# Project 2 - Bonus - Gossip Simulator - Deliberate Failure Simulation

We have performed deliberate failure for the gossip algorithm in the full topology.

Running the Code

*dotnet fsi --langversion:preview project.fsx  N F T Algorithm*

Where N is the number of nodes, F is the number of nodes for deliberate failure, T is the topology (topo= "full", topo= "2D", topo= "line", topo= "imp2D"),

A is the algorithm (algorithm = "gossip" or "push-sum")

## Implementation

Using the user input of the number of failure nodes, we generate random nodes to be deliberately killed. We wait to kill the node, till it receives the message two times, and then it fails.

## Observation

We did the following observations by keeping the total number of actor nodes fixed (1000). Then we began increasing our failure nodes and we obtained the following result.

Initially, for fewer node failures the run time is higher but as the nodes increase the run time stabilizes and remains constant for increasing number of failure nodes.

