

MESSAGE				RESPONSE			
Type #	Sender	Reason	Fields	Type #	Sender	Reason	Fields
1	client	Authentication Request	messageType: int messageID: int senderID: String password: String	2	server	Network Response	messageType: int messageID: int timestamp status: bool reason: String
3	client	Password Change	messageType: int messageID: int senderID: String timestamp newPassword: String	2	server		
4	client	Contact Request	messageType: int messageID: int senderID: String recipientID: String timestamp publicKey: String	2	server		
5	server	Contact Response	messageType: int messageID: int senderID: String status: bool	2	client		
6	client	Text Message	messageType: int messageID: int senderID: String recipientID: String timestamp timeout: int content: String	2	server		
7	server	Text Message	messageType: int messageID: int senderID: String timestamp timeout: int content: String	2	client		
8	client	Public Key Update					

PROTOCOL:

- all messages are formatted as json to make parsing easier (see json object documentation or gson libraries for references on how to do this)
- each message is required to have its first field be *messageType* to identify its purpose to the SMA network agent receiving it (either a client or server)

EXAMPLE FORMAT:

```
{messageType:"1",messageID:"2",senderID:"3",content:"Hello world!"}
```

NOTES:

- reading from and writing to the network should be done with `readline()` and `println()` respectively
- a simple approach for parsing incoming messages and doing what needs to be done with them is:
 1. define a generic network message class and specific network message classes
 2. `readLine()` from network socket connection
 3. use your json parser of choice to populate a generic network message object's fields
 4. determine the type of network message you've received using the type field from the newly populated generic network message object
 5. use this and the saved line of input to populate a specific network message object
 6. use the information in the newly populated specific network message object as needed

