimestamp field
77  *
78  * Conditions for lastSeen:
79  *
80  * lastSeenTimestamp < 10 seconds => ONLINE
81  *
82  * lastSeenTimestamp > 10 seconds => OFFLINE and
83  * returns the lastTimestamp of the client in human readable format
84  *
85  * @return
86  */
87  public String lastSeen() {
88
89      long dt = new Date().getTime();
90
91      long diff = dt - lastSeenTimestamp;
92
93      long diffSeconds = diff / 1000 % 60;
94      long diffMinutes = diff / (60 * 1000) % 60;
95      long diffHours = diff / (60 * 60 * 1000) % 24;
96      long diffDays = diff / (24 * 60 * 60 * 1000);
97
98      String lastSeen = "online";
99
100     if(diffDays > 0) {
101         lastSeen = diffDays + " days ago";
102     }
103     else if(diffHours > 0) {
104         lastSeen = diffHours + " hours ago";
105     }
106     else if(diffMinutes == 1) {
107         lastSeen = diffMinutes + " minute ago";
108     }
109     else if(diffMinutes > 1) {
110         lastSeen = diffMinutes + " minutes ago";
111     }
```

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```
112     else if(diffSeconds > 10) {
113         lastSeen = diffMinutes + " seconds ago";
114     }
115
116     return lastSeen;
117
118 }
119
120 public boolean isOnline() {
121     long dt = new Date().getTime();
122
123     if(dt - lastSeenTimestamp <= 9999) {
124         return true;
125     }
126     return false;
127 }
128
129 /***** toString *****/
130 @Override
131 public String toString() {
132     return "Client [userName=" + userName + ", id=" + id + ", name=" + name + ", password=" + password
133         + ", inetAddress=" + inetAddress + ", port=" + port + ", lastSeenTimestamp=" + lastSeenTimestamp + "];"
134 }
135
136 /***** Getters Setters *****/
137
138 public String getId() {
139     return id;
140 }
141
142 public void setId(String id) {
143     this.id = id;
144 }
145
146
147 public String getName() {
148     return name;
```

```
149     }
150
151
152     public void setName(String name) {
153         this.name = name;
154     }
155
156
157     public InetAddress getInetAddress() {
158         return inetAddress;
159     }
160
161
162     public void setInetAddress(InetAddress inetAddress) {
163         this.inetAddress = inetAddress;
164     }
165
166
167     public int getPort() {
168         return port;
169     }
170
171
172     public void setPort(int port) {
173         this.port = port;
174     }
175
176
177     public String getUser_name() {
178         return userName;
179     }
180
181
182     public void setUser_name(String userName) {
183         this.userName = userName;
184     }
185
```

```
186 public long getLastSeenTimestamp() {  
187     return lastSeenTimestamp;  
188 }  
189  
190 public void setLastSeenTimestamp(long lastSeenTimestamp) {  
191     this.lastSeenTimestamp = lastSeenTimestamp;  
192 }  
193  
194 public String getPassword() {  
195     return password;  
196 }  
197  
198 public void setPassword(String password) {  
199     this.password = password;  
200 }  
201  
202  
203  
204 }  
205
```