Relazione Algoritmi e Strutture Dati

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Contents

Chapter 1

Mege Binary Insertion Sort

1.1 Mege Binary Insertion Sort implementation

1.1.1 Introduction

The purpose of this report is to provide the tests that have been done to find the best value of K for the Merge Binary Insertion Sort algorithm. Considering that Merge Binary Insertion Sort is a hybrid algorithm that has ability to handle large input and for its speed, but it became inefficient when having a small input, in the case of small input the library switch to Binary Insertion sort, that is more efficient on small input.

Chapter 2

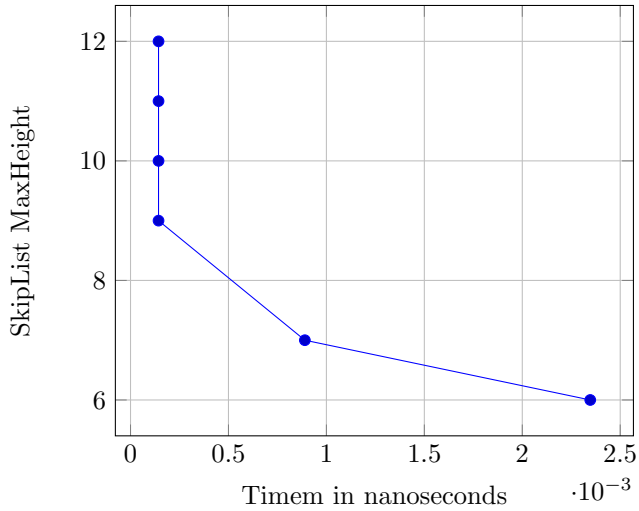
Skip List

2.1 Skip List implementation

2.1.1 Introduction

The purpose of this chapter is to report the tests that have been done to find the best value of height in a Skip List. Skip List is a probabilistic data structure that allows searching, insertion and deleting operation with time complexity of $O(logn)$.

2.1.2 Testing methodology[1]



Range from 1 to 5 is omitted because the algorithm did not terminate for those values

[1] all test are done on a Lenovo Thinkpad x390 yoga with an Intel Core i7-8565U CPU and 16GB of RAM, with Arch Linux installed as only OS