

**Problem Set 3**  
CPSC 489/689 Quantum Algorithms  
Andreas Klappenecker

**The assignment is due next Wednesday, before class.**

Solve exercises 3.1 – 3.9 given in the lecture notes. Give concise and clear answers. Give complete proofs.

Read pages Section 1.4 in Nielsen and Chuang. You can skip section 1.4.4 on the Deutsch-Josza algorithm. We will discuss this algorithm later.

**Important**

If you are not familiar with C, then please learn it this weekend. If you have not recently programmed in C, then refresh your knowledge. Do it! You should be familiar with the concept of pointers, arrays, records, etc.

B.W. Kernighan, D.M. Ritchie: *The C Programming Language*,  
Prentice Hall, 1998.

**Undergraduate Computer Science Students**

Register for the Microsoft Scholarship Program before January 31. This is part of your homework, and I will check!