**CS2001**

**Complexity**

**18/11/2020 190022143**

# Abstract

This report documents my work for the CS2001 W10 Practical, in which we explored how a search algorithm’s performance is affected by its pathological cases. The program was required to run a tested quicksort on pathological sorting cases and XXX.

# Introduction

**Quicksort**

The quick sort is a divide and conquer algorithm which picks a pivot element, partitions around that element, and recursively sorts the partitions. The pivot theoretically should be close to the median value, however, in an unsorted array the median value could be any one of them. For the purposes of this project, the final element is used as the pivot.

**Sortedness**

**https://link.springer.com/chapter/10.1007/BFb0038186**

There are a variety of ways in which one could define how sorted a list is.

Pathological cases

Algorithm testing

# Methodology

# Results

## Evaluation and Conclusion