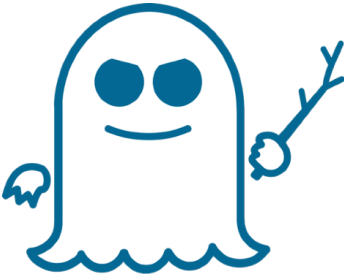
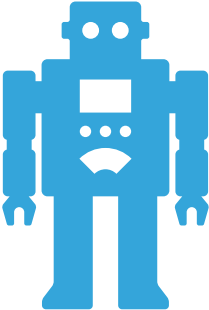




SPECTRE: SPECTACULAR EXERCUTION































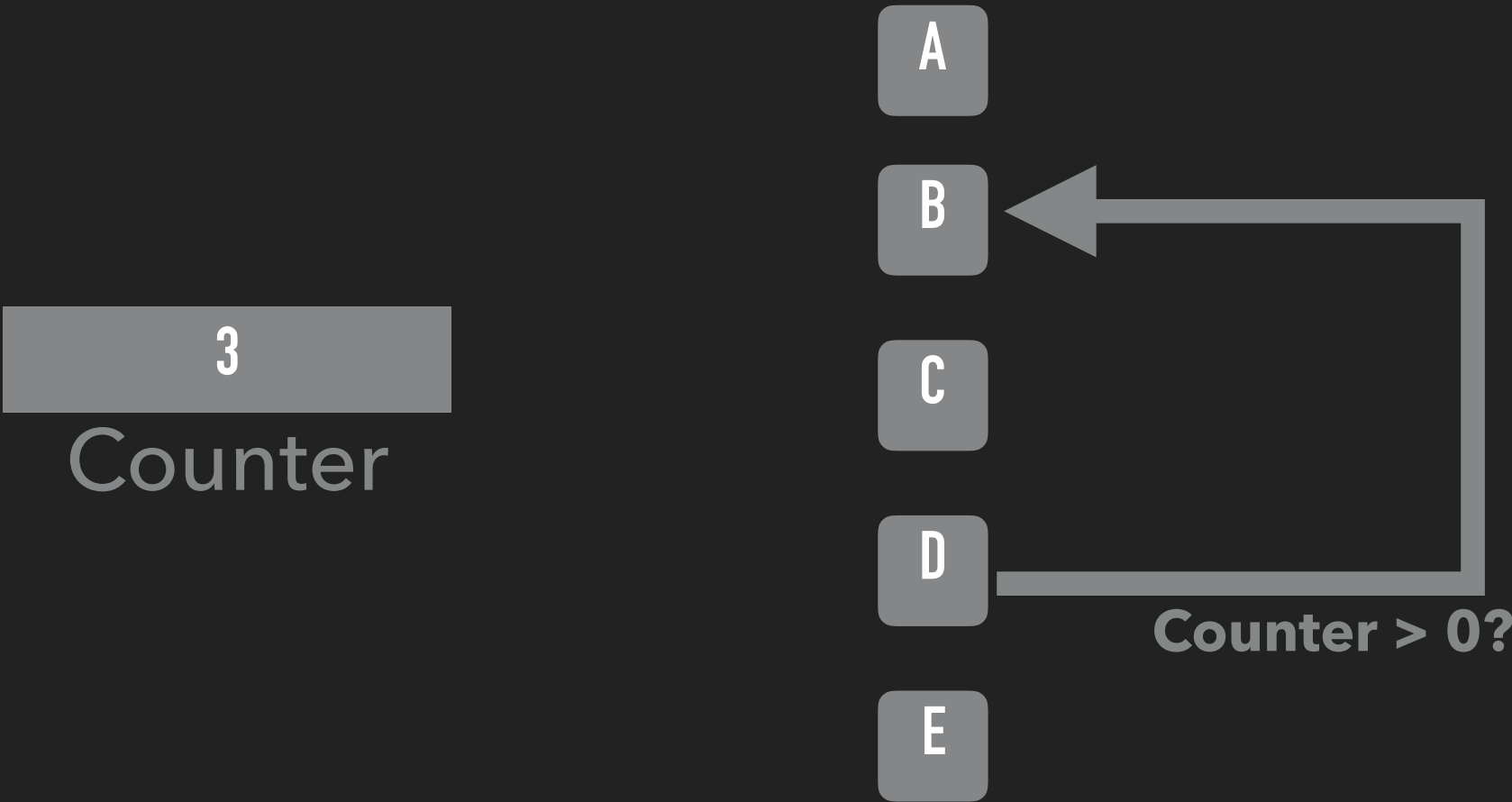
The CPU can improve the coffee machine utilisation by
speculatively brewing the coffee for 

This is very similar to the effect seen in Meltdown.

► In the **Meltdown** attack the CPU knows the next instruction (order) and asynchronously checks the permissions

► In Spectre the CPU guesses the next instructions based on heuristics (brew coffee without knowing the order)

SPECTRE: SPECULATIVE EXECUTION



COUNTER

A B ... E

A



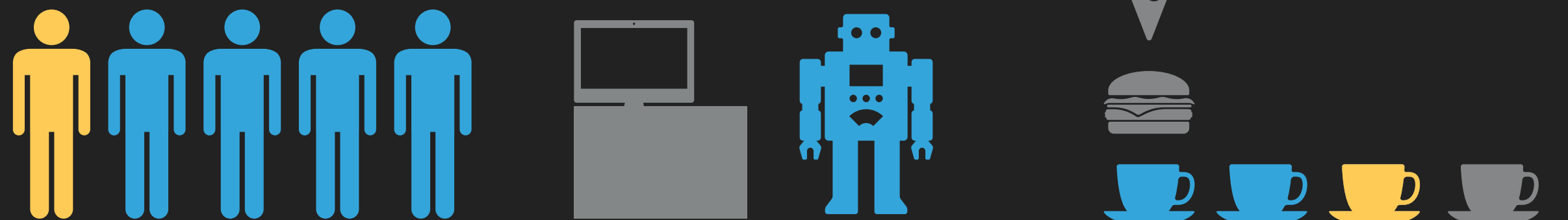
Some variable used in branch


Instructions

Currently active instruction

Conditional branch

SPECTRE: SPECULATIVE EXECUTION



The CPU can improve the coffee machine utilisation by *speculatively* brewing the coffee for 

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