

# Non-deterministic execution

Execution scenario #1

LOAD X  
INCR  
STORE X  
LOAD X  
DECR  
STORE X

➡ X is equal to 0

Execution scenario #2

LOAD X  
LOAD X  
INCR  
DECR  
STORE X  
STORE X

➡ X is equal to -1

Execution scenario #3

LOAD X  
LOAD X  
INCR  
DECR  
STORE X  
STORE X

➡ X is equal to 1

... and many other possible scenarios with the outcome of x being equal to either 0, -1 or 1

# Race-condition problem

The system behaviours depends on the sequence or timing of events that is non-deterministic

- Not desirable in most cases (hard to catch bug)