

School of Computer Science and Software Engineering
Clayton Campus, Monash University
CSE1303 Part A
Summer Semester, 2001

Tutorial 6: Hash Tables, Recursive Sorts and Revision

Please attempt all starred questions before your tutorial class.

Exercise 1.*

Using the following function

```
int hash(char* s)
{
    return (s[0] - 'A') % 11;
}
```

and linear probing, calculate the hash value of the following names and insert them into a Hash Table of size 11.

Eva, Amy, Tim, Ron, Jan, Kim, Dot, Ann, Jim, Jon

Exercise 2.*

Repeat Exercise 2 using Chaining instead of linear probing.

Exercise 3.*

For Exercise 1, illustrate what happens, after you have inserted all the names, when you search for the names **Jim**, **Jon** and **Joe**.

Exercise 4.

Show the steps taken to sort the following array:

3	9	1	12	8	4	10	2
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- Using mergesort
- Using quicksort

Exam Revision.*

Attempt all the questions on the sample exam.

Additional Questions

Kruse et al. 2nd Edition

Exercises 7.6 E1, E2, E3

Exercises 8.6 E6 a, b, c, d, E8, E11

Additional Reading for Revision:

R. Sedgwick – *Algorithms in C*

Chapters 3, 4, 5, 9, 12, 14, 16

Deitel & Deitel – *C: How to Program*, 2nd edition

Chapters 1, 2, 5, 6, 7, 8, 9, 10, 11, 12

Kruse et al. – *Data Structures & Program Design in C*, 2nd edition

Chapters 1, 2, 3, 4, 5, 6 (6.1 – 6.4), 7, (7.1, 7.2, 7.6 - 7.8),

8 (8.6, 8.7), 9 (9.1 – 9.3), 12 (12.2 – 12.4)

Appendix C