

Group member	Contributions
Nawal Ali	28.3%
Claire Li	28.3%
Dora Rajab	28.3%
Nikhil Shah	15%

## Classes

### BlockNode

Instance variables	<ul style="list-style-type: none"> <li>- public User blockedUser;</li> <li>- public BlockNode next;</li> </ul>
Methods completed	Constructor: <ul style="list-style-type: none"> <li>- public BlockNode(User blockedUser)</li> </ul>

### Channel

Instance variables	<ul style="list-style-type: none"> <li>- public String topic, name</li> <li>- ArrayList&lt;Message&gt; messages</li> </ul>
Methods completed	<ul style="list-style-type: none"> <li>- public String toString()</li> <li>- public void addMessage(Message m)</li> <li>- public void deleteMessage(int idx)</li> </ul> (class messageNode) <ul style="list-style-type: none"> <li>- public ArrayList&lt;Message&gt; findMessageByUser(User user)</li> <li>- public boolean messageExists(Message message)</li> <li>- public ArrayList&lt;Message&gt; getAllMessages()</li> <li>- public void displayAllMessages()</li> </ul>

### Date

Instance variables	<ul style="list-style-type: none"> <li>- public int day, month, year;</li> </ul>
Methods completed	<ul style="list-style-type: none"> <li>- public String toString()</li> </ul>

### FriendNode

Instance variables	<ul style="list-style-type: none"> <li>- public User friend;</li> <li>- public FriendNode next;</li> </ul>
Methods completed	Constructor: <ul style="list-style-type: none"> <li>- public FriendNode(User friend)</li> </ul>

## Message

Instance variables	<ul style="list-style-type: none"><li>- public User sender, recipient</li><li>- public Channel channel</li><li>- public String message</li><li>- public Date date</li><li>- public Time time</li><li>- public ArrayList&lt;User&gt; groupChatMembers</li></ul>
Methods completed	<ul style="list-style-type: none"><li>- public void sendChannelMessage(ArrayList&lt;Message&gt; messages)</li><li>- public void sendPrivateMessage(ArrayList&lt;Message&gt; messages)</li><li>- public void sendGroupMessage(ArrayList&lt;Message&gt; messages)</li><li>- public void addMessage(ArrayList&lt;Message&gt; messages, Message message)</li><li>- public void deleteMessage(ArrayList&lt;Message&gt; messages)</li><li>- public void removeMessage(ArrayList&lt;Message&gt; messages, Message message)</li><li>- public void clearMessages(ArrayList&lt;Message&gt; messages)</li><li>- public String displayChannelMessage()</li><li>- public String displayPrivateMessage()</li><li>- public String displayGroupMessage()</li><li>- public String getGroupChatMemberNames()</li><li>- public void addUserToGoupChat(User user)</li><li>- public void removeUserFromGroupChat(User user)</li><li>- public String dateTimeToString()</li><li>- public String toString()</li></ul>

## Signin

Instance variables	<ul style="list-style-type: none"><li>- public String username, password</li></ul>
Methods completed	<ul style="list-style-type: none"><li>- public Signin(ArrayList&lt;User&gt; users</li><li>- Public User signIn(ArrayList&lt;User&gt; users)</li></ul>

## Subscription

Instance variables	<ul style="list-style-type: none"><li>- public User user</li><li>- public Channel channel</li></ul>
Methods completed	<ul style="list-style-type: none"><li>- public User getUser()</li><li>- public Channel getChannel()</li><li>- public String toString()</li></ul>

## Time

Instance variables	<ul style="list-style-type: none"><li>- public int hour, minute, second;</li></ul>
Methods completed	<ul style="list-style-type: none"><li>- String toString()</li></ul>

## User

Instance variables	<ul style="list-style-type: none"><li>- public long studentID</li><li>- public String email, password, username</li><li>- public FriendNode friendsList;</li><li>- public BlockNode blockList</li><li>- public ArrayList&lt;Subscription&gt; subscriptions;</li></ul>
Methods completed	<ul style="list-style-type: none"><li>- public String toString()</li><li>- public void subscribeToChannel(Channel channel)</li><li>- public String unsubscribeFromChannel(int idx)</li><li>- public void displayChannelSubscriptions()</li></ul> <p>Recursive methods:</p> <ul style="list-style-type: none"><li>- public void addFriend(User newFriend)</li><li>- public FriendNode addFriendHelper(FriendNode node, User newFriend)</li><li>- public void removeFriend(User friendToRemove)</li><li>- public FriendNode removeFriendHelper(FriendNode node, User friendToRemove)</li><li>- public void displayFriendsList()</li><li>- public void displayFriendsListHelper(FriendNode node)</li><li>- public void blockUser(User toBlock)</li><li>- public BlockNode blockUserHelper(BlockNode node, User toBlock)</li><li>- public void unblockUser(User toUnblock)</li><li>- public BlockNode unblockUserHelper(BlockNode node, User toUnblock)</li><li>- public void displayBlockList()</li><li>- public void displayBlockListHelper(BlockNode node)</li><li>- public boolean isBlockedBy(User other)</li><li>- public boolean isBlockedByHelper(BlockNode node)</li><li>- public void messageTranscript(ArrayList&lt;Message&gt; messages)</li></ul>

## UnitTests

MessageTest	<ul style="list-style-type: none"><li>- Unit test for Message class</li></ul>
UserTest	<ul style="list-style-type: none"><li>- Unit test for User class</li></ul>