

Sorting and Searching on the Word RAM

Exercises, handed out 28 March 2003

- **Exercise 1** (page 378, line 5)
Describe in your own words how the operations *lookup*, *min*, *max*, *succ*, *pred* are carried out, and what the time complexity is.
- **Exercise 2** (page 379, line -8)
Describe how the operations *lookup*, *min*, *max*, *succ*, *pred*, *insert*, *delete* are carried out using constant time and one operation in \mathcal{D} .
- **Exercise 3** (page 381, line 13)
Prove that multiplying X by $1 - 2^{-(f-1)}$ creates the desired mask from the test bits in X .