



Systems & Software Security

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What is a race condition?



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Resource
10



What is a race condition?



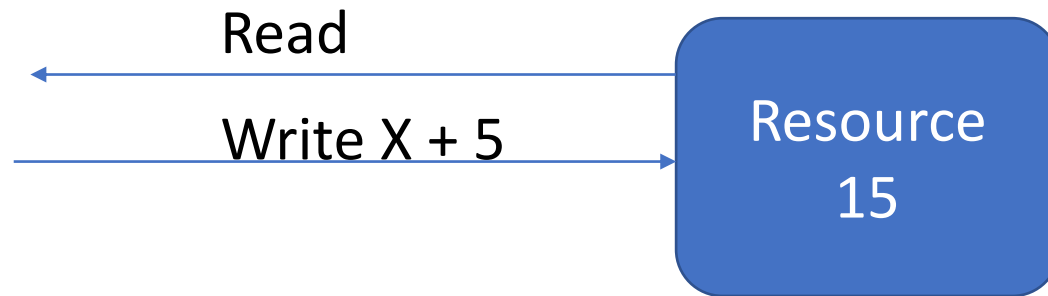
Read



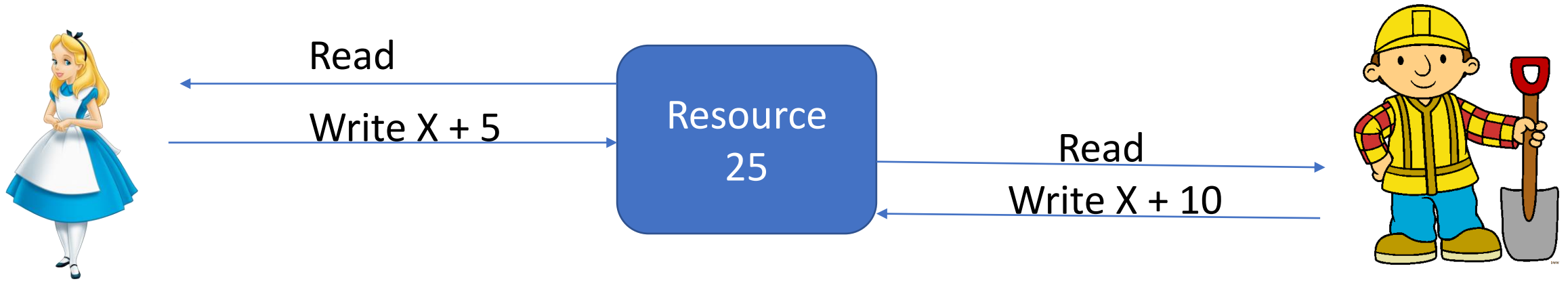
Resource
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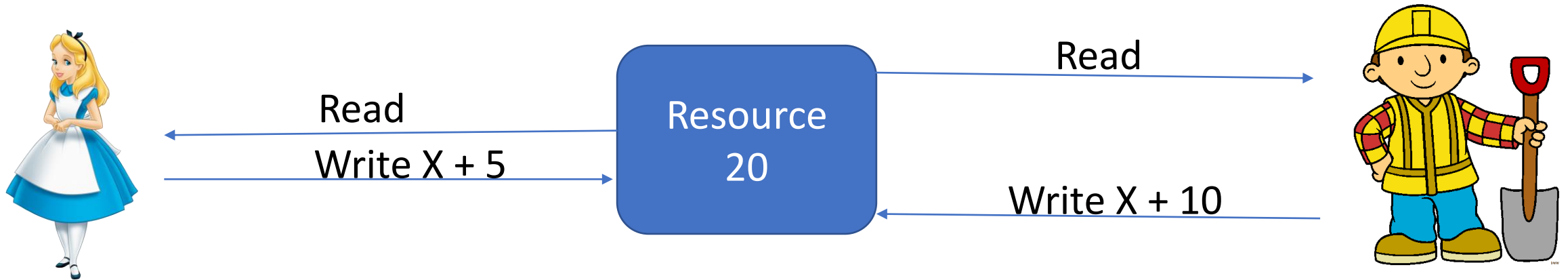
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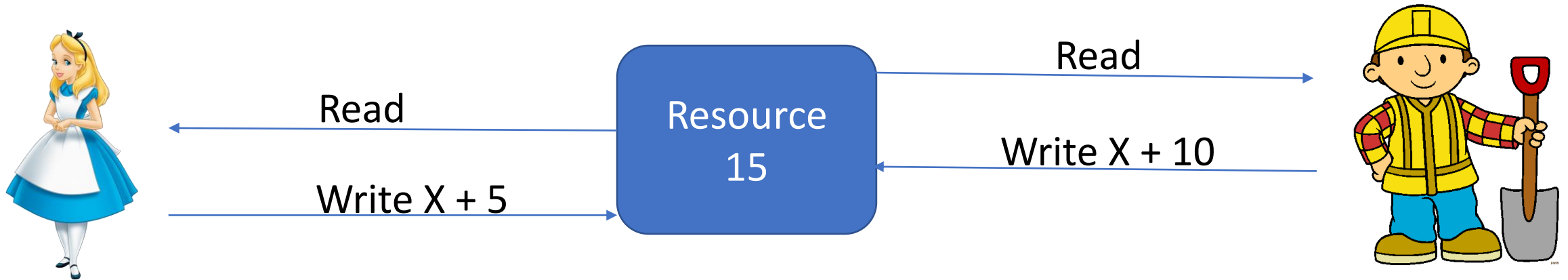
What is a race condition?

- All good here!

What is a race condition?



What is a race condition?



What is a race condition?

```
fcn witdraw(amount)
    balance = getBalance()
    if (balance > amount)
        balance = balance – amount
        saveBalance(balance)
    else
        print “not enough fund”
```

What is a race condition?

- Race condition:
 - System where the output is dependent on the sequence or timing of events
- Many possible permutations
- ... you have seen this before
- It is a well understood problem, with solutions
 - Synchronization
 - Transactions
 - etc...