Peterson’s algorithm oversimplified
Peterson’s algorithm oversimplified

Spike trap holds one person. If >2 people try to pass, last one in gets caught
Peterson’s algorithm oversimplified

I want in!

Me too!

Me too too!

P

Q

R

Comb

Cauldron
Peterson’s algorithm oversimplified
Peterson’s algorithm oversimplified
Peterson’s algorithm oversimplified

Mutual exclusion failed

Aw, man...
Peterson’s algorithm oversimplified

Make an obby with n-1 traps for n processes.
Peterson’s algorithm oversimplified
Peterson’s algorithm oversimplified

I want in!

Me too!

Me too too!
Peterson’s algorithm oversimplified

The last one to clear the first trap gets stuck in the second.

Aw, man...
Peterson’s algorithm oversimplified

Aw, man...
Peterson’s algorithm oversimplified

When P is done, Q is released from the trap.
Peterson’s algorithm oversimplified
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Peterson’s algorithm oversimplified

By weak fairness, R will eventually move to the next trap.

But we can't give a bound on How many baths by P,Q that'll take:

Hence: eventual entry, But not bounded wait.
Lamport’s fast algorithm oversimplified

When you pass a sign, you write your name on it.

\[ P \quad Q \]
Lamport’s fast algorithm oversimplified

Look at the second sign. Go back to start if there’s a name on it.
Lamport’s fast algorithm oversimplified
Lamport’s fast algorithm oversimplified

If the first sign still has my name, enter CS.
Lamport’s fast algorithm oversimplified

If the second sign has someone else’s name, go to start. Otherwise enter.
Lamport’s fast algorithm oversimplified

Q goes back to start if second sign is marked
Lamport’s fast algorithm oversimplified
Lamport’s fast algorithm oversimplified
Lamport’s fast algorithm oversimplified
Lamport’s fast algorithm oversimplified
What if we have one sign?

Both procs
Read the sign
Before they have
Time to write it
What if we have one sign?
What if we have one sign?

Q read the sign
And saw -, So can pass
What if we have one sign?
What if we have one sign?