QuitCommand :

std::string description();

bool run();

GetAllMetatdataCommand :

std::string description();

bool run();

GetMsgsForReceiverCommand :

std::string description();

bool run();

SendMessageCommand :

std::string description();

bool run();

AddUserCommand :

std::string description();

bool run();

Command :

std::string description();

bool run();

System Entities

Message:

uint32\_t id;

string senderName;

string receiverName;

string content;

time\_t timestamp;

User :

uint32\_t id;

string name;

Result :

bool status;

string description;

MessageMetadata:

uint32\_t id;

uint32\_t senderID;

uint32\_t receiverID;

time\_t timestamp;

map<string, set<Message\*> >

MessageService

map<string, set<Metadata\*> >

MessageService

QuitCommand

set<string>

map<string, User\*>

UserService

**Service Layer**

BadChoiceCommand

GetAllMessagesBySenderCommand

GetMessagesForReceiverCommand

SendMessageCommand

AddUserCommand

**Command layer**

Menu