

A blue speech bubble with a white outline and a small tail pointing towards the bottom right. The word "DONE" is written in white, bold, capital letters in the center of the bubble.

DONE



A blue speech bubble with a white question mark and the word 'ORDER?' in white, bold, sans-serif capital letters. The speech bubble has a tail pointing towards the bottom right corner.

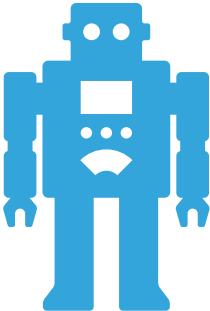
ORDER?



CONFIDENTIALBURGLING - SERIAL, IN ORDER EXECUTION









waiter











Prizzen Owen

Burgherrin





conference machine



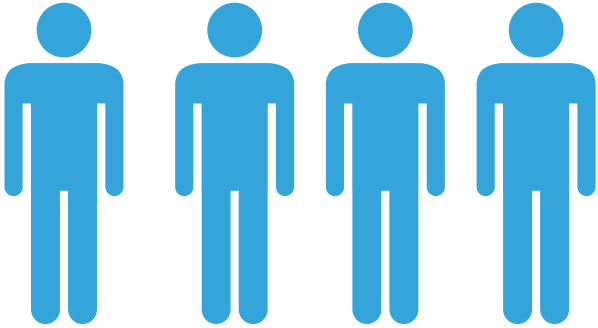


- ▶ One customer¹ after another (**in order**)
- ▶ Each part of the order ² executed **serially**

I.e. first the burger, then the coffee

- ▶ PRO: Easy to implement and understand
- ▶ CON: Slow because resources³ not utilised fully

¹ customer == CPU instruction ² part == μ OP - micro operation ³ oven, grill, coffee machine



► Decode instruction into μ OPs ("Burger", "Coffee")



Schedule pops

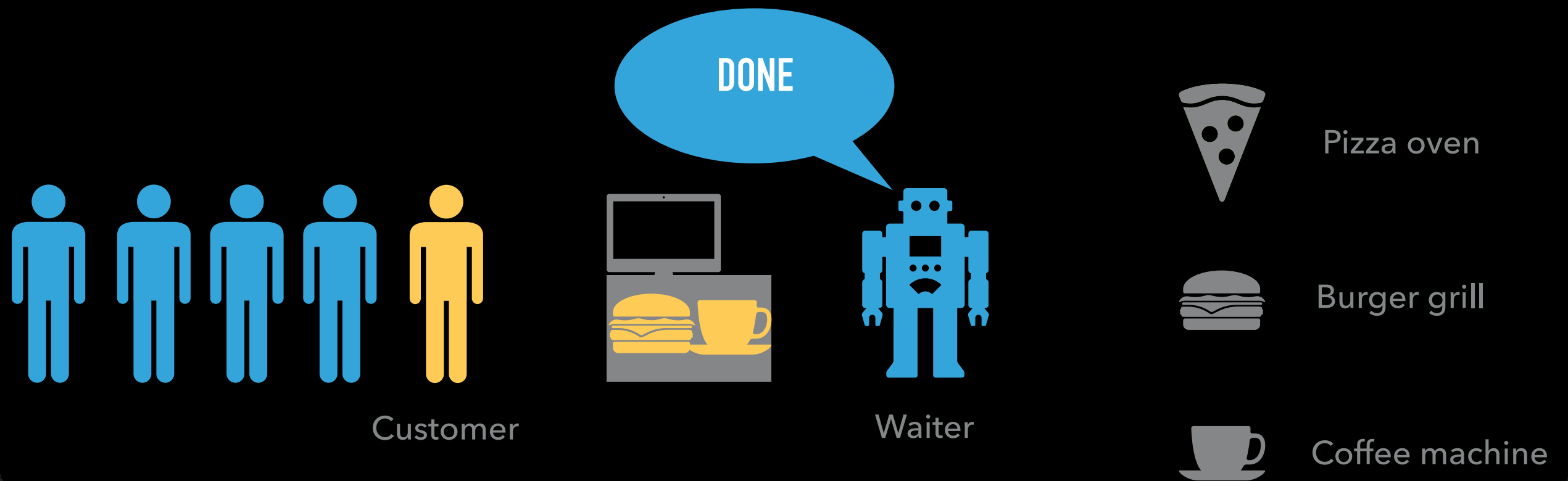
► run 1st μ OP (grill the burger)

► $\text{run}_{2nd} \mu OP$ (brew coffee, serial execution)

▶ retire instruction (customer)

- ▶ Decode instruction into μ OPs ("Burger", "Coffee")
- ▶ Schedule μ OPs
 - ▶ run 1st μ OP (grill the burger)
 - ▶ run 2nd μ OP (brew coffee, serial execution)
- ▶ retire instruction (customer)

CONFIDENTIAL BURGERS INC. : SERIAL, IN ORDER EXECUTION



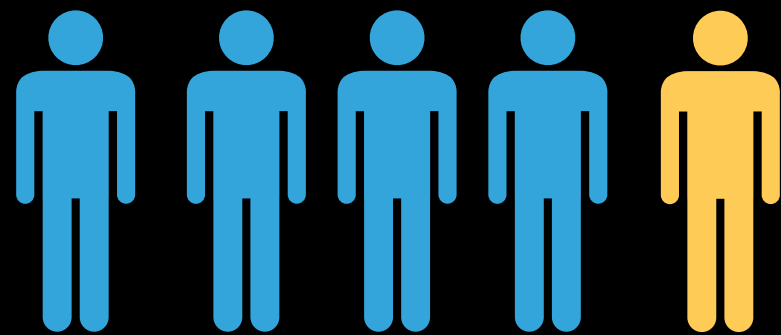
- ▶ One customer¹ after another (**in order**)
- ▶ Each part of the order ² executed **serially**

I.e. first the burger, then the coffee

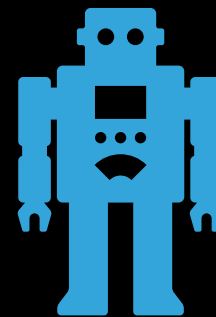
- ▶ PRO: Easy to implement and understand
- ▶ CON: Slow because resources³ not utilised fully

¹ customer == CPU instruction ² part == μ OP - micro operation ³ oven, grill, coffee machine

CONFIDENTIAL BURGERS INC. : PARALLEL, IN ORDER EXECUTION



Customer



Waiter



Pizza oven



Burger grill



Coffee machine