











### MELTDOWN & SPECTRE FOR NORMAL PEOPLE

# CONFIDENTIAL BURGERS INC. : PARALLEL, OUT OF ORDER EXECUTION



### Customer

Waiter









#### Pizza oven

## Burger grill



### Coffee machine





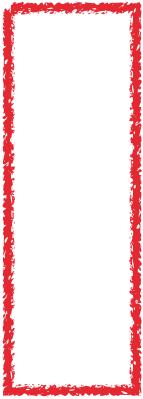






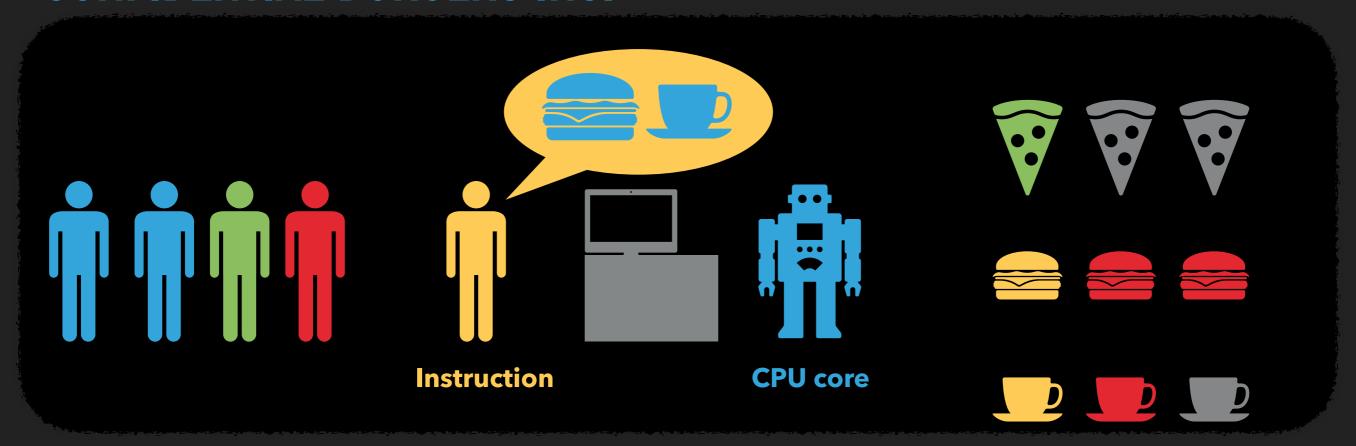
Multiple customers' orders <u>executed in parallel</u> and <u>delivered</u> (retired) in order I.e. multiple orders prepared at the same time PRO: Faster because resources are utilised even better CON: More difficult to implement

## <sup>1</sup> this is called *superscalar*



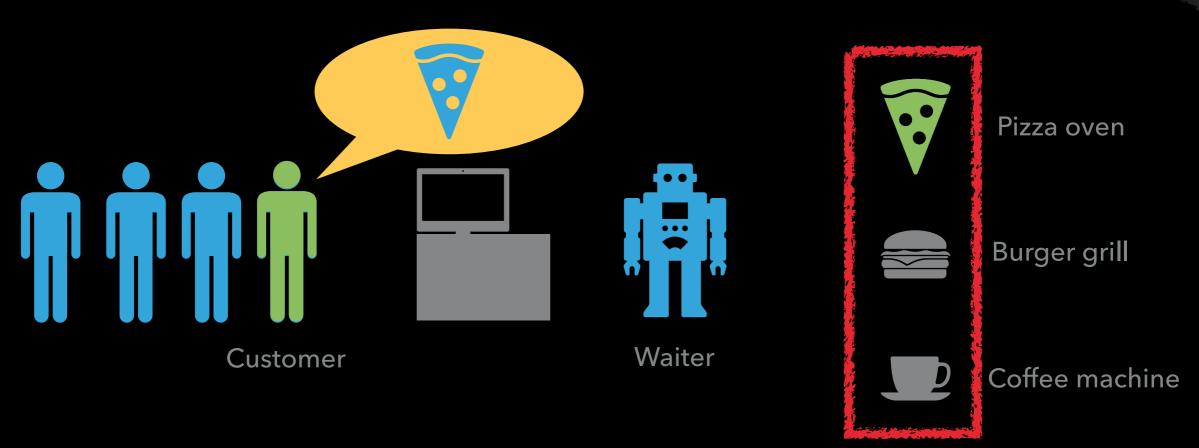
### Customer

# **CONFIDENTIAL BURGERS INC.**



Adding more resources increase parallelism & throughput. This is all on one CPU core.

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I.e. multiple orders prepared at the same time

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- CON: More difficult to implement