

## CI CHAT PROTOCOL

### 1. INTRODUCTION

CiChat is a simple chat protocol that allows multiple unique users to communicate in a single chat room called #nonsense moderated by a single moderator user.

### 2. OVERVIEW OF THE PROTOCOL DESIGN

When a client connects to a server, they automatically join a chatroom called #nonsense on port 9001. They must specify their name upon connection before sending messages. They can do so by entering NAME <name>. For moderators, they must enter MODERATOR <passcode> when wanting to connect as a moderator and the passcode must match with the passcode specified in the code. Everytime a user connects/leaves the chatroom, an announcement is made to all clients connected. They can then send a message after specifying their name. A message ends when a newline character is encountered and is then sent to everyone. Error messages will be sent when a specific error is encountered.

### 3. COMMANDS USAGE

Users and moderators may enter a specific command as follows:

#### 3.1 Users

##### 3.1.1 User Connection

NAME <name>

##### 3.1.2 User entering messages

MSG <message>

##### 3.1.3 User leaving the chatroom

EXIT

#### 3.2 Moderator

##### 3.2.1 Moderator Connection

MODERATOR <passcode>

##### 3.2.2 Moderator Abilities

KICK <name>

BAN <name>

TOPIC <topic>

#### 4. OUTPUT MESSAGES

Output messages are shown to all users/clients/servers connected to the chat room.

##### 4.1 User messages sent

<name>: <message>

##### 4.2 User enters the chatroom

<name> entered the chatroom

##### 4.3 User leaves chatroom

<name> left the chatroom

##### 4.4 User is kicked out

<name> is kicked out of the chatroom

##### 4.5 A topic is set

A topic "<topic>" is set by the moderator

#### 5. ERROR MESSAGES

Error messages are printed to the specific client when they encounter an error.

##### a.) When a name is already taken

ERROR: Name already taken

##### b.) When a name is banned

ERROR: Name is banned

##### c.) When a command is invalid

ERROR: Invalid command

##### d.) When a user does not have permission to use a command

ERROR: Permission denied

##### e.) When a user is not found

ERROR: User not found