Workshop 1: Algorithms Review

CITS3001 Algorithms, Agents and Artificial Intelligence

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The right change

- Suppose that you have a set of coins, and a certain amount of change to make up.
- Phrase this problem as an algorithmic problem.
- Propose an algorithm that solves this problem.
- How does the solution change, depending on what coins are available?
- What is the complexity of the proposed algorithm?
- Show the proposed algorithm is correct.

Complexity

- When describing the complexity of an algorithm, we often use big O notion like O(n), or O(n lg n), to describe the growth in time as the input size grows.
- What is the formal definition of big O complexity?
- What are the advantages of using big O to describe algorithms complexity?
- What are the disadvantages of big O to describe an algorithms complexity?