Практика 27.04. Разбор ДЗ

```
SP. direction (i) {
(1)     LAST := i
(2)     if (DOOR = closed) {
(3)         return (right)
        }
        else {
(4)         DOOR := closed
(5)         if (LAST = i) {
(6)             return (stop)
            }
            else {
(7)             return (left)
(8)         }
(9)     }
    }
```
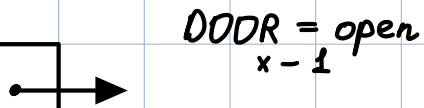
← без return

validity (допустимость значений)
        left, right, stop

Отсутствие циклов — необходимое,

но недостаточное условие

```
┌─────┐
│  x  │
├─────┴──────────────┬───┐
│ ≤  x − 1    right  │ ●─┼──→
├────────────────────┼───┤
│ ≤  x − 1    left   │   │
├────────────────────┼───┤
│ ≤  1        stop   │   │
└────────────────────┴───┘
```

$$DOOR = \underset{x-1}{open}$$

Правильная реализация

```
gt(i) {
    k := NEXT.FAA
    return (k)
}
```

1) FAA   NEXT := 0

2) LOCK

С помощью замка

```
gt(i) {
    LOCK.acquire()
    k := NEXT
    NEXT := NEXT + 1
    LOCK.release()
    return k
}
```
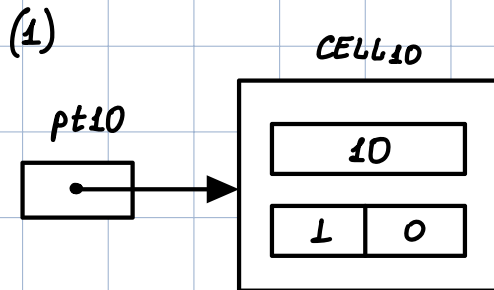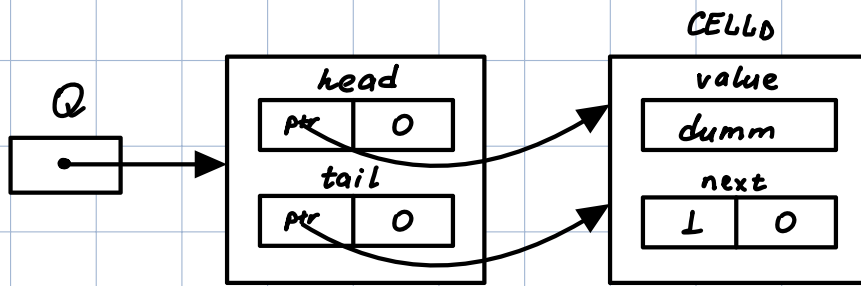
Очередь M&S

```
enq(10)
```

Q → head [ptr | 0], tail [ptr | 0]

CELL0: value [dumm], next [⊥ | 0]

(1)
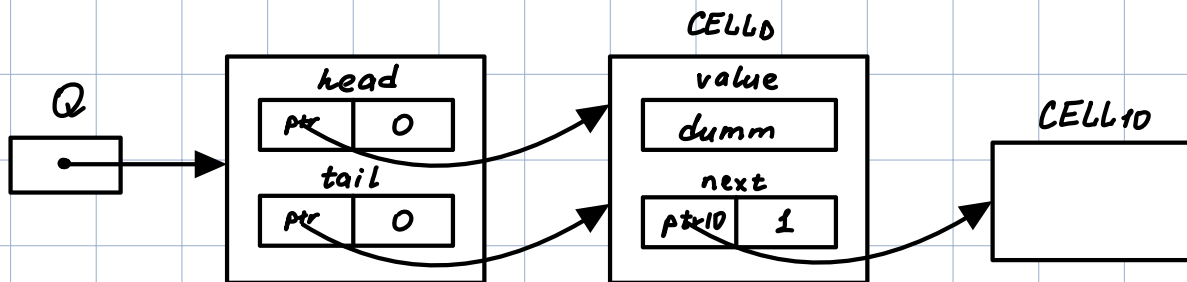
CELL10

pt10 → [10], [⊥ | 0]

(3) $ltail = \langle ptr, 0 \rangle$

(4) $lnext = \langle \bot, 0 \rangle$

(5) $ltail = tail?$

(6) $lnext.ptr = \bot?$

(7) $ltail.next :\overset{CAS}{=} \langle ptr10, 1 \rangle$

Q → head [ptr | 0], tail [ptr | 0]

CELL0: value [dumm], next [ptr10 | 1]

CELL10

(8) $tail :\overset{CAS}{=} \langle ptr10, 1 \rangle$

Q → head [ptr | 0], tail [ptr10 | 1]

CELL0: value [ ], next [| 1]

CELL10: [10], [⊥ | 0]