```
Last login: Thu Jun 1 13:49:43 on ttys003
/Users/krzysztof-test/Documents/Code/Uni/ALP4/Blatt\ 6/Aufgabe2 ;
(base) > ~ (main) x /Users/krzysztof-test/Documents/Code/Uni/ALP4/
Blatt\ 6/Aufgabe2 ; exit;
In main: creating thread 0
In main: creating thread 1
In main: creating thread 2
Producer 0 puts 1 into buffer at place 0
Buffer: [1, 0, 0]
In main: creating thread 3
Producer 0 puts 2 into buffer at place 1
Buffer: [1, 2, 0]
Producer 0 puts 3 into buffer at place 2
Buffer: [1, 2, 3]
Consumer 3 takes 1
Buffer: [2, 3, 0]
Consumer 3 takes 2
Buffer: [3, 0, 0]
Consumer 1 takes 3
Buffer: [0, 0, 0]
Producer 0 puts 4 into buffer at place 0
Buffer: [4, 0, 0]
Producer 0 puts 5 into buffer at place 1
Buffer: [4, 5, 0]
Producer 0 puts 6 into buffer at place 2
Buffer: [4, 5, 6]
Consumer 3 takes 4
Buffer: [5, 6, 0]
Consumer 3 takes 5
Buffer: [6, 0, 0]
Consumer 3 takes 6
Buffer: [0, 0, 0]
Producer 0 puts 7 into buffer at place 0
Buffer: [7, 0, 0]
Producer 0 puts 8 into buffer at place 1
Buffer: [7, 8, 0]
Producer 0 puts 9 into buffer at place 2
Buffer: [7, 8, 9]
Consumer 2 takes 7
Buffer: [8, 9, 0]
Consumer 2 takes 8
Buffer: [9, 0, 0]
Consumer 1 takes 9
Buffer: [0, 0, 0]
Producer 0 puts 10 into buffer at place 0
Buffer: [10, 0, 0]
Consumer 2 takes 10
Buffer: [0, 0, 0]
Producer 0 puts 11 into buffer at place 0
Buffer: [11, 0, 0]
Producer 0 puts 12 into buffer at place 1
Buffer: [11, 12, 0]
Producer 0 puts 13 into buffer at place 2
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Buffer: [11, 12, 13]
Consumer 2 takes 11
Buffer: [12, 13, 0]
Consumer 2 takes 12
Buffer: [13, 0, 0]
Consumer 2 takes 13
Buffer: [0, 0, 0]
Producer 0 puts 14 into buffer at place 0
Buffer: [14, 0, 0]
Producer 0 puts 15 into buffer at place 1
Buffer: [14, 15, 0]
Producer 0 puts 16 into buffer at place 2
Buffer: [14, 15, 16]
Consumer 3 takes 14
Buffer: [15, 16, 0]
Consumer 1 takes 15
Buffer: [16, 0, 0]
Consumer 1 takes 16
Buffer: [0, 0, 0]
Producer 0 puts 17 into buffer at place 0
Buffer: [17, 0, 0]
Producer 0 puts 18 into buffer at place 1
Buffer: [17, 18, 0]
Producer 0 puts 19 into buffer at place 2
Buffer: [17, 18, 19]
Consumer 3 takes 17
Buffer: [18, 19, 0]
Consumer 3 takes 18
Buffer: [19, 0, 0]
Consumer 3 takes 19
Buffer: [0, 0, 0]
Producer 0 puts 20 into buffer at place 0
Buffer: [20, 0, 0]
Producer 0 puts 21 into buffer at place 1
Buffer: [20, 21, 0]
Producer 0 puts 22 into buffer at place 2
Buffer: [20, 21, 22]
Consumer 3 takes 20
Buffer: [21, 22, 0]
Consumer 3 takes 21
Buffer: [22, 0, 0]
Consumer 3 takes 22
Buffer: [0, 0, 0]
Producer 0 puts 23 into buffer at place 0
Buffer: [23, 0, 0]
Producer 0 puts 24 into buffer at place 1
Buffer: [23, 24, 0]
Consumer 2 takes 23
Buffer: [24, 0, 0]
Consumer 3 takes 24
Buffer: [0, 0, 0]
Producer 0 puts 25 into buffer at place 0
Buffer: [25, 0, 0]
Consumer 2 takes 25
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Buffer: [0, 0, 0]
Producer 0 puts 26 into buffer at place 0
Buffer: [26, 0, 0]
Producer 0 puts 27 into buffer at place 1
Buffer: [26, 27, 0]
Producer 0 puts 28 into buffer at place 2
Buffer: [26, 27, 28]
Consumer 2 takes 26
Buffer: [27, 28, 0]
Consumer 2 takes 27
Buffer: [28, 0, 0]
Producer 0 puts 29 into buffer at place 1
Buffer: [28, 29, 0]
Producer 0 puts 30 into buffer at place 2
Buffer: [28, 29, 30]
Consumer 2 takes 28
Buffer: [29, 30, 0]
Consumer 2 takes 29
Buffer: [30, 0, 0]
Consumer 3 takes 30
Buffer: [0, 0, 0]
Producer 0 puts 31 into buffer at place 0
Buffer: [31, 0, 0]
Producer 0 puts 32 into buffer at place 1
Buffer: [31, 32, 0]
Consumer 3 takes 31
Buffer: [32, 0, 0]
Consumer 3 takes 32
Buffer: [0, 0, 0]
Producer 0 puts 33 into buffer at place 0
Buffer: [33, 0, 0]
Producer 0 puts 34 into buffer at place 1
Buffer: [33, 34, 0]
Consumer 1 takes 33
Buffer: [34, 0, 0]
Consumer 2 takes 34
Buffer: [0, 0, 0]
Producer 0 puts 35 into buffer at place 0
Buffer: [35, 0, 0]
Producer 0 puts 36 into buffer at place 1
Buffer: [35, 36, 0]
Producer 0 puts 37 into buffer at place 2
Buffer: [35, 36, 37]
Consumer 1 takes 35
Buffer: [36, 37, 0]
Consumer 1 takes 36
Buffer: [37, 0, 0]
Consumer 1 takes 37
Buffer: [0, 0, 0]
Producer 0 puts 38 into buffer at place 0
Buffer: [38, 0, 0]
Producer 0 puts 39 into buffer at place 1
Buffer: [38, 39, 0]
Producer 0 puts 40 into buffer at place 2
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Buffer: [38, 39, 40]
Consumer 3 takes 38
Buffer: [39, 40, 0]
Consumer 3 takes 39
Buffer: [40, 0, 0]
Producer 0 puts 41 into buffer at place 1
Buffer: [40, 41, 0]
Consumer 3 takes 40
Buffer: [41, 0, 0]
Consumer 3 takes 41
Buffer: [0, 0, 0]
Producer 0 puts 42 into buffer at place 0
Buffer: [42, 0, 0]
Consumer 1 takes 42
Buffer: [0, 0, 0]
Producer 0 puts 43 into buffer at place 0
Buffer: [43, 0, 0]
Producer 0 puts 44 into buffer at place 1
Buffer: [43, 44, 0]
Consumer 1 takes 43
Buffer: [44, 0, 0]
Consumer 1 takes 44
Buffer: [0, 0, 0]
Producer 0 puts 45 into buffer at place 0
Buffer: [45, 0, 0]
Producer 0 puts 46 into buffer at place 1
Buffer: [45, 46, 0]
Producer 0 puts 47 into buffer at place 2
Buffer: [45, 46, 47]
Consumer 1 takes 45
Buffer: [46, 47, 0]
Consumer 1 takes 46
Buffer: [47, 0, 0]
Consumer 1 takes 47
Buffer: [0, 0, 0]
Producer 0 puts 48 into buffer at place 0
Buffer: [48, 0, 0]
Producer 0 puts 49 into buffer at place 1
Buffer: [48, 49, 0]
Producer 0 puts 50 into buffer at place 2
Buffer: [48, 49, 50]
Consumer 1 takes 48
Buffer: [49, 50, 0]
Consumer 1 takes 49
Buffer: [50, 0, 0]
Consumer 1 takes 50
Buffer: [0, 0, 0]
Producer 0 puts 51 into buffer at place 0
Buffer: [51, 0, 0]
Producer 0 puts 52 into buffer at place 1
Buffer: [51, 52, 0]
Producer 0 puts 53 into buffer at place 2
Buffer: [51, 52, 53]
Consumer 1 takes 51
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Buffer: [52, 53, 0]
Consumer 1 takes 52
Buffer: [53, 0, 0]
Consumer 1 takes 53
Buffer: [0, 0, 0]
Producer 0 puts 54 into buffer at place 0
Buffer: [54, 0, 0]
Producer 0 puts 55 into buffer at place 1
Buffer: [54, 55, 0]
Producer 0 puts 56 into buffer at place 2
Buffer: [54, 55, 56]
Consumer 1 takes 54
Buffer: [55, 56, 0]
Consumer 1 takes 55
Buffer: [56, 0, 0]
Consumer 1 takes 56
Buffer: [0, 0, 0]
Producer 0 puts 57 into buffer at place 0
Buffer: [57, 0, 0]
Producer 0 puts 58 into buffer at place 1
Buffer: [57, 58, 0]
Producer 0 puts 59 into buffer at place 2
Buffer: [57, 58, 59]
Consumer 1 takes 57
Buffer: [58, 59, 0]
Consumer 1 takes 58
Buffer: [59, 0, 0]
Consumer 1 takes 59
Buffer: [0, 0, 0]
Producer 0 puts 60 into buffer at place 0
Buffer: [60, 0, 0]
Producer 0 puts 61 into buffer at place 1
Buffer: [60, 61, 0]
Producer 0 puts 62 into buffer at place 2
Buffer: [60, 61, 62]
Consumer 3 takes 60
Buffer: [61, 62, 0]
Consumer 2 takes 61
Buffer: [62, 0, 0]
Producer 0 puts 63 into buffer at place 1
Buffer: [62, 63, 0]
Producer 0 puts 64 into buffer at place 2
Buffer: [62, 63, 64]
Consumer 2 takes 62
Buffer: [63, 64, 0]
Consumer 2 takes 63
Buffer: [64, 0, 0]
Consumer 2 takes 64
Buffer: [0, 0, 0]
Producer 0 puts 65 into buffer at place 0
Buffer: [65, 0, 0]
Producer 0 puts 66 into buffer at place 1
Buffer: [65, 66, 0]
Producer 0 puts 67 into buffer at place 2
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Buffer: [65, 66, 67]
Consumer 2 takes 65
Buffer: [66, 67, 0]
Consumer 2 takes 66
Buffer: [67, 0, 0]
Consumer 1 takes 67
Buffer: [0, 0, 0]
Producer 0 puts 68 into buffer at place 0
Buffer: [68, 0, 0]
Producer 0 puts 69 into buffer at place 1
Buffer: [68, 69, 0]
Producer 0 puts 70 into buffer at place 2
Buffer: [68, 69, 70]
Consumer 1 takes 68
Buffer: [69, 70, 0]
Producer 0 puts 71 into buffer at place 2
Buffer: [69, 70, 71]
Consumer 3 takes 69
Buffer: [70, 71, 0]
Consumer 3 takes 70
Buffer: [71, 0, 0]
Consumer 3 takes 71
Buffer: [0, 0, 0]
Producer 0 puts 72 into buffer at place 0
Buffer: [72, 0, 0]
Producer 0 puts 73 into buffer at place 1
Buffer: [72, 73, 0]
Producer 0 puts 74 into buffer at place 2
Buffer: [72, 73, 74]
Consumer 3 takes 72
Buffer: [73, 74, 0]
Consumer 3 takes 73
Buffer: [74, 0, 0]
Consumer 1 takes 74
Buffer: [0, 0, 0]
Producer 0 puts 75 into buffer at place 0
Buffer: [75, 0, 0]
Producer 0 puts 76 into buffer at place 1
Buffer: [75, 76, 0]
Consumer 1 takes 75
Buffer: [76, 0, 0]
Consumer 1 takes 76
Buffer: [0, 0, 0]
Producer 0 puts 77 into buffer at place 0
Buffer: [77, 0, 0]
Producer 0 puts 78 into buffer at place 1
Buffer: [77, 78, 0]
Producer 0 puts 79 into buffer at place 2
Buffer: [77, 78, 79]
Consumer 1 takes 77
Buffer: [78, 79, 0]
Consumer 1 takes 78
Buffer: [79, 0, 0]
Consumer 1 takes 79
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Buffer: [0, 0, 0]
Producer 0 puts 80 into buffer at place 0
Buffer: [80, 0, 0]
Producer 0 puts 81 into buffer at place 1
Buffer: [80, 81, 0]
Producer 0 puts 82 into buffer at place 2
Buffer: [80, 81, 82]
Consumer 1 takes 80
Buffer: [81, 82, 0]
Consumer 3 takes 81
Buffer: [82, 0, 0]
Consumer 3 takes 82
Buffer: [0, 0, 0]
Producer 0 puts 83 into buffer at place 0
Buffer: [83, 0, 0]
Producer 0 puts 84 into buffer at place 1
Buffer: [83, 84, 0]
Producer 0 puts 85 into buffer at place 2
Buffer: [83, 84, 85]
Consumer 3 takes 83
Buffer: [84, 85, 0]
Consumer 3 takes 84
Buffer: [85, 0, 0]
Producer 0 puts 86 into buffer at place 1
Buffer: [85, 86, 0]
Producer 0 puts 87 into buffer at place 2
Buffer: [85, 86, 87]
Consumer 3 takes 85
Buffer: [86, 87, 0]
Producer 0 puts 88 into buffer at place 2
Buffer: [86, 87, 88]
Consumer 3 takes 86
Buffer: [87, 88, 0]
Consumer 1 takes 87
Buffer: [88, 0, 0]
Consumer 1 takes 88
Buffer: [0, 0, 0]
Producer 0 puts 89 into buffer at place 0
Buffer: [89, 0, 0]
Producer 0 puts 90 into buffer at place 1
Buffer: [89, 90, 0]
Producer 0 puts 91 into buffer at place 2
Buffer: [89, 90, 91]
Consumer 1 takes 89
Buffer: [90, 91, 0]
Consumer 1 takes 90
Buffer: [91, 0, 0]
Consumer 1 takes 91
Buffer: [0, 0, 0]
Producer 0 puts 92 into buffer at place 0
Buffer: [92, 0, 0]
Producer 0 puts 93 into buffer at place 1
Buffer: [92, 93, 0]
Producer 0 puts 94 into buffer at place 2
```

Buffer: [92, 93, 94] Consumer 1 takes 92 Buffer: [93, 94, 0] Consumer 2 takes 93 Buffer: [94, 0, 0] Consumer 2 takes 94 Buffer: [0, 0, 0] Producer 0 puts 95 into buffer at place 0 Buffer: [95, 0, 0] Producer 0 puts 96 into buffer at place 1 Buffer: [95, 96, 0] Consumer 2 takes 95 Buffer: [96, 0, 0] Consumer 2 takes 96 Buffer: [0, 0, 0] Producer 0 puts 97 into buffer at place 0 Buffer: [97, 0, 0] Producer 0 puts 98 into buffer at place 1 Buffer: [97, 98, 0] Producer 0 puts 99 into buffer at place 2 Buffer: [97, 98, 99] Consumer 2 takes 97 Buffer: [98, 99, 0] Consumer 2 takes 98

Buffer: [99, 0, 0] Consumer 2 takes 99 Buffer: [0, 0, 0]