

8.8 Case study: a videotape manager	192
Summary	199
Exercises	199
<b>9 Set Abstract Data Types</b>	<b>202</b>
9.1 The concept of a set	202
9.2 Applications of sets	204
9.3 A set abstract data type	205
9.4 Implementation of bounded sets using arrays	209
9.5 Implementation of unbounded sets using linked lists	211
9.6 Implementation of small-integer sets using boolean arrays	217
9.7 Sets in the Java class library	220
9.8 Case study: an interactive spell-checker	223
Summary	230
Exercises	232
<b>10 Binary Tree Data Structures</b>	<b>236</b>
10.1 Binary trees	236
10.2 Searching	242
10.3 Insertion	245
10.4 Deletion	247
10.5 Traversal	256
10.6 Merging	261
10.7 Implementation of unbounded sets using binary search trees	262
Summary	270
Exercises	270
<b>11 Map Abstract Data Types</b>	<b>274</b>
11.1 The concept of a map	274
11.2 Applications of maps	276
11.3 A map abstract data type	277
11.4 Implementation of small-integer-key maps using key-indexed arrays	281
11.5 Implementation of bounded maps using arrays	283
11.6 Implementation of unbounded maps using linked lists	287
11.7 Implementation of unbounded maps using binary search trees	288
11.8 Maps in the Java class library	290
11.9 Case study: a student record system	293
Summary	303
Exercises	304
<b>12 Hash-Table Data Structures</b>	<b>307</b>
12.1 Hash tables	307
12.2 Closed-bucket hash tables	309
12.3 Open-bucket hash tables	316
12.4 Implementations of sets using hash tables	331