**DOSP - Project 2**

**Gossip Simulator**

**Team members**

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**What is working**

1. Gossip Algorithm
   1. Line
   2. Full
   3. 3D
   4. Imperfect3D
2. Push-Sum Algorithm
   1. Line
   2. Full
   3. 3D
   4. Imperfect3D

The program prints the convergence time for above mentioned algorithms and topologies. The convergence time is defined as following:

Gossip – When all the actors hear the rumor/message more than 10 times.

Push-Sum – When ratio of s/w changes by more than 10^ (-10) in 3 consecutive rounds.

**How to Run**

Set path for project2.fsx and run the following command

*dotnet fsi project2.fsx <numNodes> <topology> <algorithm>*

where:

*numNodes* (Integer) – no. of nodes you want in the topology

*topology* (String) – can be one of the following: ‘line’, ‘full’, ‘3D’, ‘imp3D’

*algorithm* (String) - can be one of the following: ‘gossip’, ‘pushsum’

**Largest Network**

Below is the largest value of *numNodes* we could manage to run our algorithms and topologies to run for:

|  |  |  |
| --- | --- | --- |
|  | **Gossip** | **Push-Sum** |
| **Line** | 1000 | 300 |
| **Full** | 30000 | 5000 |
| **3D** | 500 | 300 |
| **Imperfect 3D** | 500 | 300 |