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Date: 11/20/2024

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Section 001

**Lab 6 Report**

Total in points: \_\_\_\_\_\_

Comments:

Affirmation of my Independent Effort: HAOZHOU HUANG

**How to use**

1. Extract Fsm folder into the working directory

The working directory should contain:

1. Fsm folder with .class files in it
2. Main.java
3. Tcp folder, with 4 .java files
4. Compile and run (windows):

javac -cp . Main.java; java -cp . Main.java

1. Directly type event into the console

**FSM implementation**

TCPFSM’s State/Event/Transition/Action classes are implemented as extending the Fsm classes.

* In main, all possible State, Event, Transition, Actions are created first and fed to the “addTransition” method to be able to build the FSM with all possible transitions.
* The standard input continuously consumes user input which can contain multiple event token in one line, separated by space or newline.
* If unexpected input received, it ignores the input; If unexpected event for a given state is received no action/transition is taken, and an error message is thrown without termination.
* The counts for receiving and sending messages are cleared whenever a connection terminates (CLOSED), simulating only one session. This means although user can continue to establish another session, the counts from previous sessions are not recorded.

**Other information**

* Fsm.trace is disabled but can uncomment the related line in Main.java to expose the traces.
* Action is created only as one for simplicity. As improvement, it can be created separately for each Event/Transition.