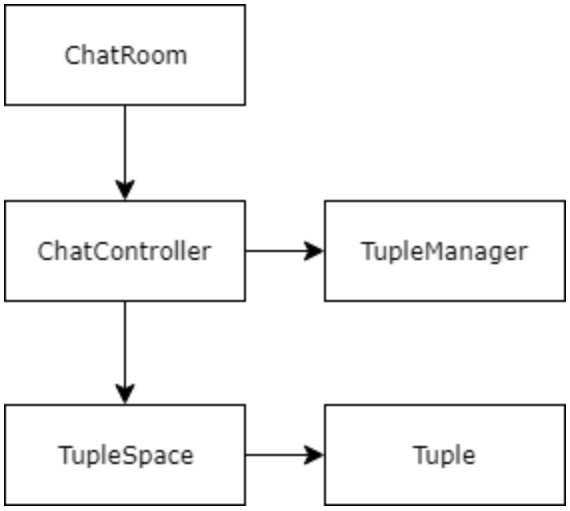

Class Descriptions

MainApp

Contains the main method to launch the application.

ChatRoom

The start() method is called by main. The ChatRoom contains a constant while loop and a switch statement for possible chat room options. The class also contains an instance of TupleSpaceTest and an option in the chat room to run the tuple test.

ChatController

Used to handle the actual implementation of the chat room logic. Its methods are called by ChatRoom and it performs the necessary operations with the TupleSpace.

TupleManager

Contains 5 template tuple methods for use by the ChatController. This is used so that the code in ChatController is cleaner and the tuples that are stored in the TupleSpace are consistently uniform.

Internal Tuple patterns created:
 currentUserTuple -- ("Current User", "username")
 counterTuple -- ("Count", int)
 statusTuple -- ("Active/Inactive", "username")

msgTuple -- ("Msg", timeInt, "username", "message")
userTuple -- ("User", "username")

TupleSpace

Implements the add, remove, and read methods to construct a TupleSpace. There is a SimpleTupleSpace and a TupleSpace. They are both using the same interface and specifications but the simple one is less efficient.

Tuple

The Tuple object is used by the TupleSpace to better retrieve and access the data structure. It contains basic methods and a data structure to store the tuple contents. There is a SimpleTuple and a Tuple class for use in the different tuple spaces. I decided to encapsulate the Tuple in the TupleSpace because this way the interactions with the TupleSpace are as simple as possible and the user can create their own tuples.

TupleSpaceInterface

A basic interface for describing the add, remove, and read methods. The interface helps so that the TupleSpaceTest class can be used by both TupleSpace implementations.

TupleSpaceTest

Contains two methods for testing the Tuple Space. There is a test for correctness and a test for efficiency. The tests are able to be called through the chat room by typing the (t) command. This is so that it is easier to access for debugging and would not normally be accessible from the chat room. The stress test allows for you to add a size for your test.