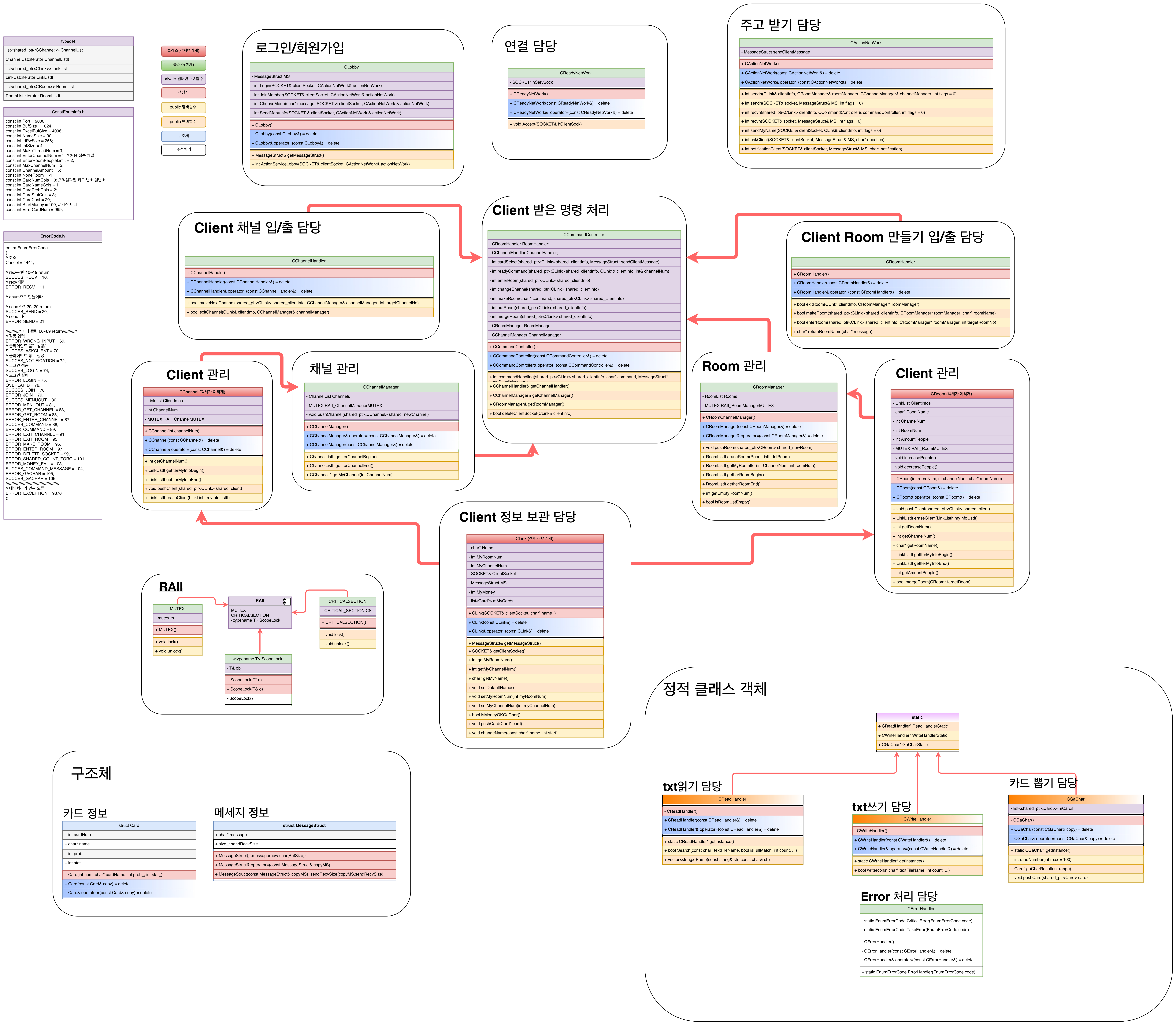
# RoomChatServer
# v1.01



```
typedef
list<shared_ptr<CChannel>> ChannelList
ChannelList::iterator ChannelListIt
list<shared_ptr<CLink>> LinkList
LinkList::iterator LinkListIt
list<shared_ptr<CRoom>> RoomList
RoomList::iterator RoomListIt
```

| |
|---|
| 🟥 클래스(객체여러개) |
| 🟩 클래스(한개) |
| 🟪 private 멤버변수 &함수 |
| 🟥 생성자 |
| 🟨 public 멤버함수 |
| 🟧 public 멤버함수 |
| 🟦 구조체 |
| ⬜ 주석처리 |

```
ConstEnumInfo.h
const int Port = 9000;
const int BufSize = 1024;
const int ExcelBufSize = 4096;
const int NameSize = 30;
const int IdPwSize = 256;
const int IntSize = 4;
const int MakeThreadNum = 3;
const int EnterChannelNum = 1; // 처음 접속 채널
const int EnterRoomPeopleLimit = 2;
const int MaxChannelNum = 5;
const int ChannelAmount = 5;
const int NoneRoom = -1;
const int CardNumCols = 0; // 액셀파일 카드 번호 열번호
const int CardNameCols = 1;
const int CardProbCols = 2;
const int CardStatCols = 3;
const int CardCost = 20;
const int StartMoney = 100; // 시작 머니
const int ErrorCardNum = 999;
```

```
ErrorCode.h
enum EnumErrorCode
{
// 취소
Cancel = 4444,

// recv관련 10~19 return
SUCCES_RECV = 10,
// recv 에러
ERROR_RECV = 11,

// enum으로 만들어라

// send관련 20~29 return
SUCCES_SEND = 20,
// send 에러
ERROR_SEND = 21,

///////////// 기타 관련 60~89 return///////////
// 잘못 입력
ERROR_WRONG_INPUT = 69,
// 클라이언트 묻기 성공/
SUCCES_ASKCLIENT = 70,
// 클라이언트 통보 성공
SUCCES_NOTIFICATION = 72,
// 로그인 성공
SUCCES_LOGIN = 74,
// 로그인 실패
ERROR_LOGIN = 75,
OVERLAPID = 76,
SUCCES_JOIN = 78,
ERROR_JOIN = 79,
SUCCES_MENUOUT = 80,
ERROR_MENUOUT = 81,
ERROR_GET_CHANNEL = 83,
ERROR_GET_ROOM = 85,
ERROR_ENTER_CHANNEL = 87,
SUCCES_COMMAND = 88,
ERROR_COMMAND = 89,
ERROR_EXIT_CHANNEL = 91,
ERROR_EXIT_ROOM = 93,
ERROR_MAKE_ROOM = 95,
ERROR_ENTER_ROOM = 97,
ERROR_DELETE_SOCKET = 99,
ERROR_SHARED_COUNT_ZORO = 101,
ERROR_MONEY_FAIL = 103,
SUCCES_COMMAND_MESSAGE = 104,
ERROR_GACHAR = 105,
SUCCES_GACHAR = 106,
/////////////////////////////////////////////
// 예외처리가 안된 오류
ERROR_EXCEPTION = 9876
};
```

## 로그인/회원가입

```
CLobby
- MessageStruct MS
- int Login(SOCKET& clientSocket, CActionNetWork& actionNetWork)
- int JoinMember(SOCKET& clientSocket, CActionNetWork& actionNetWork)
- int ChooseMenu(char* message, SOCKET & clientSocket, CActionNetWork & actionNetWork)
- int SendMenuInfo(SOCKET & clientSocket, CActionNetWork & actionNetWork)
+ CLobby()
+ CLobby(const CLobby&) = delete
+ CLobby& operator=(const CLobby&) = delete
+ MessageStruct& getMessageStruct()
+ int ActionServiceLobby(SOCKET& clientSocket, CActionNetWork& actionNetWork)
```

## 연결 담당

```
CReadyNetWork
- SOCKET* hServSock
+ CReadyNetWork()
+ CReadyNetWork(const CReadyNetWork&) = delete
+ CReadyNetWork&  operator=(const CReadyNetWork&) = delete
+ void Accept(SOCKET& hClientSock)
```

## 주고 받기 담당

```
CActionNetWork
- MessageStruct sendClientMessage
+ CActionNetWork()
+ CActionNetWork(const CActionNetWork&) = delete
+ CActionNetWork& operator=(const CActionNetWork&) = delete
+ int sendn(CLink& clientInfo, CRoomManager& roomManager, CChannelManager& channelManager, int flags = 0)
+ int sendn(SOCKET& socket, MessageStruct& MS, int flags = 0)
+ int recvn(shared_ptr<CLink> clientInfo, CCommandController& commandController, int flags = 0)
+ int recvn(SOCKET& socket, MessageStruct& MS, int flags = 0)
+ int sendMyName(SOCKET& clientSocket, CLink& clientInfo, int flags = 0)
+ int askClient(SOCKET& clientSocket, MessageStruct& MS, char* question)
+ int notificationClient(SOCKET& clientSocket, MessageStruct& MS, char* notification)
```

## Client 채널 입/출 담당

```
CChannelHandler
+ CChannelHandler()
+ CChannelHandler(const CChannelHandler&) = delete
+ CChannelHandler& operator=(const CChannelHandler&) = delete
+ bool moveNextChannel(shared_ptr<CLink> shared_clientInfo, CChannelManager& channelManager, int targetChannelNo)
+ bool exitChannel(CLink& clientInfo, CChannelManager& channelManager)
```

## Client 받은 명령 처리

```
CCommandController
- CRoomHandler RoomHandler;
- CChannelHandler ChannelHandler;
- int cardSelect(shared_ptr<CLink> shared_clientInfo, MessageStruct* sendClientMessage)
- int readyCommand(shared_ptr<CLink> shared_clientInfo, CLink*& clientInfo, int& channelNum)
- int enterRoom(shared_ptr<CLink> shared_clientInfo)
- int changeChannel(shared_ptr<CLink> shared_clientInfo)
- int makeRoom(char * command, shared_ptr<CLink> shared_clientInfo)
- int outRoom(shared_ptr<CLink> shared_clientInfo)
- int mergeRoom(shared_ptr<CLink> shared_clientInfo)
- CRoomManager RoomManager
- CChannelManager ChannelManager
+ CCommandController( )
+ CCommandController(const CCommandController&) = delete
+ CCommandController& operator=(const CCommandController&) = delete
+ int commandHandling(shared_ptr<CLink> shared_clientInfo, char* command, MessageStruct* sendClientMessage)
+ CChannelHandler& getChannelHandler()
+ CChannelManager& getChannelManager()
+ CRoomManager& getRoomManager()
+ bool deleteClientSocket(CLink& clientInfo)
```

## Client Room 만들기 입/출 담당

```
CRoomHandler
+ CRoomHandler()
+ CRoomHandler(const CRoomHandler&) = delete
+ CRoomHandler& operator=(const CRoomHandler&) = delete
+ bool exitRoom(CLink* clientInfo, CRoomManager* roomManager)
+ bool makeRoom(shared_ptr<CLink> shared_clientInfo, CRoomManager* roomManager, char* roomName)
+ bool enterRoom(shared_ptr<CLink> shared_clientInfo, CRoomManager* roomManager, int targetRoomNo)
+ char* returnRoomName(char* message)
```

## Client 관리

```
CChannel (객체가 여러개)
- LinkList ClientInfos
- int ChannelNum
- MUTEX RAII_ChannelMUTEX
+ CChannel(int channelNum);
+ CChannel(const CChannel&) = delete
+ CChannel& operator=(const CChannel&) = delete
+ int getChannelNum()
+ LinkListIt getIterMyInfoBegin()
+ LinkListIt getIterMyInfoEnd()
+ void pushClient(shared_ptr<CLink> shared_client)
+ LinkListIt eraseClient(LinkListIt myInfoListIt)
```

## 채널 관리

```
CChannelManager
- ChannelList Channels
- MUTEX RAII_ChannelManagerMUTEX
- void pushChannel(shared_ptr<CChannel> shared_newChannel)
+ CChannelManager()
+ CChannelManager& operator=(const CChannelManager&) = delete
+ CChannelManager(const CChannelManager&) = delete
+ ChannelListIt getIterChannelBegin()
+ ChannelListIt getIterChannelEnd()
+ CChannel * getMyChannel(int ChannelNum)
```

## Room 관리

```
CRoomManager
- RoomList Rooms
- MUTEX RAII_RoomManagerMUTEX
+ CRoomChannelManager()
+ CRoomManager(const CRoomManager&) = delete
+ CRoomManager& operator=(const CRoomManager&) = delete
+ void pushRoom(shared_ptr<CRoom> shared_newRoom)
+ RoomListIt eraseRoom(RoomListIt delRoom)
+ RoomListIt getMyRoomIter(int ChannelNum, int roomNum)
+ RoomListIt getIterRoomBegin()
+ RoomListIt getIterRoomEnd()
+ int getEmptyRoomNum()
+ bool isRoomListEmpty()
```

## Client 관리

```
CRoom (객체가 여러개)
- LinkList ClientInfos
- char* RoomName
- int ChannelNum
- int RoomNum
- int AmountPeople
- MUTEX RAII_RoomMUTEX
- void increasePeople()
- void decreasePeople()
+ CRoom(int roomNum,int channelNum, char* roomName)
+ CRoom(const CRoom&) = delete
+ CRoom& operator=(const CRoom&) = delete
+ void pushClient(shared_ptr<CLink> shared_client)
+ LinkListIt eraseClient(LinkListIt myInfoListIt)
+ int getRoomNum()
+ int getChannelNum()
+ char* getRoomName()
+ LinkListIt getIterMyInfoBegin()
+ LinkListIt getIterMyInfoEnd()
+ int getAmountPeople()
+ bool mergeRoom(CRoom* targetRoom)
```

## Client 정보 보관 담당

```
CLink (객체가 여러개)
- char* Name
- int MyRoomNum
- int MyChannelNum
- SOCKET& ClientSocket
- MessageStruct MS
- int MyMoney
- list<Card*> mMyCards
+ CLink(SOCKET& clientSocket, char* name_)
+ CLink(const CLink&) = delete
+ CLink& operator=(const CLink&) = delete
+ MessageStruct& getMessageStruct()
+ SOCKET& getClientSocket()
+ int getMyRoomNum()
+ int getMyChannelNum()
+ char* getMyName()
+ void setDefaultName()
+ void setMyRoomNum(int myRoomNum)
+ void setMyChannelNum(int myChannelNum)
+ bool isMoneyOKGaChar()
+ void pushCard(Card* card)
+ void changeName(const char* name, int start)
```

## RAII

```
MUTEX
- mutex m
+ MUTEX()
+ void lock()
+ void unlock()
```

```
RAII
MUTEX
CRITICALSECTION
<typename T> ScopeLock
```

```
CRITICALSECTION
- CRITICAL_SECTION CS
+ CRITICALSECTION()
+ void lock()
+ void unlock()
```

```
<typename T> ScopeLock
- T& obj
+ ScopeLock(T* o)
+ ScopeLock(T& o)
~ScopeLock()
```

## 구조체

### 카드 정보

```
struct Card
+ int cardNum
+ char* name
+ int prob
+ int stat
+ Card(int num, char* cardName, int prob_, int stat_)
+ Card(const Card& copy) = delete
+ Card& operator=(const Card& copy) = delete
```

### 메세지 정보

```
struct MessageStruct
+ char* message
+ size_t sendRecvSize
+ MessageStruct() :message(new char[BufSize])
+ MessageStruct& operator=(const MessageStruct& copyMS)
+ MessageStruct(const MessageStruct& copyMS) :sendRecvSize(copyMS.sendRecvSize)
```

## 정적 클래스 객체

```
static
+ CReadHandler* ReadHandlerStatic
+ CWriteHandler* WriteHandlerStatic
+ CGaChar* GaCharStatic
```

### txt읽기 담당

```
CReadHandler
- CReadHandler()
+ CReadHandler(const CReadHandler&) = delete
+ CReadHandler& operator=(const CReadHandler&) = delete
+ static CReadHandler* getInstance()
+ bool Search(const char* textFileName, bool isFullMatch, int count, ...)
+ vector<string> Parse(const string& str, const char& ch)
```

### txt쓰기 담당

```
CWriteHandler
- CWriteHandler()
+ CWriteHandler(const CWriteHandler&) = delete
+ CWriteHandler& operator=(const CWriteHandler&) = delete
+ static CWriteHandler* getInstance()
+ bool write(const char* textFileName, int count, ...)
```

### 카드 뽑기 담당

```
CGaChar
- list<shared_ptr<Card>> mCards
- CGaChar()
+ CGaChar(const CGaChar& copy) = delete
+ CGaChar& operator=(const CGaChar& copy) = delete
+ static CGaChar* getInstance()
+ int randNumber(int max = 100)
+ Card* gaCharResult(int range)
+ void pushCard(shared_ptr<Card> card)
```

### Error 처리 담당

```
CErrorHandler
- static EnumErrorCode CriticalError(EnumErrorCode code)
- static EnumErrorCode TakeError(EnumErrorCode code)
- CErrorHandler()
- CErrorHandler(const CErrorHandler&) = delete
- CErrorHandler& operator=(const CErrorHandler&) = delete
+ static EnumErrorCode ErrorHandler(EnumErrorCode code)
```