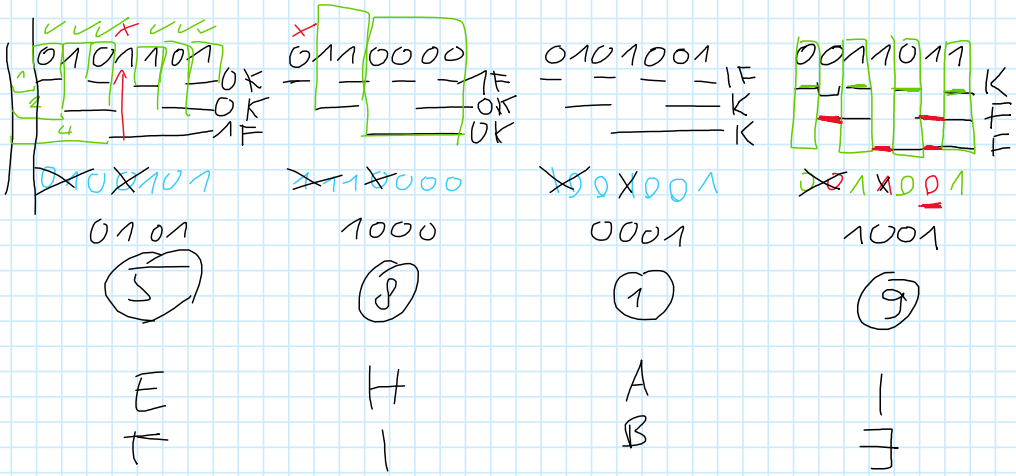
Hamming-Codes

Freitag, 25. Februar 2022 16:48

M = {000000,
101101}
d(M) = d_{min} = 4
Erkannt werden = d_{min} - 1 = 3
Korrigiert werden = (d_{min} - 1) // 2 = 1
1 // 2 = round(0.5) = 0
3 // 2 = round(1.5) = 1

(Korrigiert werden) * 2 + 1 = d(M)



$$E = \left\lfloor \frac{d-1}{2} \right\rfloor$$

E H A I
F I B 子

$$= \text{round}\left(\frac{d-1}{2}\right) = (d-1) // 2$$

$$R = \frac{\log_2(M)}{n}$$ (n: länge der Codewörter) $$D = \frac{d(M)}{n} = \frac{d_{min}}{n} = \frac{4}{6} = \frac{2}{3}$$

$$= \frac{\log_2 2}{6} = \frac{1}{6}$$