CO324 Lab 07 : Finite State Machines

E/14/158
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1 Files, compilation and running

```
ls
Fan.java FanState.java
javac Fan.java
java Fan
```

Tested on java version 1.8.0-144 running on Ubuntu 16.04

2 Note that the FanControl server is multithreaded. What would happen if multiple clients connected and sent control requests at the same time?

When multiple threads (clients) try to access and modify the same variable (multiple clients send control requests to the fan) **race conditions** can occur giving rise to **memory inconsistencies**.

Multiple client control has the obvious drawback of a particular client requesting a change and him experiencing something else. But this is not an **error**. An example for errors is when two clients request **inc** but the fan increments only once because the memory was accessed by both threads before any increment happened.

The solution is to make the inc(), dec(),changeState() **methods synchronized** or put the part of the code accessing variables in to **synchronized blocks**.