

Lab 4 Dense coding; Teleportation

Exercise 1

Implement and test quantum circuit producing Bell state

$$\frac{1}{\sqrt{2}}|0\rangle + \frac{1}{\sqrt{2}}|1\rangle$$

Exercise 2

Implement and test dense quantum coding with the simulator

(hint see: Fig 6.4f <http://www.lassp.cornell.edu/mermin/qcomp/chap6.pdf>)

Exercise 3

Implement and test teleportation circuit

(hint see: Fig 6.5g <http://www.lassp.cornell.edu/mermin/qcomp/chap6.pdf>)