SHEET 11

1) a1) ./cnt

argc = 1

i = 1 , 1 < 1 ⇒ false

It doesn't enter the loop

0 children

a2) ./cnt 1

argc = 2

argv[0] = ./cnt

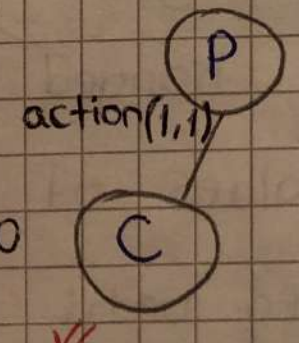
argv[1] = 1

i = 1 , 1 < 2 ⇒ true

It enters the for loop

P = parent

C = child



exit(0) ends this process

1 child

a3) ./cnt 2

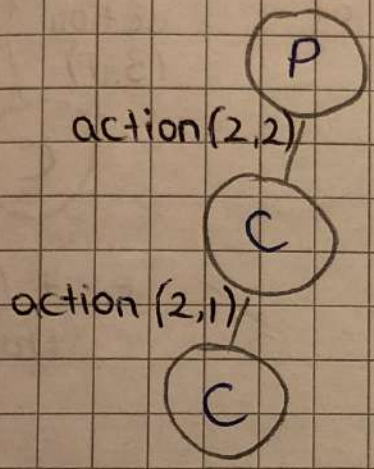
argc = 2

argv[0] = ./cnt

argv[1] = 2

i = 1 , 1 < 2 ⇒ true

It enters the for loop



⇒ The first child is now the parent of the second child created

exit(0) ends the process

2 children

a4) ./cnt 1 2 3

argc = 4

argv[0] = ./cnt

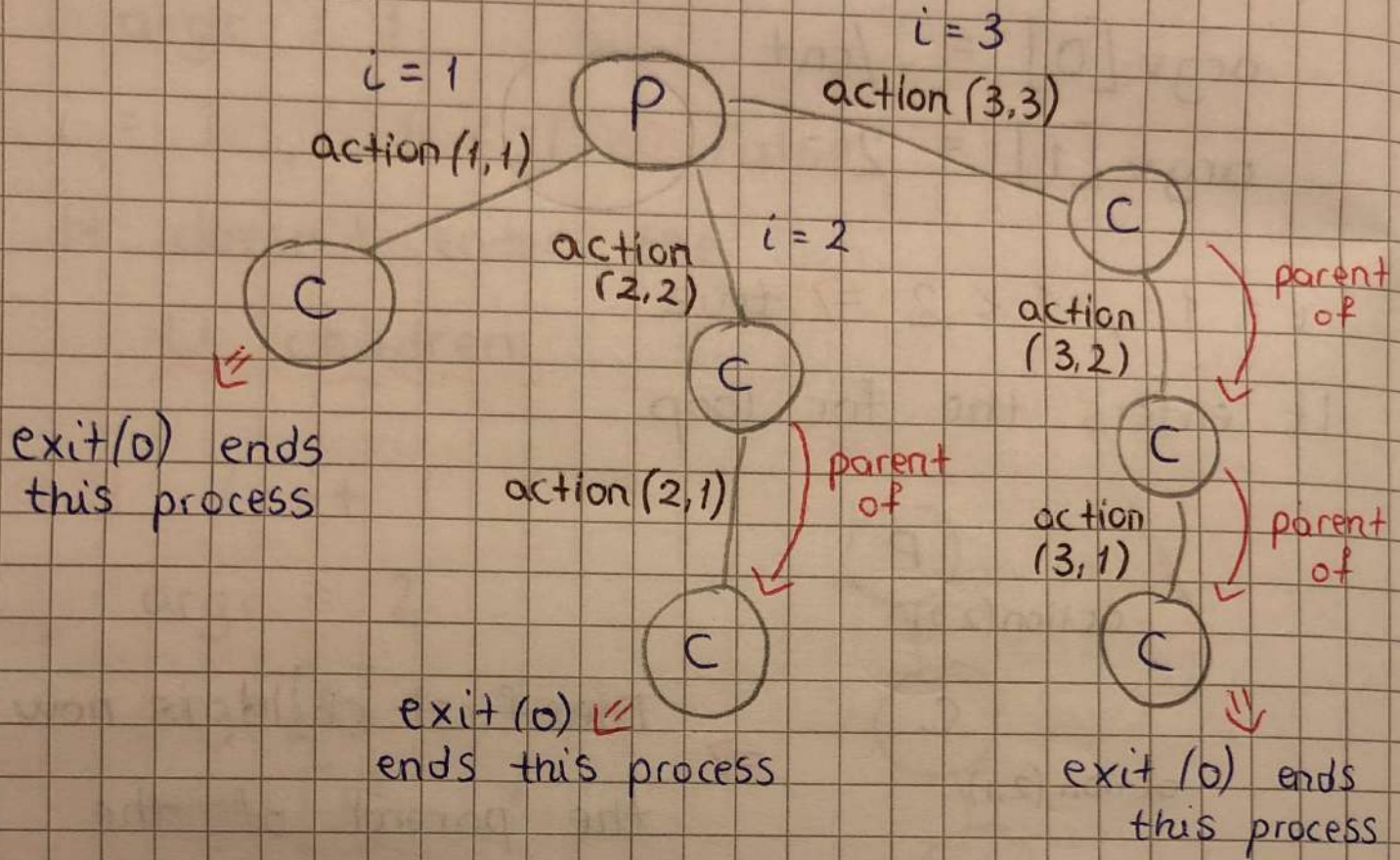
argv[1] = 1

argv[2] = 2

argv[3] = 3

i = 1 , 1 < 4 ⇒ true

It enters the for loop



6 children

b1) ./cnt 1

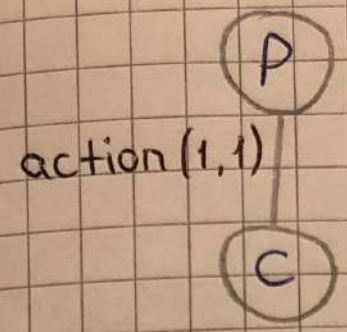
argc = 2

argv[0] = ./cnt

argv[1] = 1

i = 1 , 1 < 2 ⇒ true

It enters the for loop



If statement is not true anymore as now $n = 0$, so the program stops its execution

Printed to the terminal: 1, 1
1, 0

1 child

b2) ./cnt 2

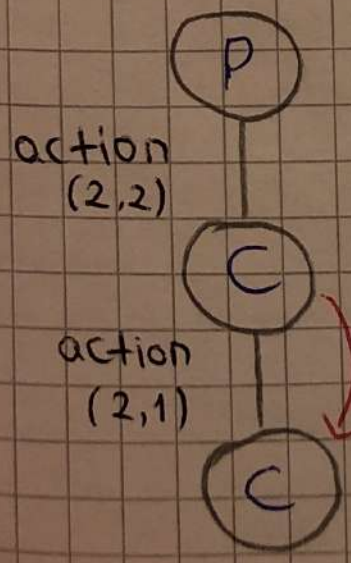
argc = 2

argv [0] = ./cnt

argv [1] = 2

i = 1, 1 < 2 ⇒ true

It enters the for loop



Printed: 2, 2
2, 1
2, 0

2 children

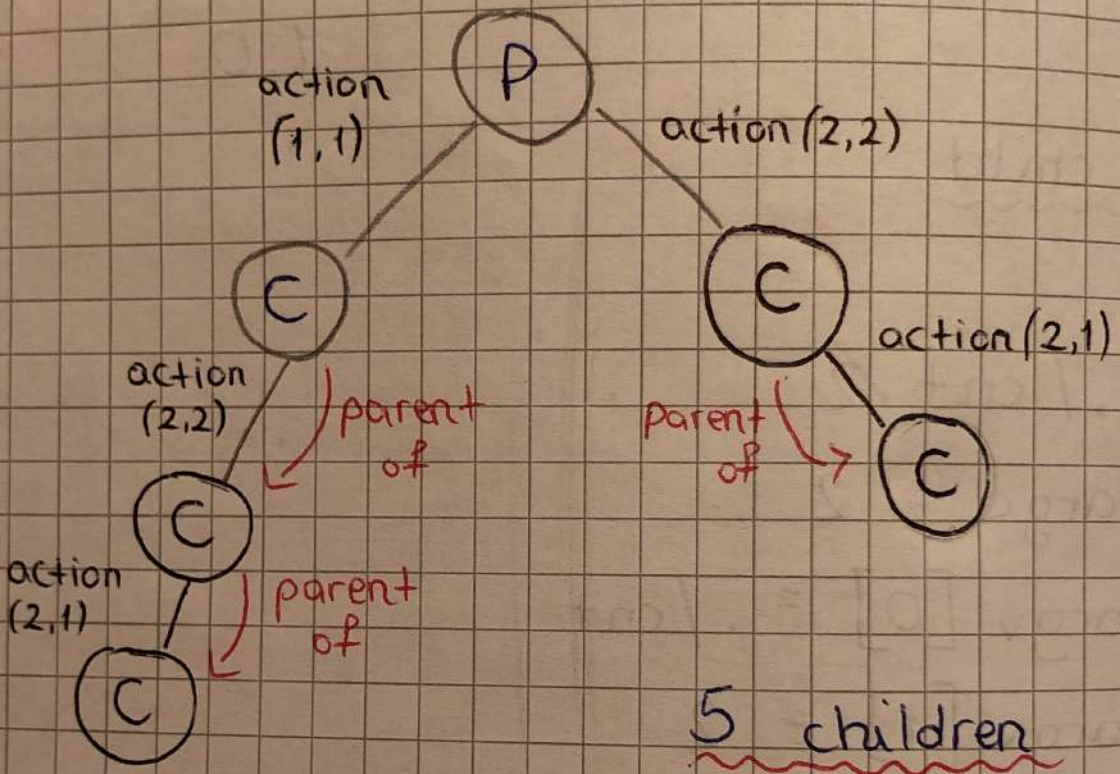
b3) ./cnt 1 2

argc = 3

argv[0] = ./cnt

argv[1] = 1

argv[2] = 2



5 children

b4) ./cnt 1 2 3

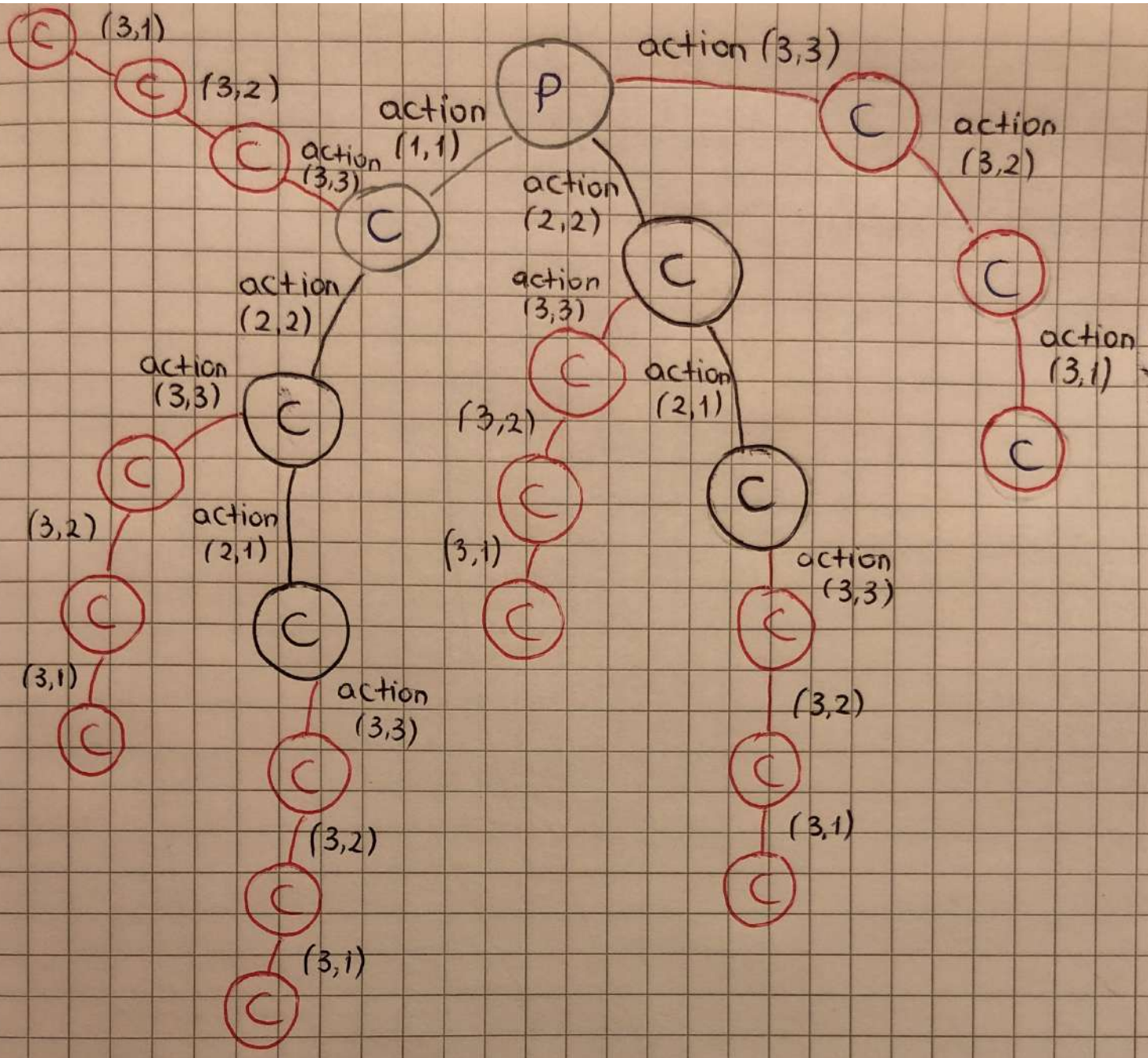
argc = 4

argv[0] = ./cnt

argv[1] = 1

argv[2] = 2

argv[3] = 3


P
action (1,1)
action (3,3)
action (2,2)
action (3,3)
action (3,3)
action (2,2)
action (2,1)
action (3,3)
action (3,2)
action (3,1)
(3,1)
(3,2)
(3,2)
(3,1)
(3,2)
(3,1)
(3,1)
(3,2)
(3,1)
action (3,3)
action (3,3)
action (2,1)

23 children