Hash Functions

Learning Objectives

1. Define what a Hash Function is

2. Know criteria for a hash function

Hash Function

Function from key space to set of compact integers
Keys:
- Names for an address book
- Items in a Catalog

Hash Table

Key	Value

Hash Function

Keyspace

When to use a hash table?

Don't when the input space is small and finite

Ex. Character Frequencies - {a: 10, b: 20, …}

Use when large keyspaces -> finite memory

Hash Function Criteria

Deterministic:

Efficient:

Map to a desired table size: