

Aufgabe 1

Note Title

6/15/2016

a) Größe der Hashtabelle : m

mod erzeugt Hashwerte im Bereich $[0, \dots, m-1]$

b) 4, 9, 14, 19

$$h(4) = 4 \text{ mod } m = 4 \text{ mod } 4 = 0 \quad \neq$$

$$h(9) = 9 \text{ mod } 4 = 1$$

$$h(14) = 14 \text{ mod } 4 = 2$$

$$h(19) = 19 \text{ mod } 4 = 3$$

4	9	14	19
0	1	2	3

c) $m=5$

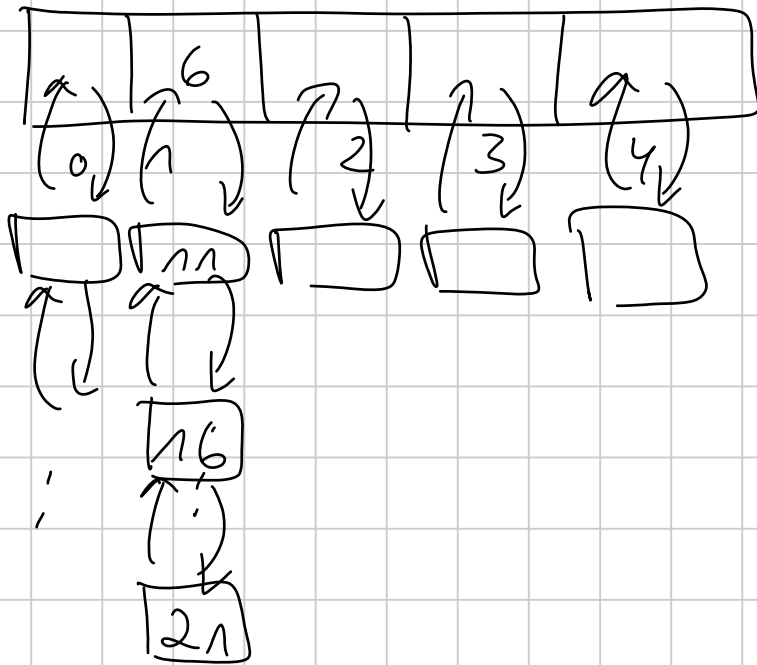
6, 11, 16, 21

$$h(6) = 6 \text{ mod } 5 = 1$$

$$h(11) = 11 \text{ mod } 5 = 1$$

$$h(16) = 16 \bmod 5 = 1$$

$$h(21) = 21 \bmod 5 = 1$$



Aufgabe 2

Note Title

6/15/2016

a) s t d : : s t r i n g
-1 0 0 0 0 0 0 1 2 0 0 0

b) i n t - s o r t (i . n t * - d a t a ,
-1 0 0 0 0 0 0 0 0 1 2 3 0 0 0 0 0 0

i n t - n)
0 1 2 3 4 0

c) T U - M ü n c h e n

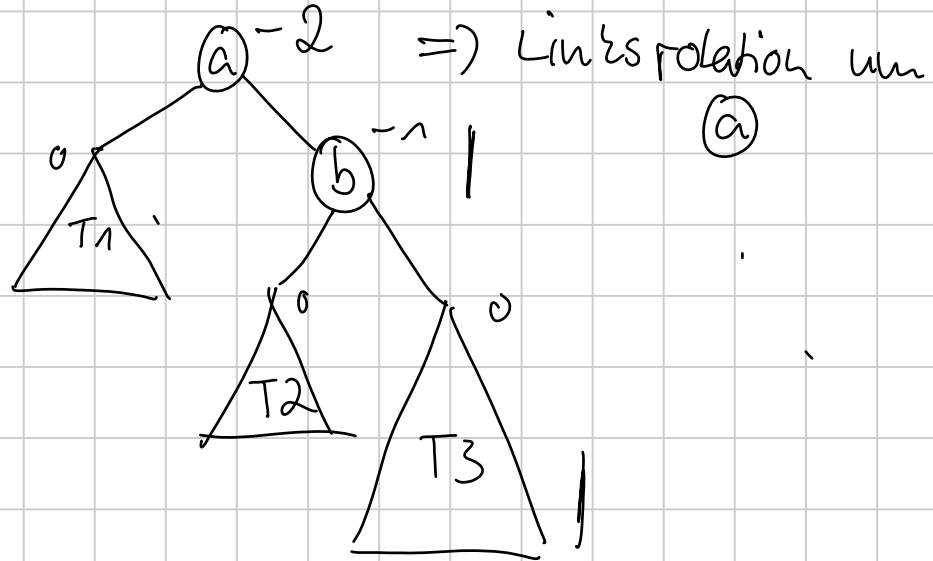
-1 0 0 0 0 0 0 0 0

Aufgabe 3

Note Title

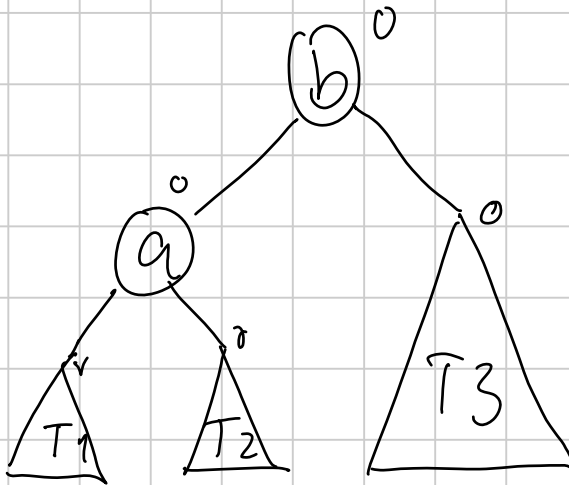
6/15/2016

a)

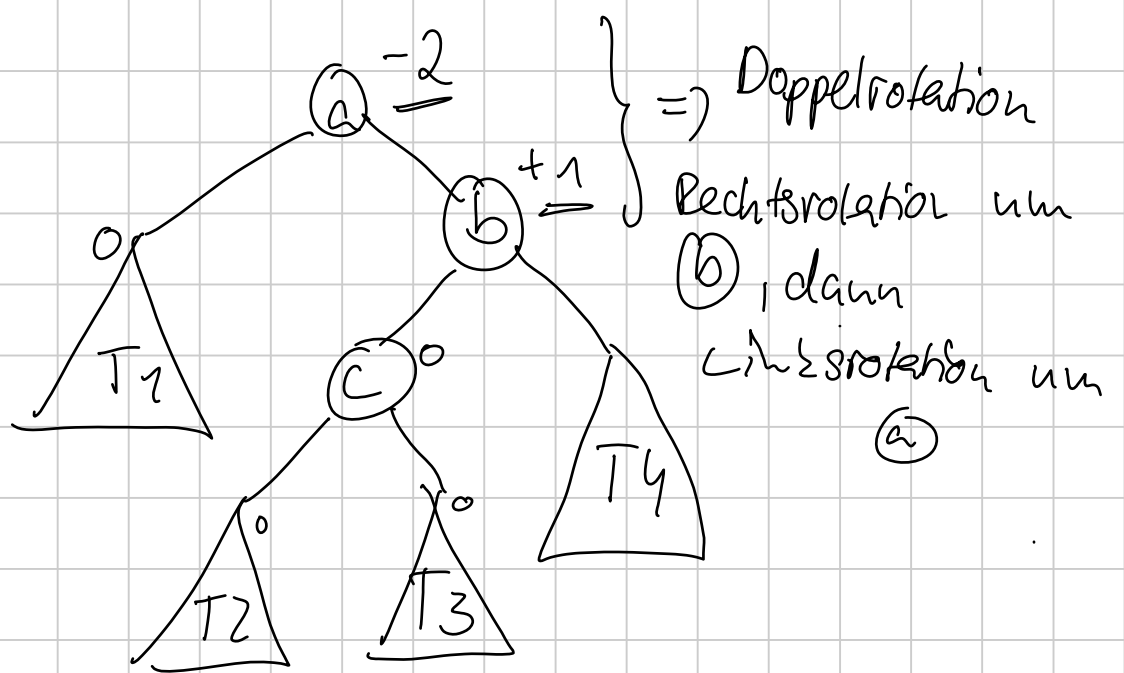


$$h(T_1) = h(T_2)$$

$$h(T_3) = h(T_1) + 1 = \underline{h(T_2) + 1}$$

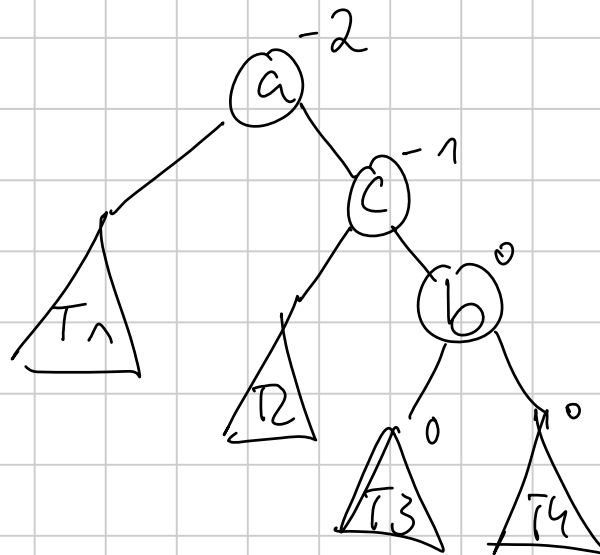


b)

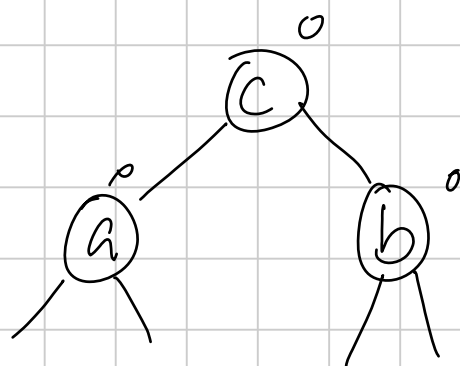


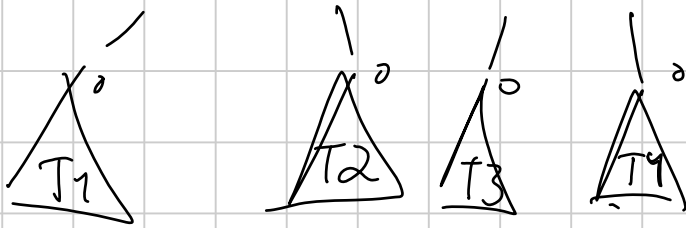
$$h(T_1) = h(T_2) = h(T_3) = h(T_4)$$

Rechtsrotation um b

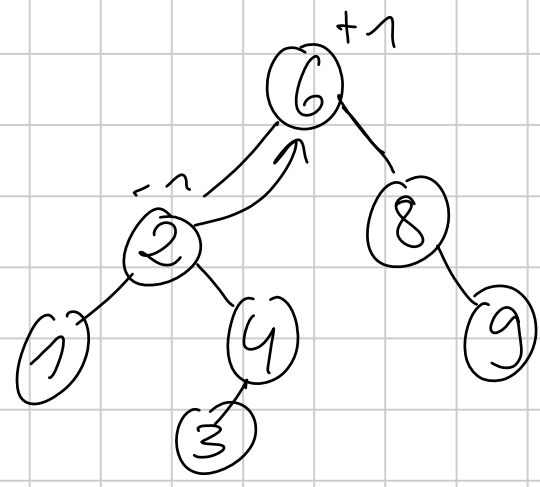
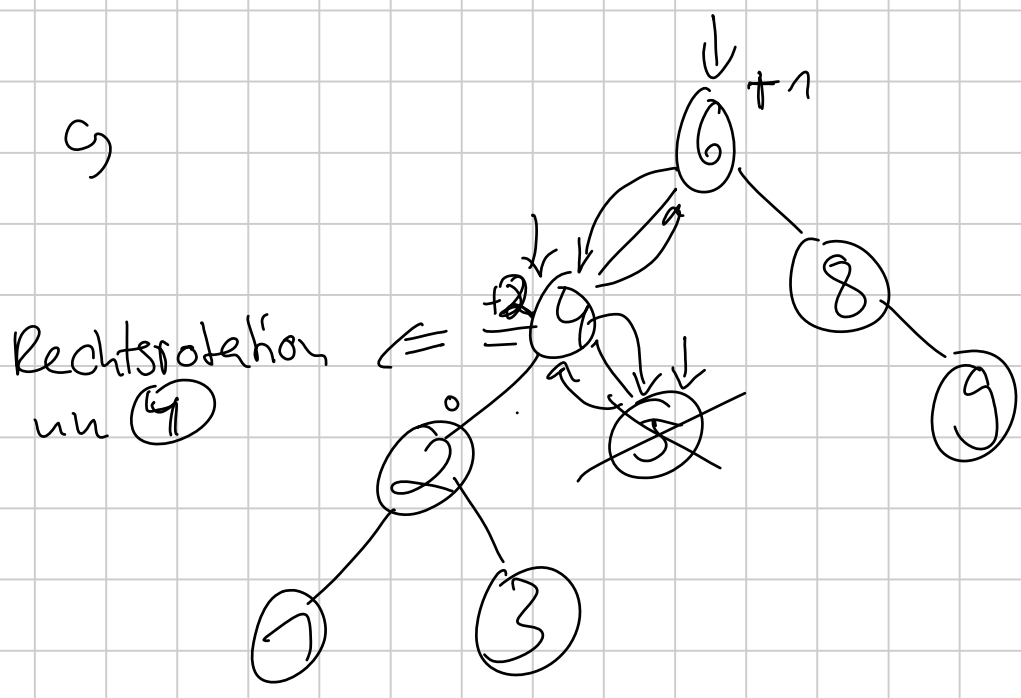


Linksrotation um a

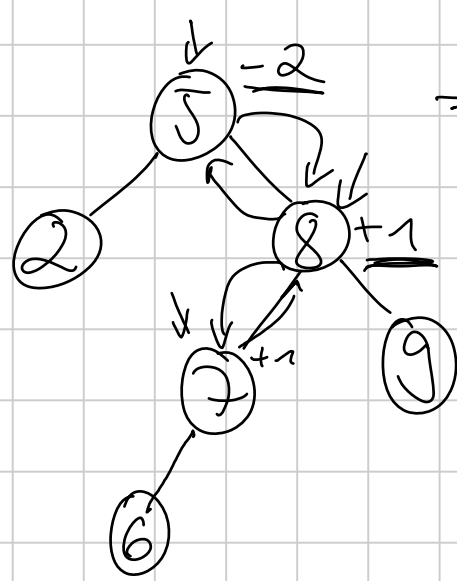




c)

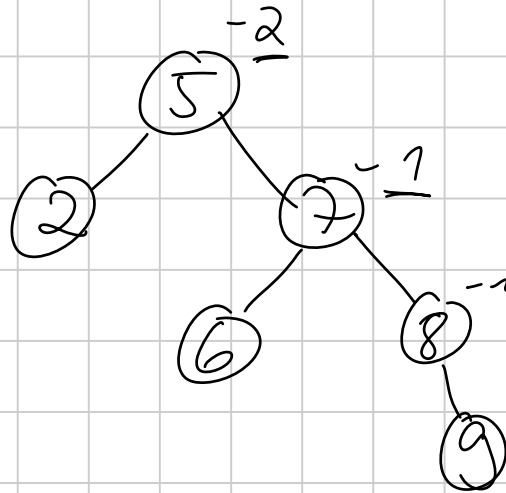


d)

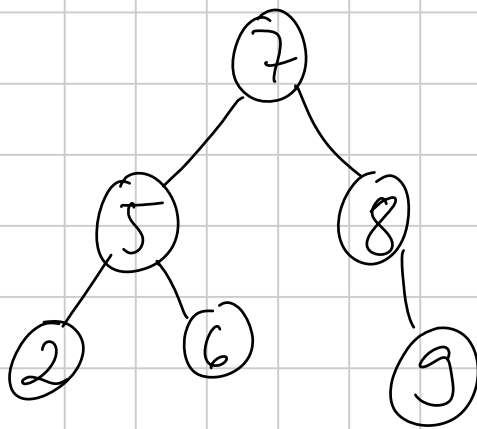


=> Doppelrotation:
 Rechtsrotation um 8, dann
 Linksrotation um 5

Rechtsrot. um 8



Linksrotation um 5



Aufgabe 4

$\downarrow \quad \downarrow$
 Dies es Die sel fahrzeug
~~es el~~
~~es el~~
 es el

Präfix-Tabelle

e s e l			
-1	0	0	0
0	1	2	3

0 1 2 3 4 5 6 7 8 9 10 ...
 $\downarrow \quad \downarrow \quad \downarrow$

Dies es - Diesel fahrzeug

~~es el~~
~~es el~~
~~es el~~ ←
 $2 + 3 - 1 = 4 \neq$
~~es el~~
 $4 + 2 - 0 = 6$
~~es el~~
~~es el~~
~~es el~~