

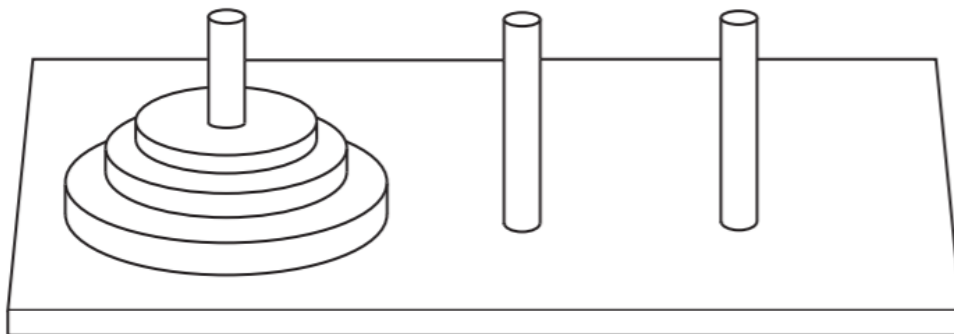
Tutorial 02 Algorithms

1. In mathematics and computer science, what is a typical definition of algorithm?
2. During the lecture, a few examples of algorithms in action that we can observe in our daily lives were discussed e.g.:
 - [audio and video compression algorithms](#) (Instagram Live Video)
 - [routing algorithms](#) (Google Maps)
 - [rendering algorithms](#) (Pixar)

Discuss other examples of algorithms in action that you can observe in your daily lives.

3. The Towers of Hanoi is a mathematical game that is often used in computer science to illustrate the use of algorithm for problem solving, particularly the concept and power of recursion (which we will discuss further in Topic 05).

The game uses three pegs and a set of discs with holes through their centers. The discs are stacked on the leftmost peg, in order of size with the largest disc at the bottom.



The objective of the game is to move all the discs from the first peg to the third peg, using the middle peg as a temporary holder – with the minimum number of moves. In addition, the following rules must be observed while moving the discs:

- Only one disk may be moved at a time
- A disk cannot be placed on top of a smaller disc
- All discs must be stored on a peg except while being moved

(Content adapted from: Starting out with Python. Tony Gaddis, Addison Wesley, 2nd Edition, 2012.)

Devise an algorithm to solve the Tower of Hanoi problem.

-- End of Tutorial --