DISTRIBUTED OPERATING SYSTEM PRINCIPLES
PROJECT 2
(README)

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What is Working:

Implementation:

We have implemented the following topologies and algorithms,

Topologies:

1. Full Network
2. 2D Grid
3. Line
4. Imprefect 3D Grid

Algorithms

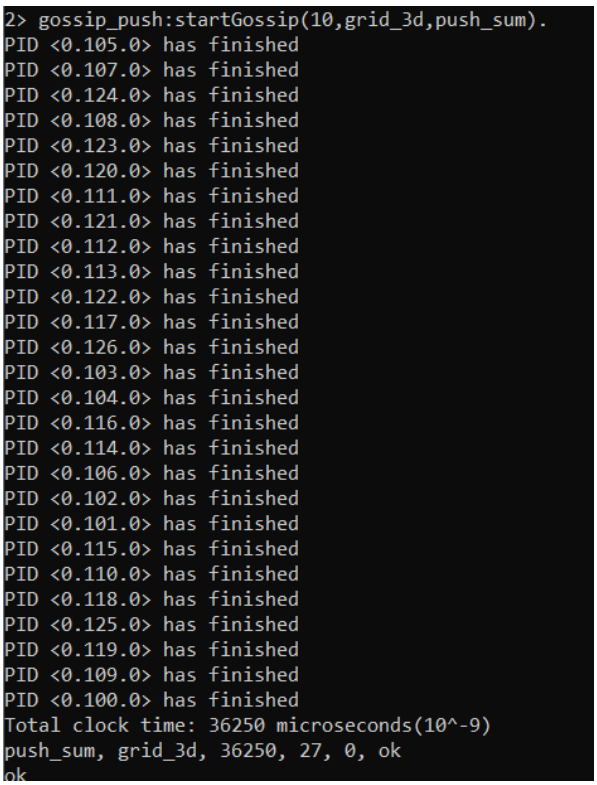
1. Gossip
2. Push-Sum

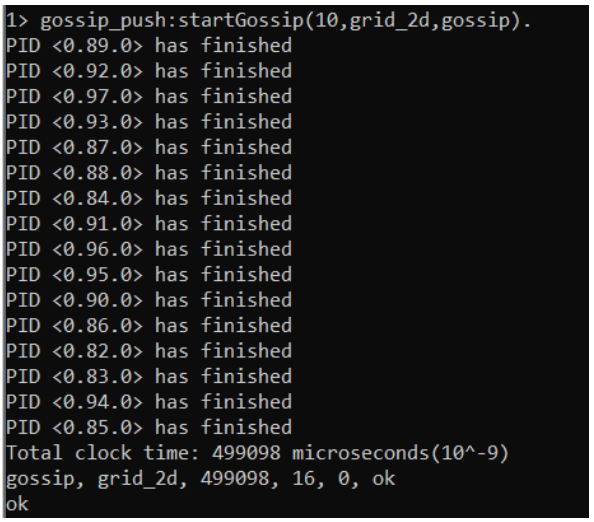
Compilation and Execution:

1. Extract the zip file.
2. cd to project2 directory.
3. Open the `erl` shell in this directory
4. Compile the code file:
    a. c(gossip_push).
5. On the Server Machine, start the server with
    a. gossip_push:startGossip(Nodes, Topology, Algorithm)
6. Here inputs are,
    a. Node : number of nodes
    b. Topology: full | grid_2d | line | grid_3d
    c. Algorithm: gossip | push_sum

```
2> gossip_push:startGossip(10,full,gossip).
PID <0.96.0> has finished
PID <0.89.0> has finished
PID <0.92.0> has finished
PID <0.88.0> has finished
PID <0.87.0> has finished
PID <0.91.0> has finished
PID <0.93.0> has finished
PID <0.94.0> has finished
PID <0.90.0> has finished
PID <0.95.0> has finished
Total clock time: 352666 microseconds(10^-9)
gossip, full, 352666, 10, 0, ok
ok
```

```
4> gossip_push:startGossip(10,line,push_sum).
PID <0.111.0> has finished
PID <0.112.0> has finished
PID <0.118.0> has finished
PID <0.119.0> has finished
PID <0.117.0> has finished
PID <0.115.0> has finished
PID <0.116.0> has finished
PID <0.113.0> has finished
PID <0.120.0> has finished
PID <0.114.0> has finished
Total clock time: 26009 microseconds(10^-9)
push_sum, line, 26009, 10, 0, ok
ok
```





What is the largest network you managed to deal with for each type of topology and algorithm?

Topologies	**Algorithms: Gossip & Push-Sum** (No. of actors)
Full	4000
2D Grid	4624
Line	4000
3D Grid	4913