

## Errata for M263 2005 Exam Solutions

### Question 15 (Dave Wild)

In part (c), labelled (d), change 2k to k in 3 places as shown below.

"adding (2k, 0)" should be "adding (k, 0)" .

"adding (-2k, 0)" should be "adding (-k, 0)".

"state (-2k,0, right(0))" should be "state (-k,0, right(0))".

### Question 17 (Bob T)

We have the schemes

S1: attributes: author, authornat

S2A: attributes: isbn, author, title, classification

S3: attributes: author, classification, agent

A tuple in S1 gives info about an author.

A tuple in S2A gives info about a book.

A tuple in S3 gives info about the agent handling books of a particular classification for authors of a particular nationality.

S1 and S3 are in a many-many association (there is no foreign key here).

Reason: An author may have written books with different classifications and dealt with by different agents; and an agent may deal with different authors.

S1 is in a one-many association with S2A (foreign key {author})

Reason: An author may have written more than one book.

S3 is in a one-many association with S2A (foreign key {author, classification})

Reason: There may be more than one book with any given combination of author's nationality and book classification

### Question 18 (Dave Wild)

(b). An alternative example of a worst case would be where the character c does not occur in the string s. Eg 'a' and 'bbbbbb'.

(c)  $T(n) = 11n - 1$ .

(d). When `INSTRING('b', 'ab')` is executed then mid is set to 1 on line 7 and not 0 as stated. The error described occurs next time round when `INSTRING('b', " ")` is executed.