

Running

For Linux, requires Python 3.7.0 (or above):

```
$ ./spawn.sh 5 # replace 5 by the number of replicas you want

# In another terminal:
# to add more replicas
$ python replica.py &
# to run the tests (no output = pass)
$ tools/test_all
# to run the client
$ python client.py
```

Features

Users can CRUD their own ratings and tags. They also can search for, and create movies. All operations are causally ordered using vector clocks. Thus, if a user creates a rating from the same session and reads a rating (from the same session) then he would receive ratings with his updates applied. Creating movies is a forced update, the frontend will wait until a majority of replicas have received the update before proceeding. Using the client, you can force replicas to go offline.

At any time, all replicas are causally consistent. Given enough time, all replicas converge to a common global order of events (i.e. all replicas will apply *all* concurrent updates in the same order) and hence the same global state. The system supports any number of replicas. New replicas can join the cluster at any time.