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## Data Structures Review

This document serves as my personal review of data structures used in programming. I expect this document to begin with only the most fundamental concepts: stacks, queues, graphs, linked lists, arrays, hash maps, etc. As I learn more though, I expect this document to become quite lengthy. This document will not serve as an in-depth review of everything, but rather will hold only the most vital content to remember. It's my intention to link longer explanations of individual concepts to separate documents, particularly those which are more complex or have more to remember.

### Contents

<b>1</b>	<b>Fundamentals</b>	<b>2</b>
1.1	Lists . . . . .	4
1.2	Stacks . . . . .	4
1.3	Queues . . . . .	4
<b>2</b>	<b>Hashing</b>	<b>4</b>
2.1	Addressing and Hash Functions . . . . .	4
2.2	Probing . . . . .	4
2.3	Double Hashing . . . . .	4
<b>3</b>	<b>Heaps</b>	<b>4</b>
3.1	Heap . . . . .	4
3.2	Priority Queues . . . . .	4
<b>4</b>	<b>Linked Lists</b>	<b>4</b>
4.1	Singly Linked . . . . .	4
4.2	Doubly Linked . . . . .	4
<b>5</b>	<b>Trees</b>	<b>4</b>
5.1	Tree Traversals . . . . .	4
5.2	Binary Search Trees . . . . .	4

5.3	Tries . . . . .	4
<b>6</b>	<b>Graphs</b>	<b>4</b>
6.1	Graph Representations . . . . .	4
6.2	Breadth First Search . . . . .	4
6.3	Depth First Search . . . . .	4
6.4	Topological Sort . . . . .	4
6.5	Prim's Algorithm . . . . .	4
6.6	Kruskal's Algorithm . . . . .	4

# 1 Fundamentals

We'll begin with the most basic of structures, a simple list.



1.1 Lists

1.2 Stacks

1.3 Queues

## 2 Hashing

2.1 Addressing and Hash Functions

2.2 Probing

2.3 Double Hashing

## 3 Heaps

3.1 Heap

3.2 Priority Queues

## 4 Linked Lists

4.1 Singly Linked

4.2 Doubly Linked

## 5 Trees

5.1 Tree Traversals

5.2 Binary Search Trees

5.3 Tries

## 6 Graphs

6.1 Graph Representations

6.2 Breadth First Search

6.3 Depth First Search

4

6.4 Topological Sort

6.5 Prim's Algorithm

6.6 Kruskal's Algorithm