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Псевдокод алгоритму HS:

**u // UID of process**

**send+ //data, which will sent to right neighbour**

**send- //data, which will sent to left neighbour**

**status // {unknown, leader}**

**direction // {LEFT, RIGHT}, inverse(LEFT) = RIGHT, inverse(RIGHT) = LEFT**

**phase //number of phase**

**returned\_from\_left //message returned back to sender from left neighbour**

**returned\_from\_right //message returned back to sender from right neighbour**

Process i (u, send+, send-, status, phase, returned\_from\_left, returned\_from\_right) {

    phase := 0

    u := UID

    status := unknown

    returned\_from\_left := false

    returned\_from\_right := false

    do {

        hops\_count := 2 \*\* phase

        send+ := u

        send- := i

        send (send+, hops\_count, RIGHT)

        send (send-, hops\_count, LEFT)

        ACCEPT:

            (v, h, d) //value, hops count, direction

            if h = 1 and v = u {

                if d = LEFT {

                    returned\_from\_right := true

                }

                else {

                    returned\_from\_left := true

                }

                if returned\_from\_left and returned\_from\_right {

                    phase += 1

                    return

                }

            }

            if v > u and h > 1 {

                send (v, h - 1, d)

            } else if v > u and h = 1 {

                send (v, 1, inverse(d))

            } else if v = u {

                status := leader

            }

    }

}