

I ILLINOIS

Hash Table

Learning Objectives

1. Know the Types of Hash Tables



Hash Tables

```
Dictionary<KeyType, ValueType> d;  
d[k] = v;
```

Insert, Find, Remove

A **Hash Table** consists of three things:

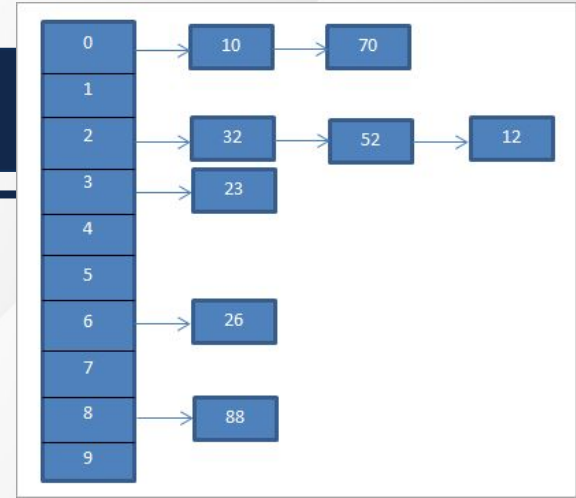
1. A hash function
2. A data storage structure
3. A method of addressing *hash collisions*



Types of Hash Tables

Open Hashing (Closed Address) (Separate Chaining)

- Simpler, decent performance
- HashTable points to external storage
- Index tells you where the data is



Closed Hashing (Open Address)

- Complex, high performance
- HashTable is an array
- Location of data depends on contents of hash table

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