Project 3: P2P

- **Team members**

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- **Input**

  Command line to run the project:

  dotnet fsi chord.fsx numberOfNodes numberOfRequest

- **What is working**

  As part of its implementation, the Chord protocol allows a program to be started by specifying the number of nodes that are to be configured in the network, as well as the number of requests that are required per node. The program starts by adding the input number of nodes one by one and distributing the keys as they join. It also updates the finger table as needed. Each node is joined by using child actor. Upon the completion of the specified number of requests, the program terminates. Every node transmits one request per second. I was able to compute the SHA-1 but unable to implement the part where we must assigned it as id to each node and keys. I used the random integer value between 0 to 2^m to assign id and keys.

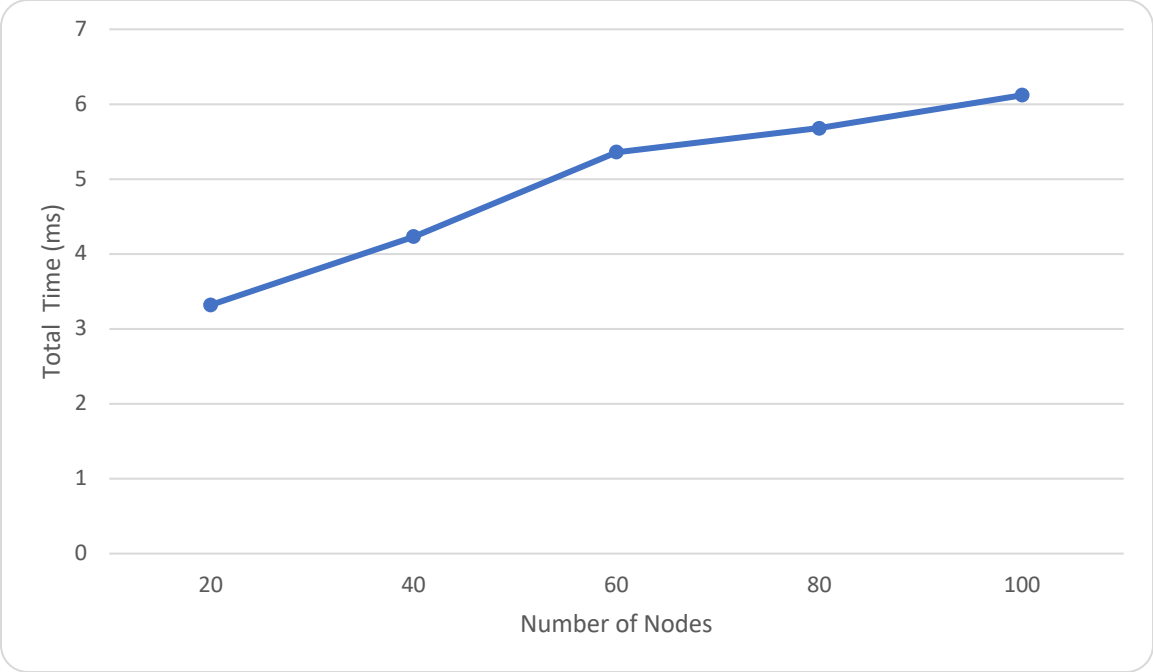

Figure 1: Graph of Number of nodes VS average time

- **What is the largest network you managed to deal with**

  The project run for maximum value of number of nodes = 200

```
[shwetatyagi@Shwetas-MacBook-Air project3 % dotnet fsi chord.fsx 200 4
  The average number of hops traversed = 39.074320
  Time = 10.062321
 shwetatyagi@Shwetas-MacBook-Air project3 %
```