Assessed Practical 2

Part A

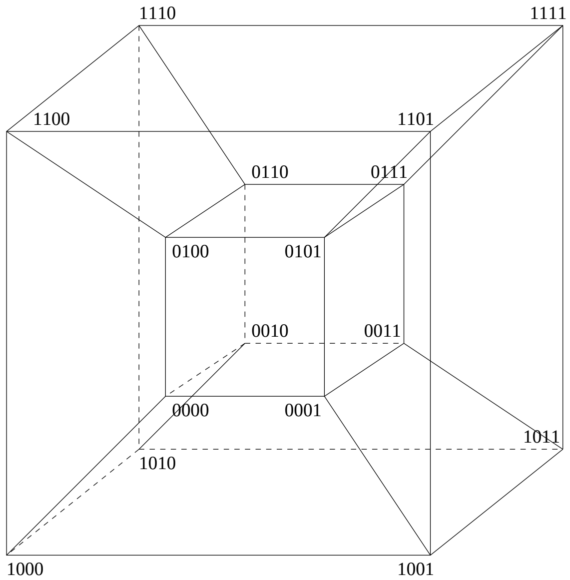
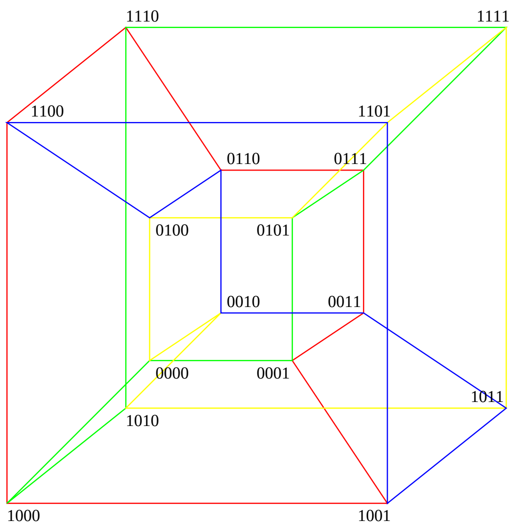


Figure 1: Labeled Hypercube

Part B

My solution aims to have on no path two transmission at the same time. To illustrate the algorithm I painted the date-path into the hypercube. The finished mapping has the same coloured arrows.



Source				Destination
0000	0000	0000	0000	0000
0001	0001	0001	0001	0001
0010	0010	0010	0010	0010
0011	0011	0011	0011	0011
0100	0100	0100	0100	0100
0101	0101	0101	0101	0101
0110	0110	0110	0110	0110
0111	0111	0111	0111	0111
1000	1000	1000	1000	1000
1001	1001	1001	1001	1001
1010	1010	1010	1010	1010
1011	1011	1011	1011	1011
1100	1100	1100	1100	1100
1101	1101	1101	1101	1101
1110	1110	1110	1110	1110
1111	1111	1111	1111	1111

Figure 2: Left: Hypercube with paths. Right: Hypercube Routing Table

Part C

The algorithm takes 4 steps. In the first all notes with a zero as the last bit transfer there data to the corresponding note with an one at the last bit. The second step the bit 2 matters and so on. In figures 2 and 3 are the steps displayed.

Sorry broken

Figure 3: First and Second step of the algorithm

Sorry broken

Figure 4: Third and Fourth step of the algorithm