# Chapter 11

**Sets, Maps, and Hashing**

11.1 Sets

Logical Level

Application Level

Implementation Level

Explicit Representation

Implicit Representation

11.2 Maps

Logical Level

Application Level

Implementation Level

11.3 Hashing

Collisions

Linear Probing

Clustering

Rehashing

Buckets and Chaining

Choosing a Good Hash Function

Division Method

Other Hash Methods

Complexity

Summary

Exercises