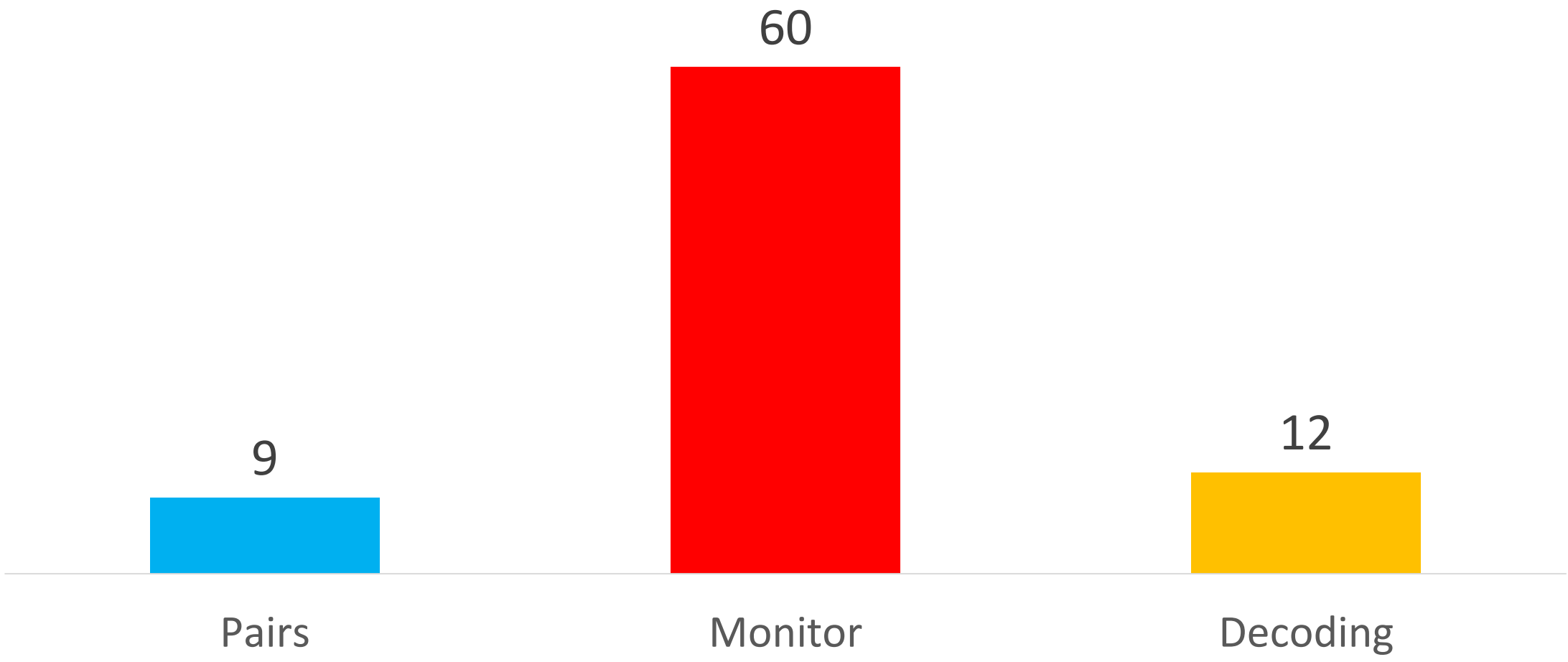
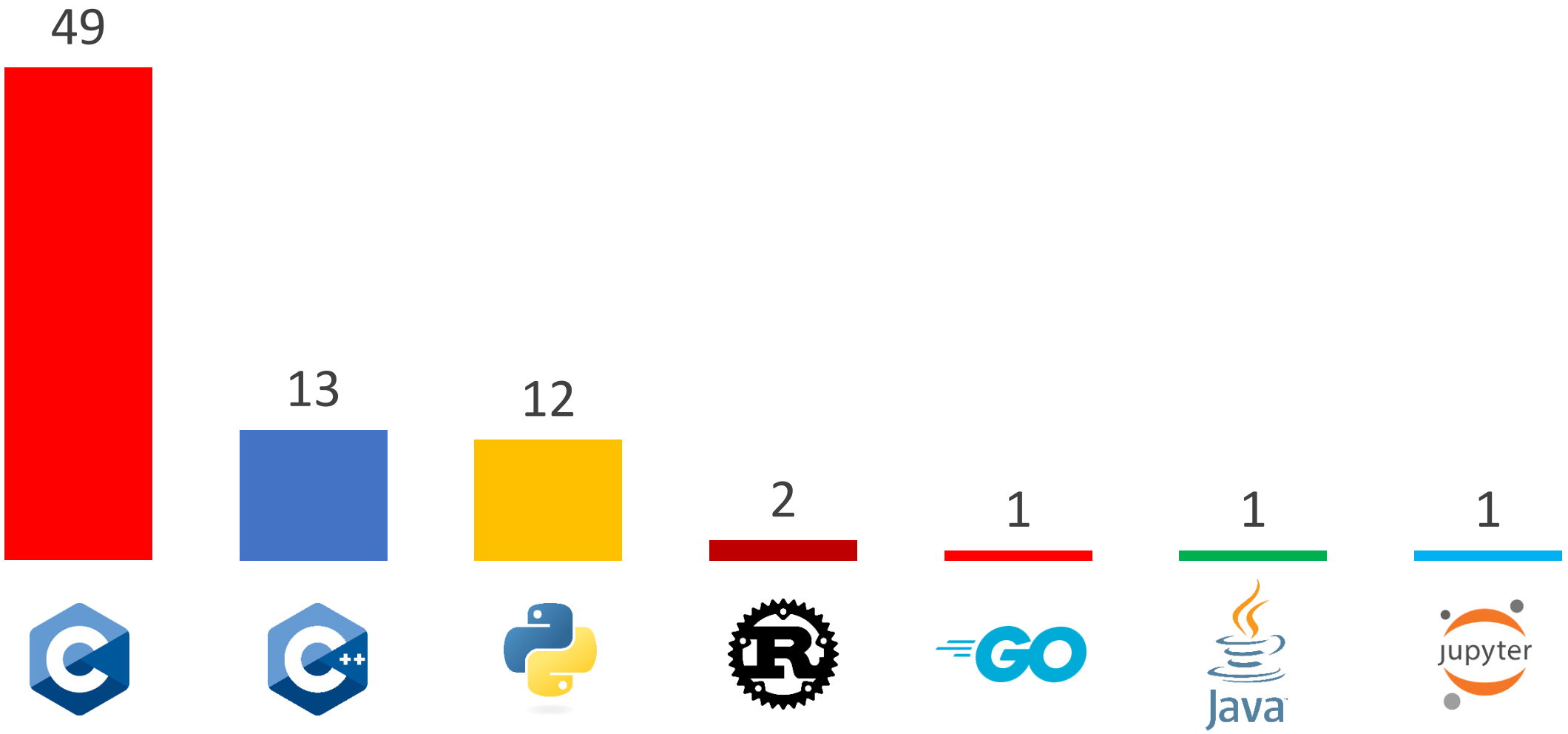
81 submissions!



Programming languages distribution



Problem 1: Pairs (Conclusions)

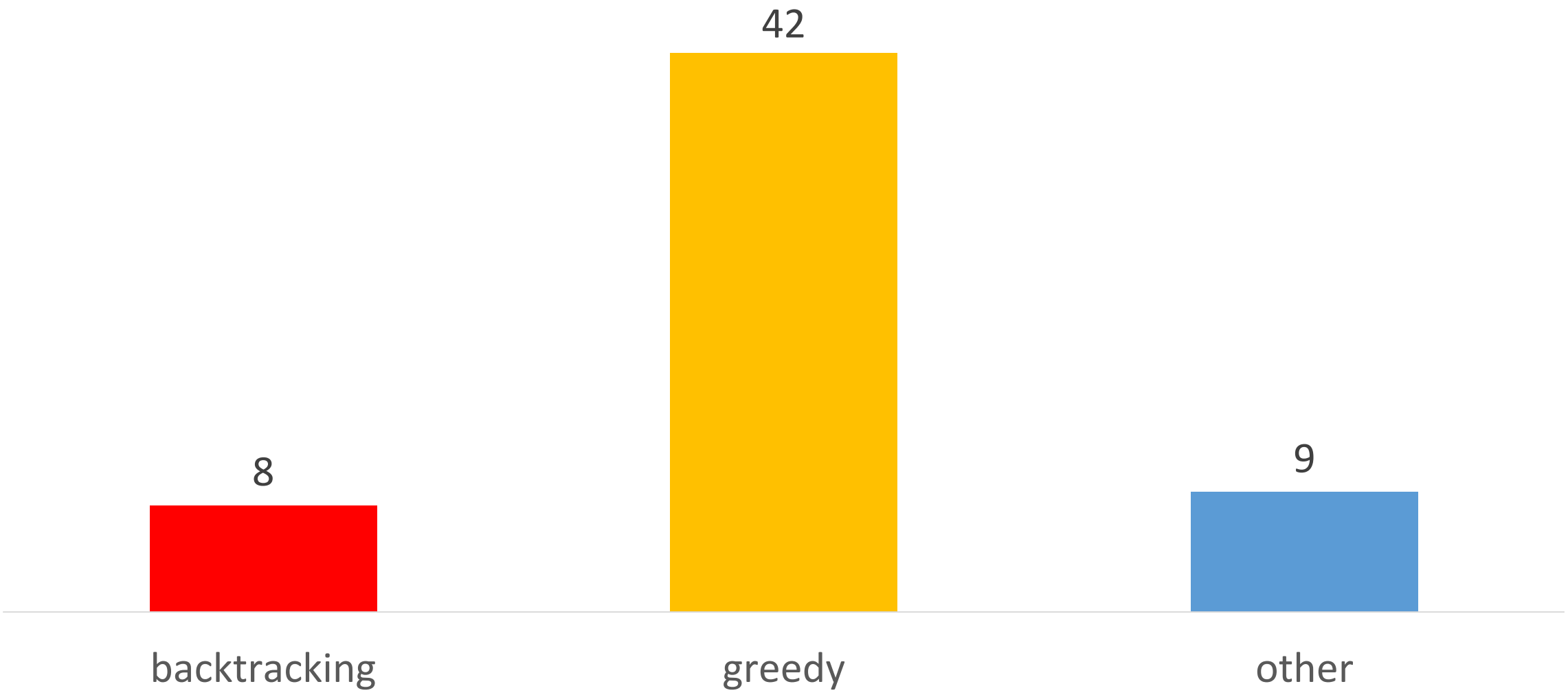
Commonly known as: *„Post's Correspondence Problem"*

Cannot be solved algorithmically (it is *undecidable*)!

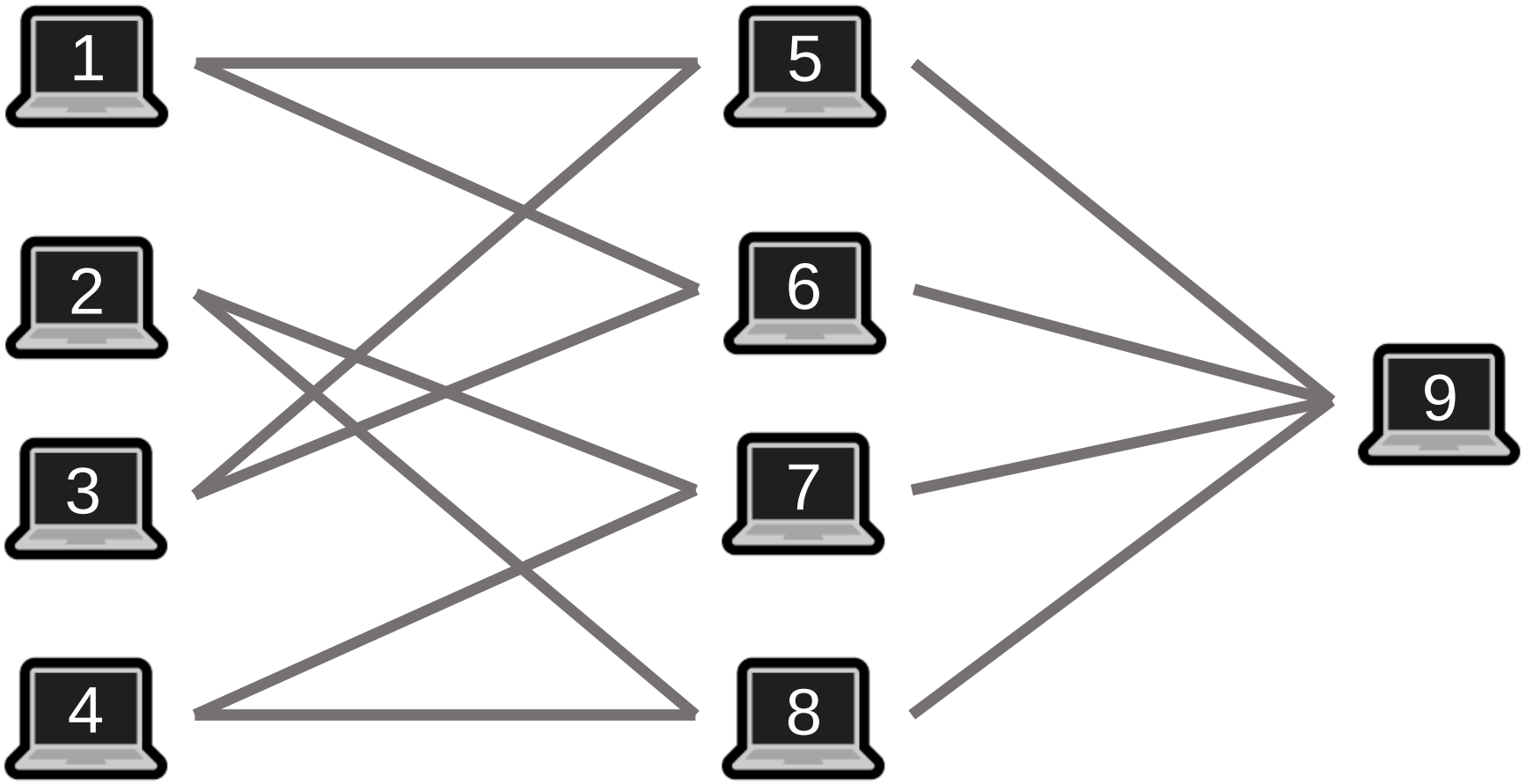
We can *prove* that no algorithm that solves it exists.

But can we write a solution that is „good enough"?

Problem 2: Monitor



Problem 2: Monitor (greedy doesn't work)



Problem 2: Monitor (Conclusions)

Commonly known as: *„Mininimum Vertex Cover”*

It’s likely that it cannot be solved efficiently (it is NP-Hard)!

No proof of this fact is known, but it’s a strong conjecture.

But can we write a solution that is „good enough”?

Problem 3: Decoding (Conclusions)

Commonly known as: *„Unique Decodability”*

Can be solved efficiently (it is in P)!

The Sardinas-Patterson algorithm is a provably correct, provably efficient solution

Takeaways

We need a proper understanding of the ***problem***, before working on the ***algorithm***

We need ***a formal framework*** that overcomes the limitations of our ***intuition***