# DSA Review 1 – Summary

**Big-Oh: O(1), O(log(n)), O(n), O(nlog(n)), O(n*n), O(n*n*n), …**

**Collection: is_empty, add, find, remove, cardinality; entities + relations**

**Set**

Unordered
Unique
No relations

**HASHING**

Collisions:
Chaining
Linear &
quadratic
probing
Double hash

**Sequence**

Ordered
?Sorted?
Successor

**LINEAR**

**Tree**

(Un) Ordered
**Sorted: BST/AVL**
Hierarchical

**BT, BST, AVL**

SLR, DLR
SRR, DRR

**RECURSIVE**

S ::= H T | ¤; S ::= Elem; T ::= S
BT ::= L N R | ¤; N ::= Elem; L, R ::= BT

**HEAP** = Tree & Sequence **PQ**

**Graph** = (V,E)

Unordered
Un/directed
General

**ADT**

**Virtual machine**
**Collection**
**Implementation independence**