**DOKUMENTASI PROTOKOL CHAT SERVER**

**KEAMANAN INFORMASI DAN JARINGAN**

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**KONSEP CLIENT-SERVER**

Konsep sederhana untuk memahami pembentukan koneksi client-server dapat diterangkan sebagai berikut :

1. Server membuat sebuah socket dengan menggunakan karakter unik (misalnya dengan penentuan alamat IP dan nomor port), yang dapat diidentifikasi dan ditemukan oleh client, pada saat ini server telah memasuki kondisi listening. Kondisi listening adalah keadaan di mana server dalam kondisi siap untuk menerima permintaan servis dari client.
2. Client membuat socket, mencari nama atau alamat socket server dan kemudian “menyambungkannya” untuk menginisialisasi sebuah komunikasi.
3. Setelah inisialisasi dilakukan maka client dan server sudah bisa saling mengirimkan data dan menerima data.

**SKRENARIO APLIKASI**

**Skenario normal untuk sistem aplikasi chatting clientserver ini adalah sebagai berikut :**

1. Server dijalankan pertama kali, pada saat ini server dikatakan dalam kondisi listening dan siap untuk menerima permintaan koneksi dari client.
2. Client siap melakukan koneksi ke server dengan menggunakan perintah connect , server lalu akan memproses permintaan koneksi dari client dengan menggunakan perintah accept.
3. Server mengirimkan balasan / notifikasi atas permintaan koneksi dari client, isinya adalah informasi bahwa client sudah terkoneksi dengan server. Bila notifikasi dari server sudah diterima maka client sudah terkoneksi dengan server, pada saat ini terjadi maka client dan server sudah bisa berkomunikasi saling mengirimkan pesan.
4. Bila ada permintaan koneksi dari client yang lain maka server akan melakukan hal yang sama pada point (1), (2) dan (3) di atas.
5. Jika client ingin keluar dari sistem maka tinggal memutuskan koneksi dari server dengan memanggil perintah close.
6. Server mengirimkan notifikasi pemutusan dari client.
7. Client sudah tidak terkoneksi ke server.
8. Server berada dalam keadaan listening dan siap untuk memproses permintaan koneksi dari client yang lain.

**INISIALISASI LOGIN**  
Request

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "REQ" : "LOGIN", "DATA" : {  "ID" : "VARIS",  "PASSWORD" : "1234"  } |  |

Response Success Login

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "SUCCESSLOGIN",  "SESSION" : "a2m2kmd0" |  |

Response Failed Login

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "FAILEDLOGIN" |  |

**INISIALISASI REGISTER**

Request Register

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "REQ" : "REGISTER",  "DATA" : {  "ID" : "VARIS",  "PASSWORD" : "1234"  } |  |

Response Success Register

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "SUCCESSREGISTER" |  |

Response Failed Register

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "FAILEDREGISTER" |  |

**INISIALISASI CREATE ROOM**

Request Create Room

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "REQ" : "CREATEROOM",  "DATA" : {  "ROOMNAME" : "PROGJARF",  "ID" : "VARIS"  } |  |

Response Success Create Room

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "SUCCESSCREATEROOM" |  |

Response Failed Create Room

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : “FAILEDCREATEROOM" |  |

**INISIALISASI INVITE ROOM**

Request Invite Room

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "REQ" : "ROOM",  "SESSIONKEY" : "asdw3",  "STATUS" : "INVITE",  "DATA" : {  "ROOMNAME" : "PROGJARF",  "ID" : "VARIS",  "IDTUJUAN" : "PABLO"    } |  |

Response Success Invite Room

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "SUCCESSINVITEROOM" |  |

Response Failed Invite Room

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "FAILEDINVITEROOM",  "MESSAGE" : "MESSAGE" |  |

**INISIALISASI MSG BROADCAST ROOM**

Request MSG Broadcast Room

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "REQ" : "ROOM",  "SESSIONKEY" : "asdw3",  "STATUS" : "MSG",  "DATA" : {  "ROOMNAME" : "PROGJARF",  "ID" : "VARIS",  "MESSAGE" : "MESSAGE"  } |  |

Response Success MSG Broadcast Room

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "SUCCESSMSGROOM",  "MESSAGE" : "IDPENGIRIM : MESSAGE" |  |

Response Failed MSG Broadcast Room

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "FAILEDMSGROOM" |  |

**INISIALISASI LIST ROOM**

Request List Room

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "REQ" : "ROOM",  "SESSIONKEY" : "asdw3",  "STATUS" : "LISTROOM",  "DATA" : {  "ID" : "VARIS"  } |  |

Response Success List Room

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "SUCCESSLISTROOM",  "DATA" : {  "ROOMLIST" : [  "PROGJARF","PROGJARG"  ]  } |  |

Response Failed List Room

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : “FAILEDLISTROOM" |  |

**INISIALISASI JOIN ROOM**

Request Join Room

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "REQ" : "ROOM",  "SESSIONKEY" : "asdw3",  "STATUS" : "JOIN",  "DATA" : {  "ROOMNAME" : "PROGJARF",  "ID" : "VARIS"  } |  |

Response Success Join Room

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "SUCCESSJOINROOM" |  |

Response Failed Join Room

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "FAILEDJOINROOM" |  |

**INISIALISASI LEAVE ROOM**

Request Leave Room

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "REQ" : "LEAVEROOM",  "SESSIONKEY" : "asdw3",  "DATA" : {  "ROOMNAME" : "PROGJARF",  "ID" : "VARIS"  } |  |

Response Success Leave Room

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "SUCCESSLEAVEROOM" |  |

Response Failed Leave Room

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "FAILEDLEAVEROOM" |  |

**INISIALISASI ACTIVE USER LIST**

Request Active User List

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "REQ" : "LIST" |  |

Response Success Active User List

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "SUCCESSLIST",  "DATA" : {  "LISTUSER" : [  "PABLO","DERY"  ]  } |  |

Response Failed Active User List

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "FAILEDLIST" |  |

**INISIALISASI USER ACTIVE - INVITE**

Request User Active - Invite

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "REQ" : "CHAT",  "SESSIONKEY" : "asdw3",  "DATA" : {  "ID" : "VARIS",  "IDTUJUAN" : "ANDRI",  "STATUS" : "INVITE"  } |  |

Response Success User Active - Invite

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "SUCCESSCHAT" |  |

Response Failed User Active - Invite

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "FAILEDCHAT" |  |

**INISIALISASI USER ACTIVE - CHAT**

Request Chatting with Active User

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "REQ" : "CHAT",  "SESSIONKEY" : "asdw3",  "DATA" : {  "ID" : "VARIS",  "IDTUJUAN" : "ANDRI",  "STATUS" : "ON",  "MESSAGE" : "hallo??"  } |  |

Response Success Chatting with Active User

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "RCHAT",  "DATA" : {  "MESSAGE" : "MESSAGE",  "PENGIRIM" : "VARIS"  } |  |

Response Failed Chatting with Active User

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "FAILEDCHAT" |  |

**INISIALISASI END CHAT**

Request End Chat

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "REQ" : "ENDCHAT",  "SESSIONKEY" : "asdw3",  "DATA" : {  "ID" : "VARIS",  "IDTUJUAN" : "ANDRI",  } |  |

Response Success End Chat

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "SUCCESSENDCHAT" |  |

Response Failed End Chat

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "FAILEDENDCHAT" |  |

**INISIALISASI LOGOUT**

Request Logout

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "REQ" : "LOGOUT",  "SESSIONKEY" : "asdw3",  "DATA" : {  "ID" : "VARIS"  } |  |

Response Logout

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "SUCCESSLOGOUT" |  |

Response Logout

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "FAILEDLOGOUT" |  |

**INISIALISASI EXPIRED SESSION**

Response Expired Session

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "EXPIRED",  "MESSAGE" : "Waktu anda habis, silakan login kembali." |  |

**INISIALISASI PROTOKOL ERROR**

Response Protokol Error

|  |  |  |
| --- | --- | --- |
| CLIENT |  | SERVER |
|  | "RTR" : "PROTOCOLERROR",  "MESSAGE" : "Protokol Anda Error :D" |  |