

1) Trace Table: Boxes

```
let n: number = 5;
```

Line No	color: string	x: number	y: number	i: number	size	comments
3						
4		0				
5			0			
7				0		i < n? → true
8			50			if (i==2), y += 20, otherwise y += 50 → i != 2
9		170				x = 170 % 400
12	"#ff0000"					i = 0 → case 0, break;
24					"big"	„for ... of“ loops through the values of an iterable object.
25						createBox("#ff0000", 170, 50, "big"): places a div in the body with the size of 50x50px, background color #ff0000 and position left 170px and top 50px.
26						i == 4? → false, loop goes on
24					"medium"	
25						createBox("#ff0000", 170, 50, "medium"): places a div in the body with the size of 30x30px, background color #ff0000 and position left 170px and top 50px.
26						i == 4? → false, loop goes on
24					"small"	
25						createBox("#ff0000", 170, 50, "medium"): places a div in the body with the size of 30x30px, background color #ff0000 and position left 170px and top 50px.
7				1		1 < 5? → true
8			100			if (i==2), y += 20, otherwise y += 50 → i != 2
9		340				x = 340 % 400
16	"#00ff00"					case 1 and 4 share the same code block
24					"big"	„for ... of“ loops through the values of an iterable object.

Line No	color: string	x: number	y: number	i: number	size	comments
25						createBox("#00ff00", 340, 100, "big"): places a div in the body with the size of 50x50px, background color #00ff00 and position left 340px and top 100px.
26						i == 4? —> false, loop goes on
24					"medium"	
25						createBox("#00ff00", 340, 100, "medium"): places a div in the body with the size of 30x30px, background color #00ff00 and position left 340px and top 100px.
26						i == 4? —> false, loop goes on
24					"small"	
25						createBox("#00ff00", 340, 100, "small"): places a div in the body with the size of 10x10px, background color #00ff00 and position left 340px and top 100px.
7				2		2 < 5? —> true
8			120			if (i==2), y += 20, otherwise y += 50 —> i == 2
9		110				x = 510 % 400
20	"#0000ff"					default
24					"big"	„for ... of“ loops through the values of an iterable object.
25						createBox("#0000ff", 110, 120, "big"): places a div in the body with the size of 50x50px, background color #00ff00 and position left 110px and top 120px.
26						i == 4? —> false, loop goes on
24					"medium"	
25						createBox("#0000ff", 110, 120, "medium"): places a div in the body with the size of 30x30px, background color #0000ff and position left 110px and top 120px.
26						i == 4? —> false, loop goes on
24					"small"	

Line	color: string	x: number	y: number	i: number	size	comments
No						
25						createBox("#0000ff", 110, 120, "small"): places a div in the body with the size of 10x10px, background color #00ff00 and position left 110px and top 120px.
7				3		3 < 5? —> true
8			140			if (i==2), y += 20, otherwise y += 50 —> i != 2
9		280				x = 280 % 400
19						switch 3: continue —> skips the loop iteration
7				4		4 < 5? —> true
8			190			if (i==2), y += 20, otherwise y += 50 —> i != 2
9		50				x = 450 % 400
16	"#00ff00"					
24				"big"		
25						createBox("#00ff00", 50, 190, "big"): places a div in the body with the size of 50x50px, background color #00ff00 and position left 50px and top 190px.
26						i == 4? —> true, loop is being stopped
7				5		5 < 5? —> false, loop stops.

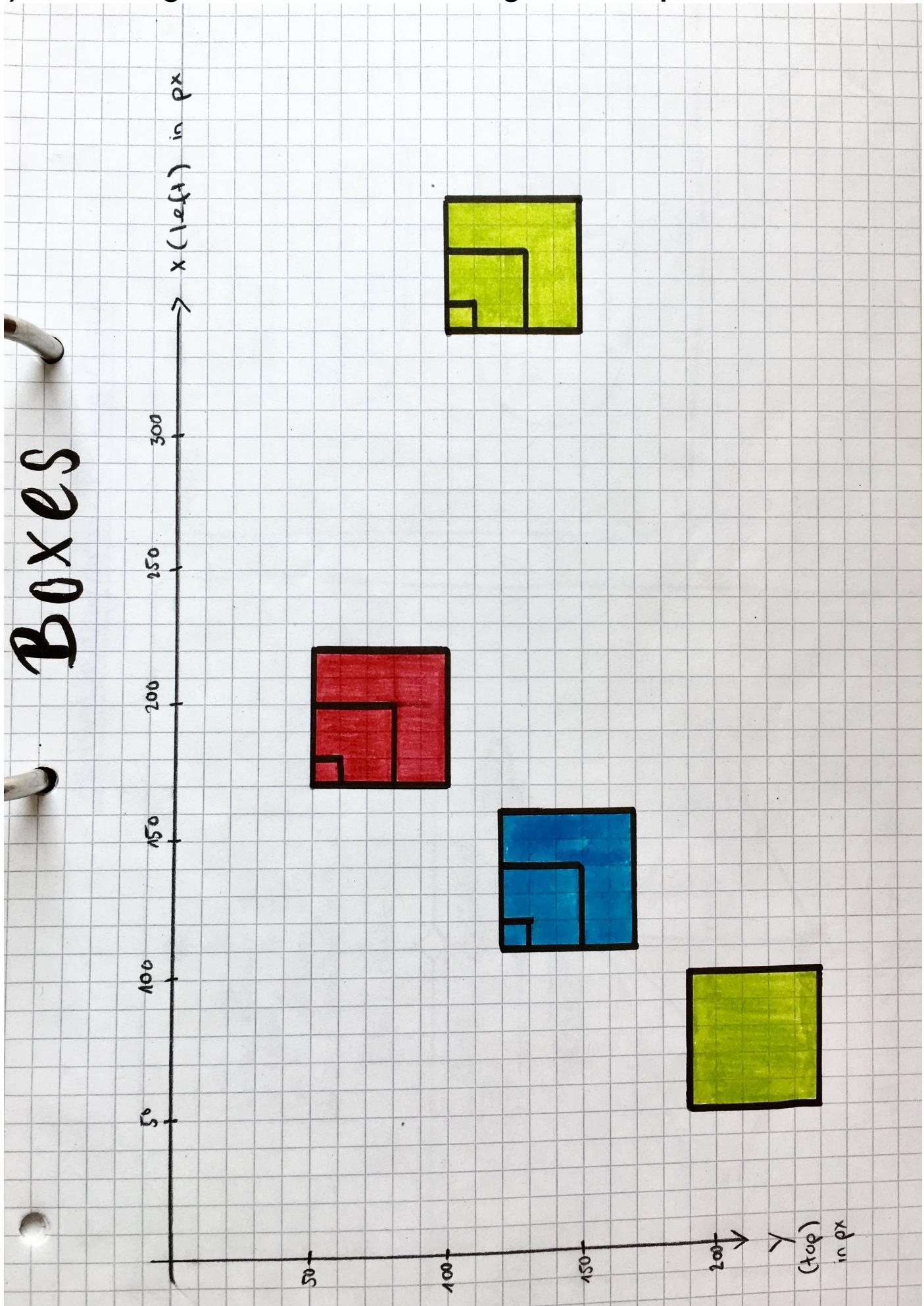
```
createBox(_color: string, _x: number, _y: number, _size: string)
```

Line No	_color	_x	_y	_size	div: HTMLDivElement	comments
32	"#ff0000"	170	50	"big"		
33						creates div
34						appends div to document.body
35					class = "big"	adds class „big“ to div —> sets css-style: width/height is 50px
36						sets backgroundColor to "#ff0000"
37, 38						positions div at left 170px and top 50px
...						
32	"#00ff00"	340	100	"big"		
33						creates div
34						appends div to document.body
35					class = "big"	adds class „big“ to div —> sets css-style: width/height is 50px
36						sets backgroundColor to "00ff00"
37, 38						positions div at left 340px and top 100px
...						
32	"#0000ff"	110	120	"big"		
33						creates div
34						appends div to document.body
35					class = "big"	adds class „big“ to div —> sets css-style: width/height is 50px
36						sets backgroundColor to „0000ff“
37, 38						positions div at left 110px and top 120px
...						
32	"#00ff00"	50	190	"big"		
33						creates div
34						appends div to document.body

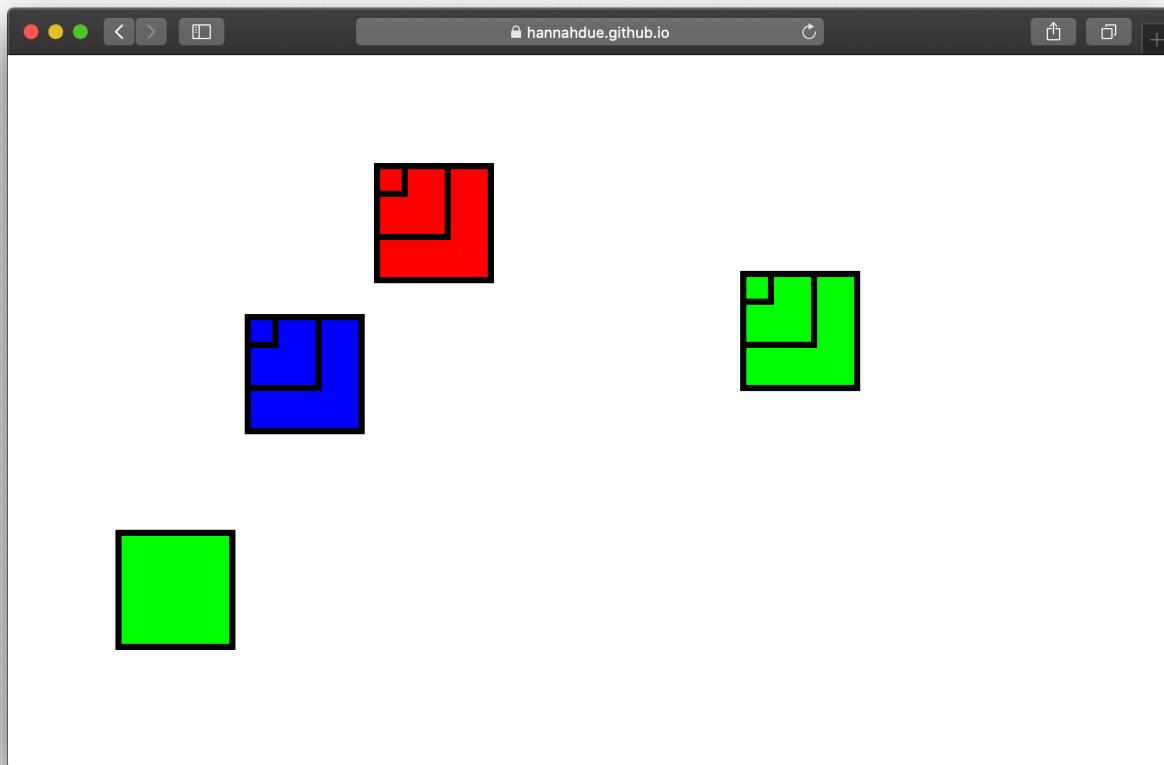
Line No	_color	_x	_y	_size	div: HTMLDivElement	comments
35					class = "big"	adds class „big“ to div —> sets css-style: width/height is 50px
36						sets backgroundColor to "00ff00"
37, 38						positions div at left 50px and top 190px

2) Darstellung der zu erwartenden Ausgabe auf Papier

Boxes



3) Code zum Laufen bringen und mit Zeichnung vergleichen – Ausgabe ist wie erwartet.



4) Experimentieren mit dem Debugger

Da die Ausgabe wie erwartet war, gab es keine Abweichungen zu meiner Erwartung. Trotzdem habe ich einige Breakpoints gesetzt und den Verlauf so Schritt für Schritt bzw. Zeile für Zeile im Debugger verfolgt. Der Verlauf war der gleiche wie in meiner Trace Tabvle.

Aktivitätsdiagramm Boxes (LCA)

5) Aktivitätsdiagramm

