## Hash Tables:

Types of Tables:

Main Components for Hash Tables:

Properties:

Determining Table Size:

## Collision Resolution:

Separate Chaining:

Open Addressing:

Types:

Linear Probing:

3 Rehashing (linear)

Quadratic Probing:

Double Hashing:

Ex:

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| F (probe) |  | Index |
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Clustering:

w/ Linear Probing:

w/ Quadratic Probing:

Why is clustering a bad thing?

TC for Hashing Operations:

|  |  |  |
| --- | --- | --- |
| Operation/Method | Separate Chaining | Open Addressing |
| Successful Search |  |  |
| Unsuccessful Search |  |  |
| Insert |  |  |
| Delete |  |  |
| Perfect Conditions |  |  |

Dynamic Hashing/Rehashing:

Purpose:

When to rehash?

Load Factor: α =

Time Complexity:

Space Complexity:

Perfect Hashing:

Hashing Strings:

# Summary: