Project 2 Bonus Report

Group Members:
Joseph S Rayan, (UFID: 61022245), josephsrayan@ufl.edu
Sai Krishna Anugu, (UFID: 42266064), saikrishnaanugu@ufl.edu

Implementation Design

Failure Mode can be achieved using the monitor functionality in the Erlang OTP

Based on Current Code Design

1) In the Supervisor Function within both the maingossip and mainpushsum files, the monitor function can be called before spawning the neighbor nodes.

2) This ensure that the supervisor node will be able to monitor if the neighbors die

3) When any of the neighbors die, the Supervisor node will be able to spawn a new neighbor

4) This newly spawned neighbor will take the old neighbor's place in the PID list that was defined (refer to README regarding PID List)

Simulating Failure Mode

1) After the maingossip:start(NumOfNode, "full") has been executed, a new function can be introduced to kill a random neighbor within the PID list

2) Due to the monitor functionality that was already called before the neighbors were spawned, the supervisor would be notified of this process being killed.

3) The supervisor functionality will be able to spawn a new Neighbor

4) This new Neighbor's PID will be added to the PID list at the same index as the old Neighbor that was killed