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# Large-Scale Distributed Systems

## Project 2: Distributed Hash Tables

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## 1 Introduction

## 2 The base Chord protocol

In this section, we will implement the base Chord protocol. At first, we will consider a simplified version of Chord with no finger table. Each peer will only have links to its successor and its predecessor, thus we expect the search time to be  $O(n)$  hops, where  $n$  is the number of peers in the ring. Secondly, we will add a finger table to each node so that the queries can be performed in  $O(\log(n))$  hops. Finally we will compare both protocols' search efficiency for 500 queries per node.

### 2.1 Implementation