

# EE30220

# MECHATRONIC DESIGN PROJECT

## ALGORITHMS - EXAMPLE EXERCISE 6

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UNIVERSITY OF  
**BATH**

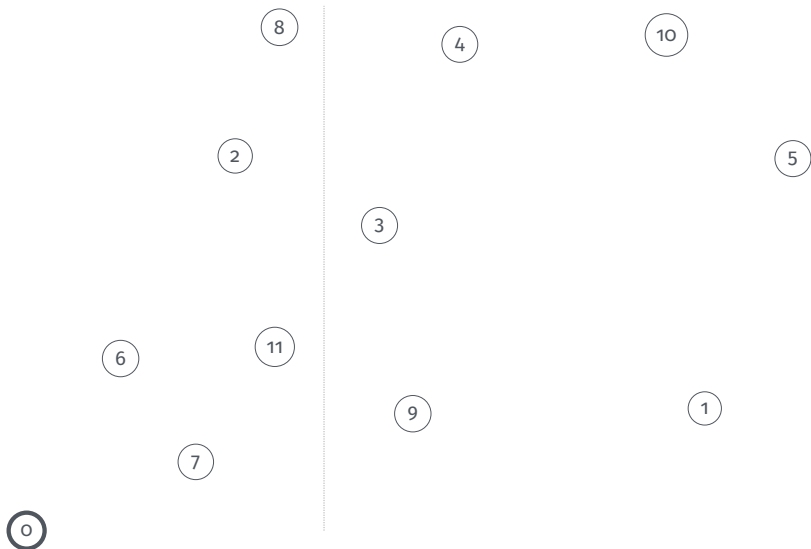
Nov. 8<sup>TH</sup>, 2019

# **ALGORITHM #2**

# EXAMPLE



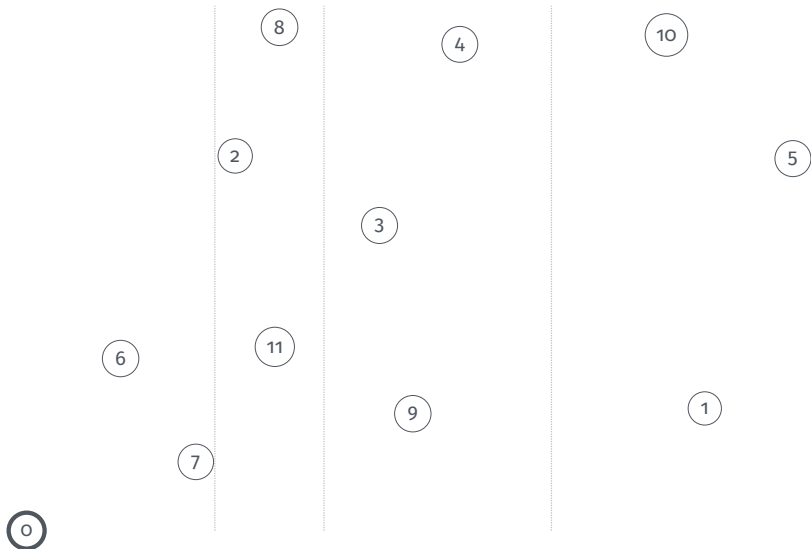
# EXAMPLE



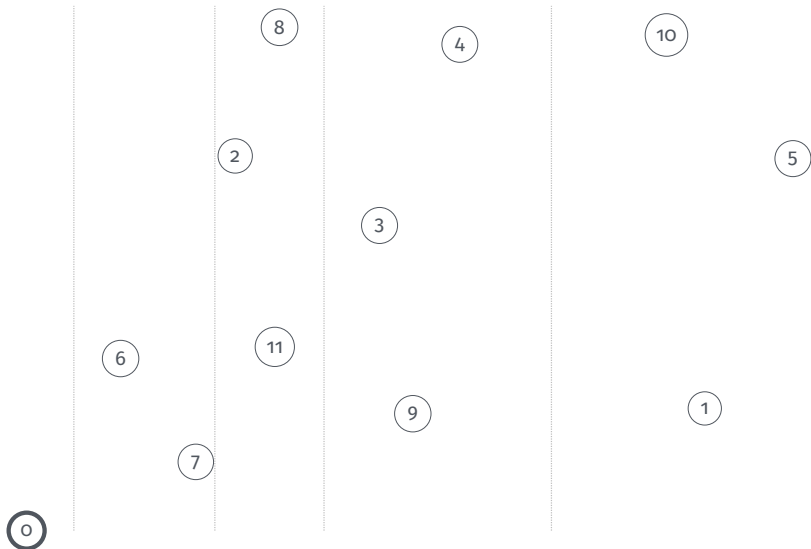
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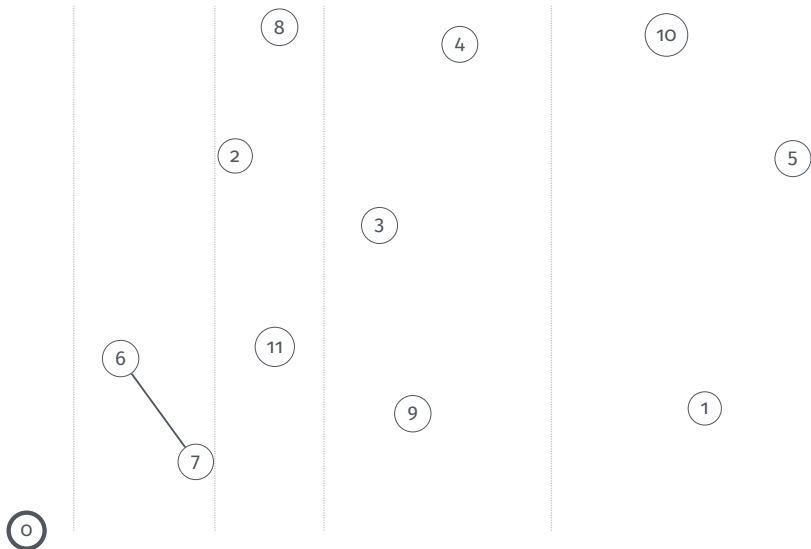
# EXAMPLE



# EXAMPLE

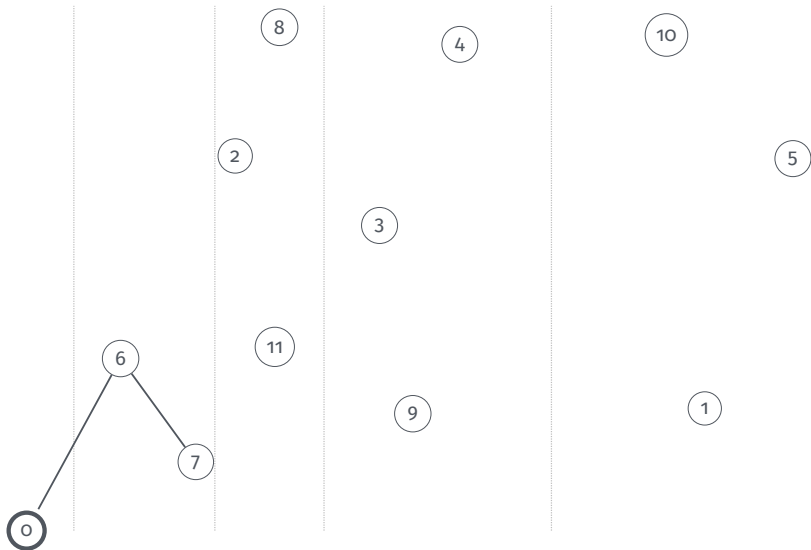


# EXAMPLE

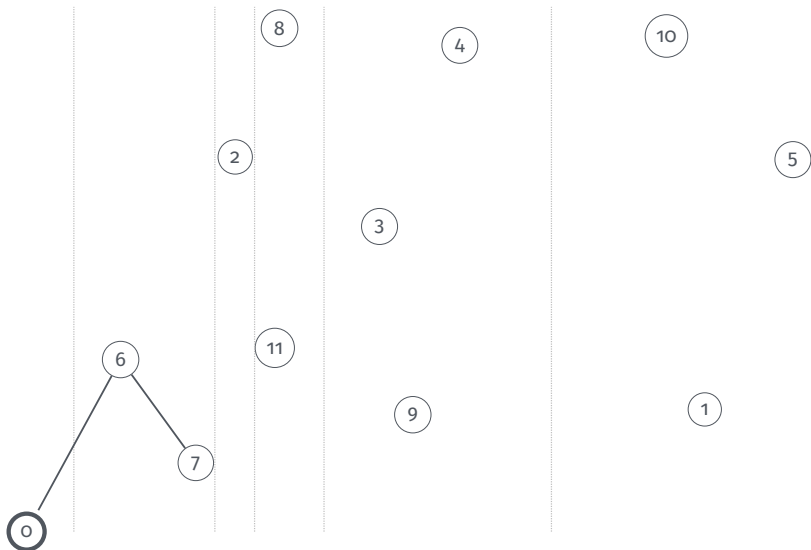




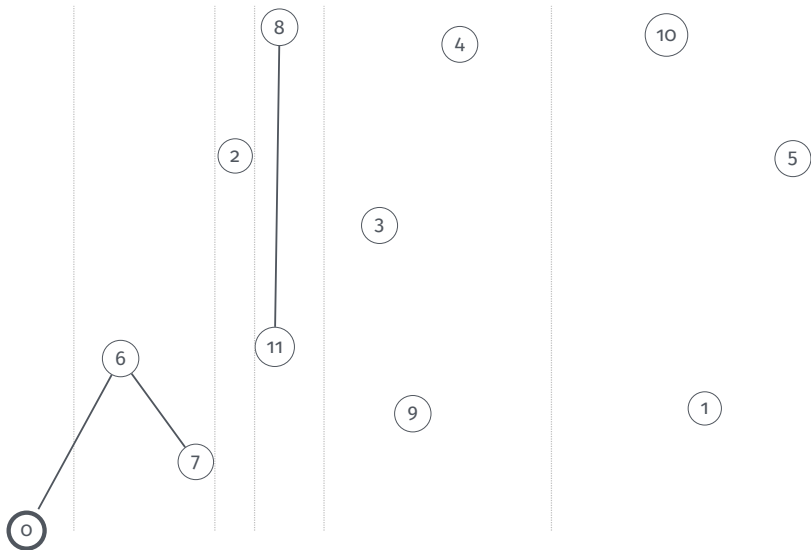
# EXAMPLE



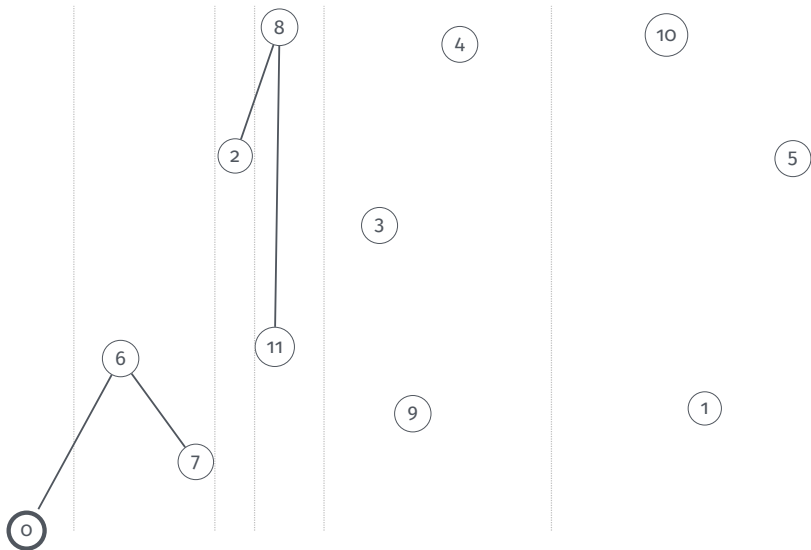
# EXAMPLE



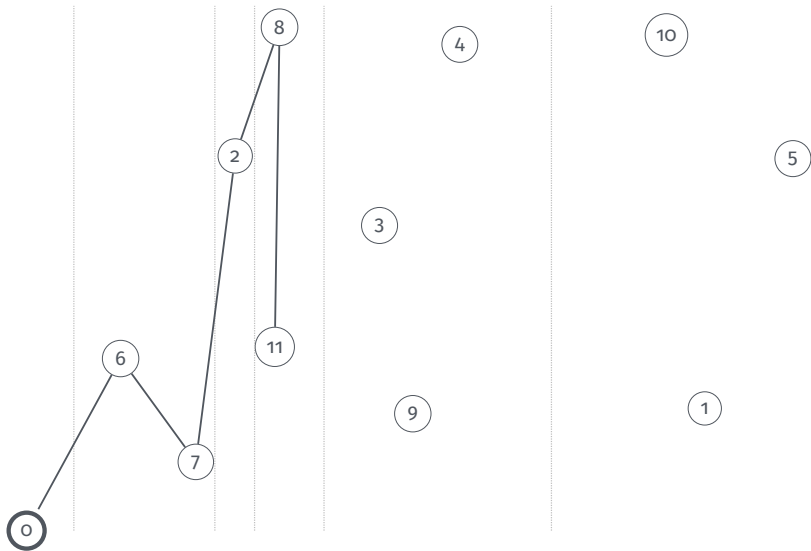
# EXAMPLE



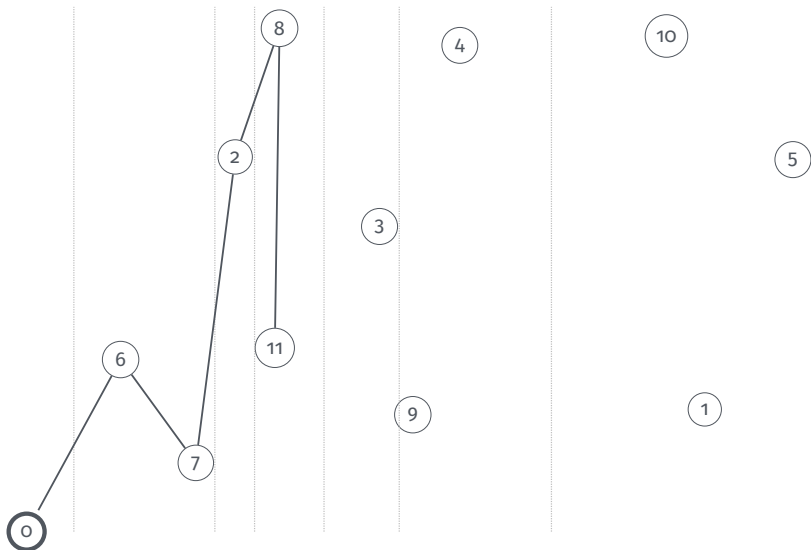
# EXAMPLE



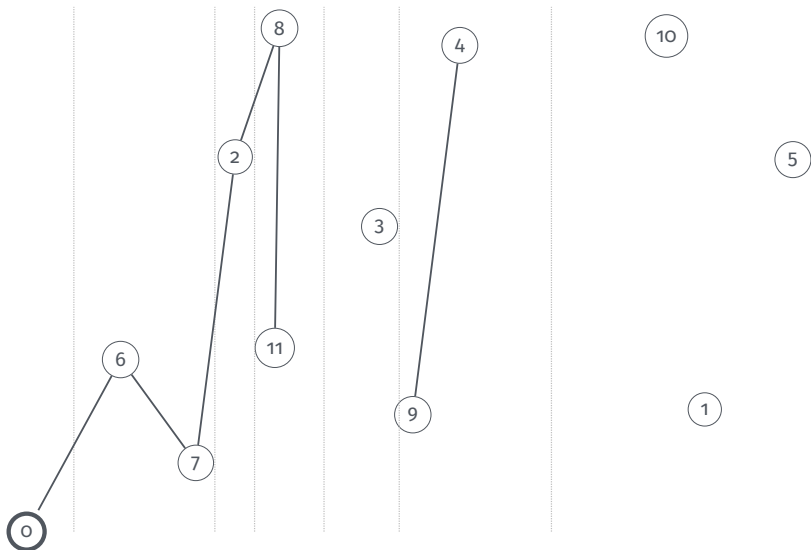
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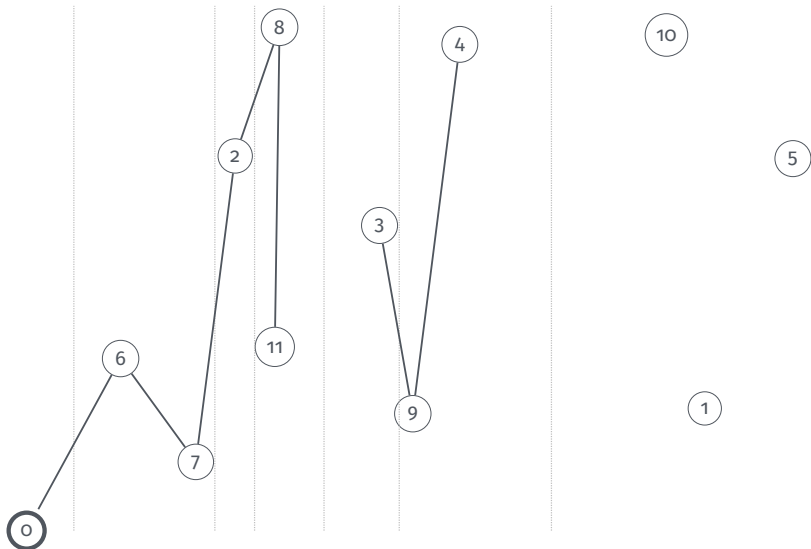
# EXAMPLE



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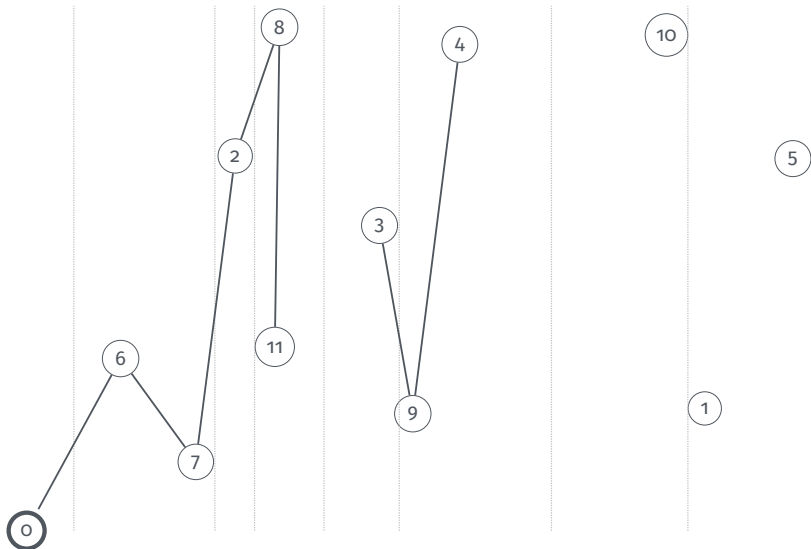


# EXAMPLE

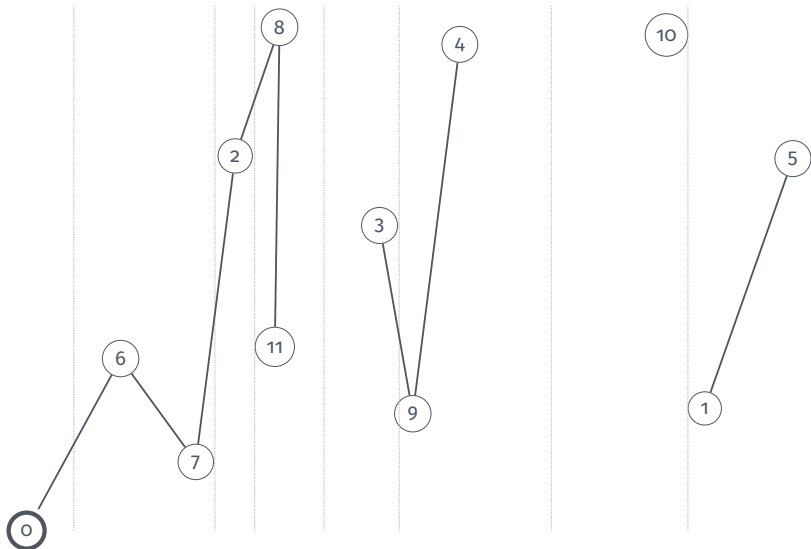




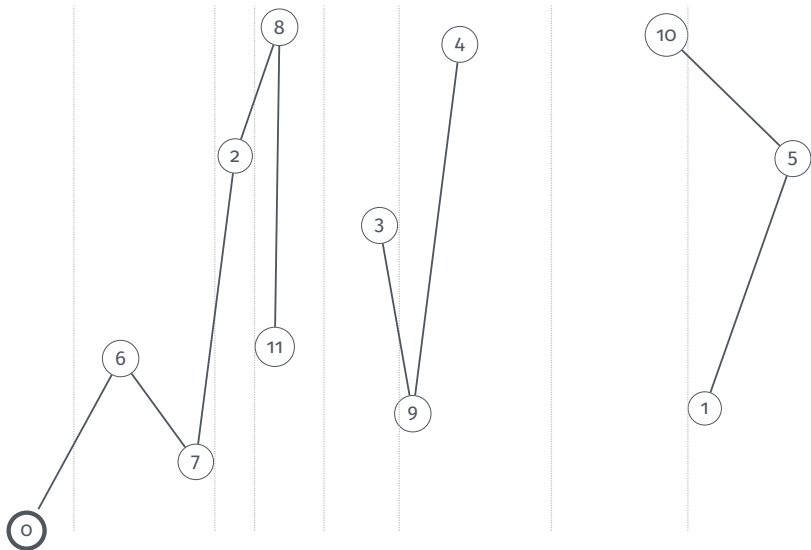
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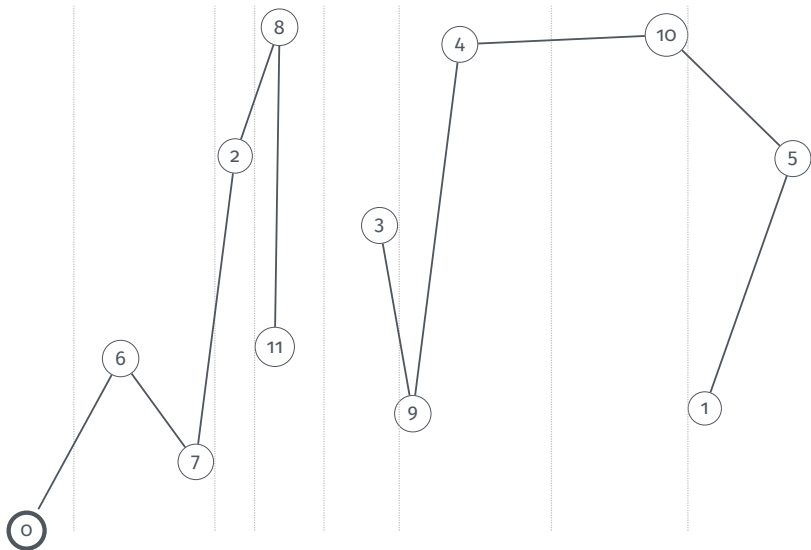
# EXAMPLE



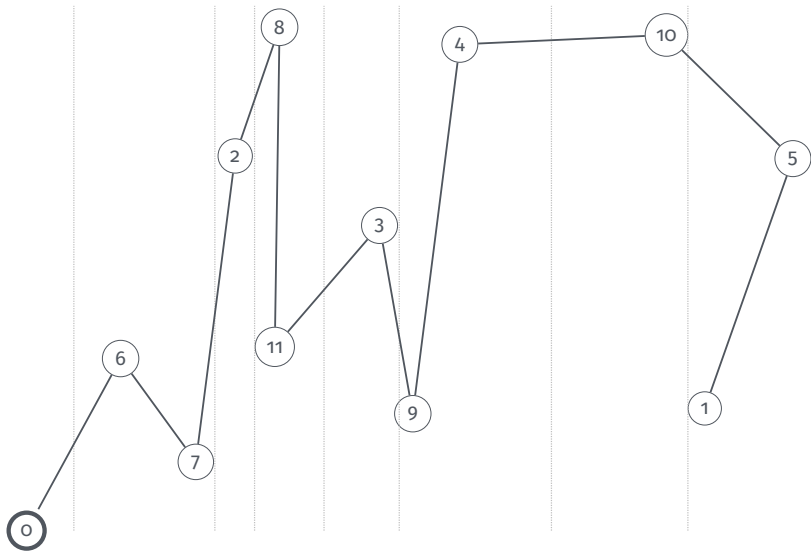
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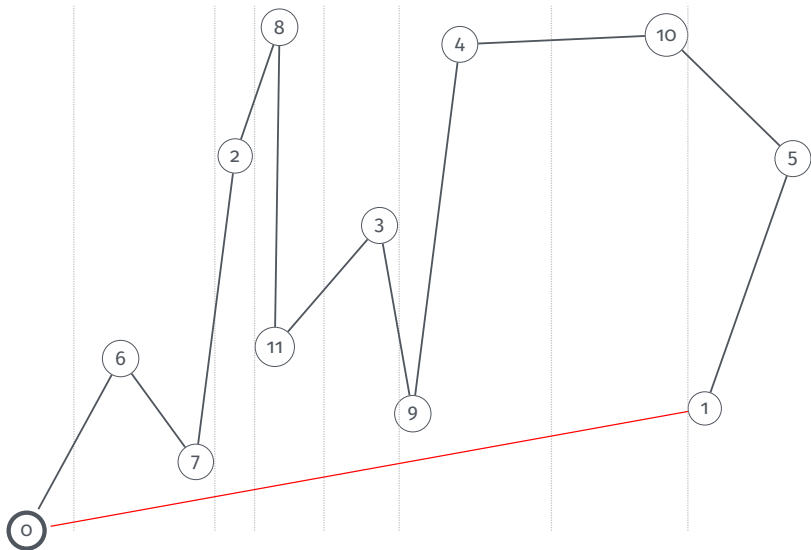
# EXAMPLE



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# EXAMPLE



- how do we sort magnets per x coordinate?
- not clever to cut the plane along the same direction each time. Better to alternate, vertical, horizontal
- we need to close the loop at the end

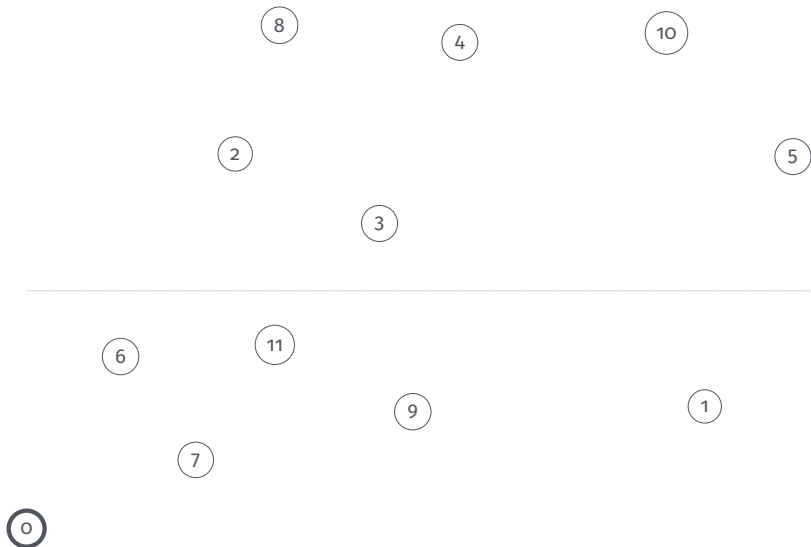
# ALGORITHM #3



# EXAMPLE



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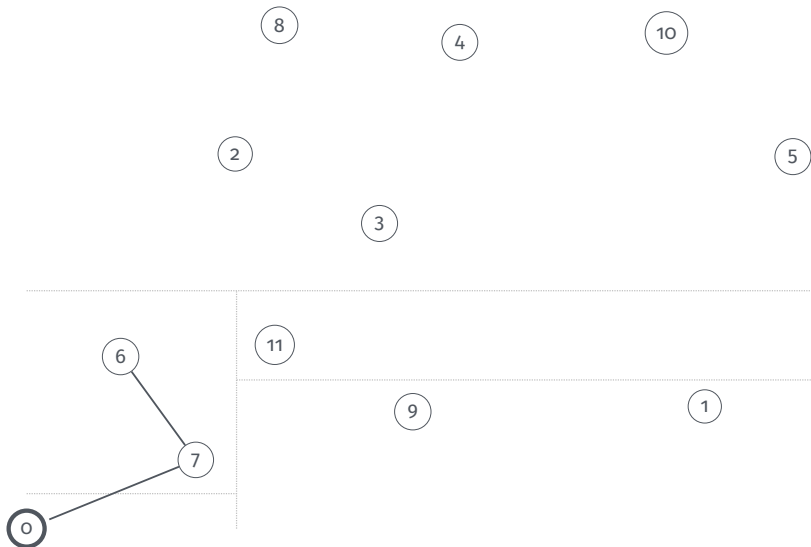
# EXAMPLE



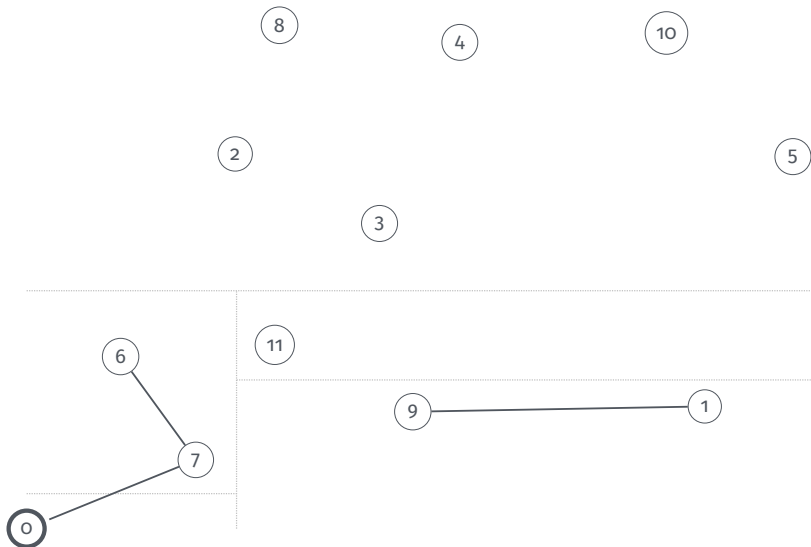
# EXAMPLE



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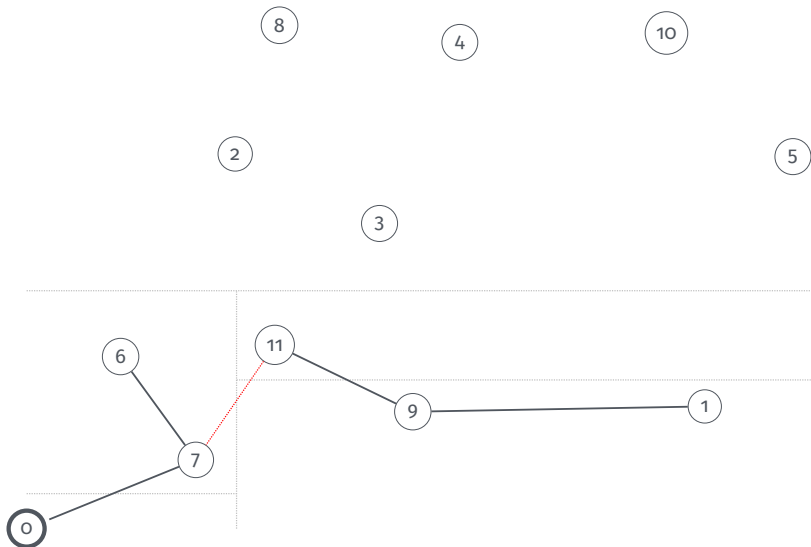




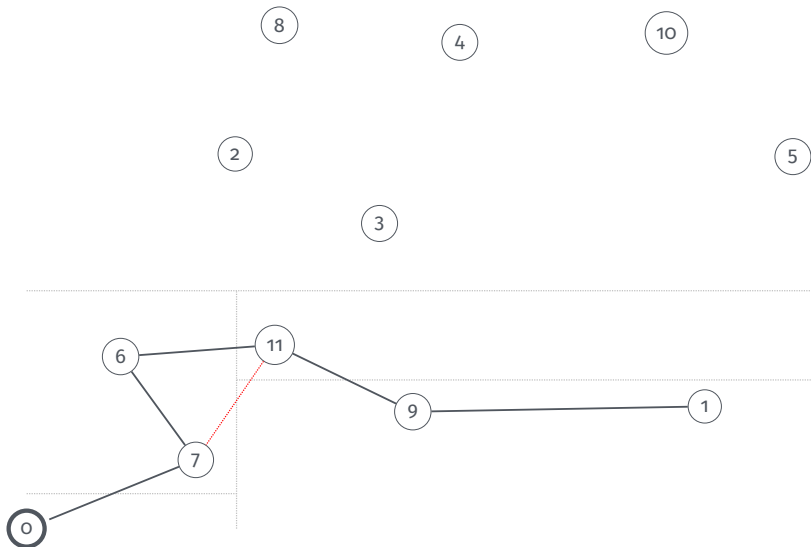
# EXAMPLE



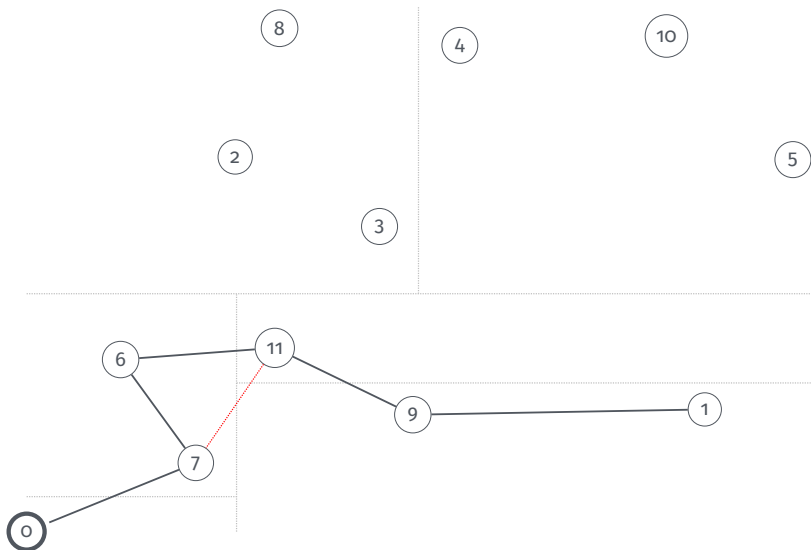
# EXAMPLE



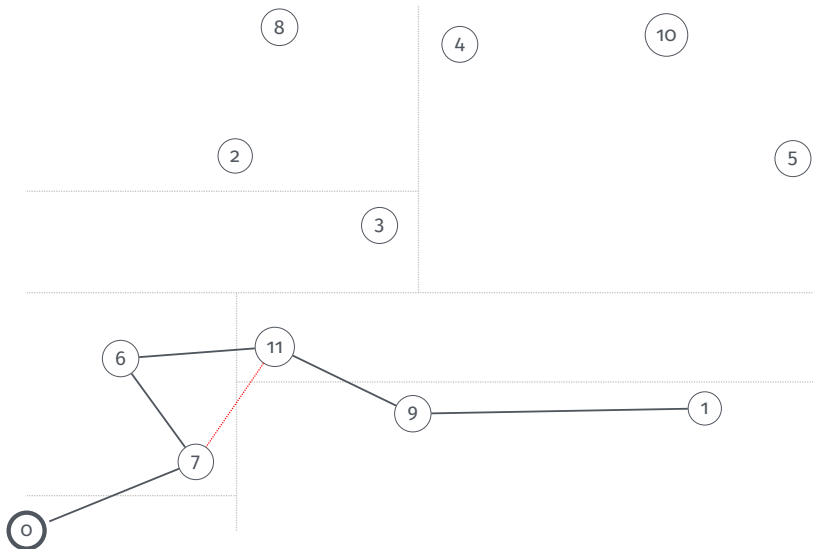
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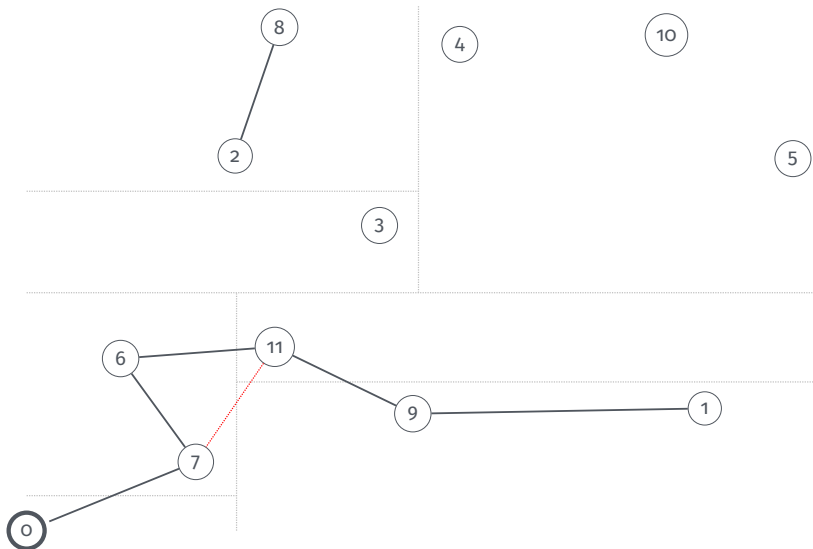
# EXAMPLE



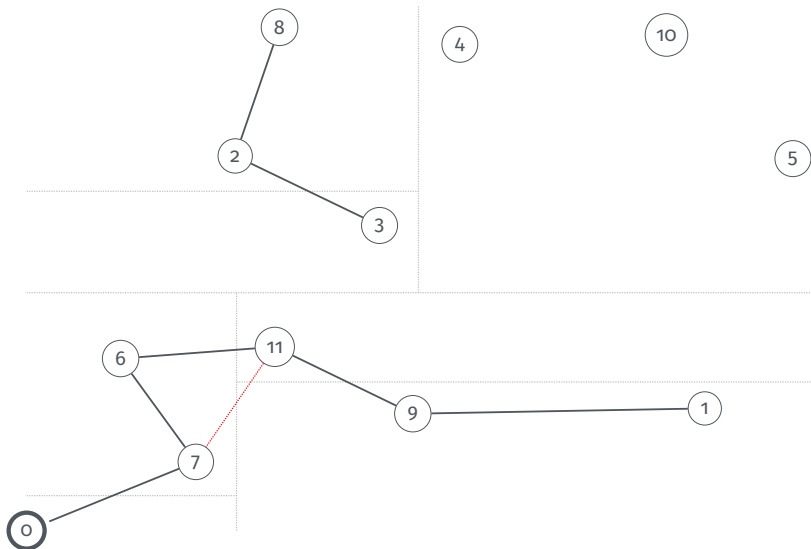
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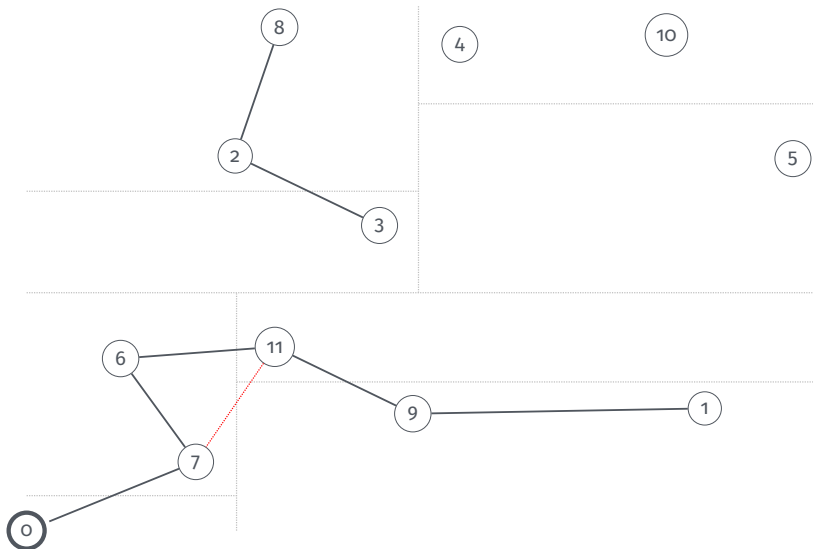
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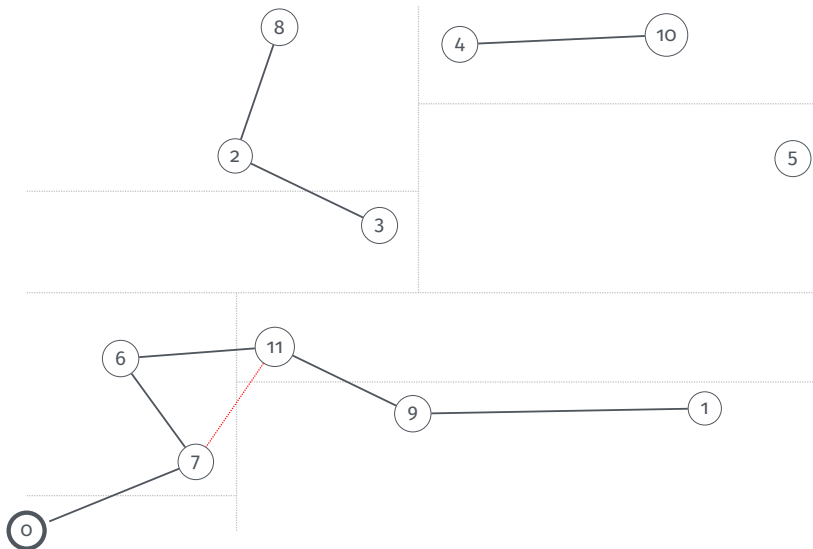


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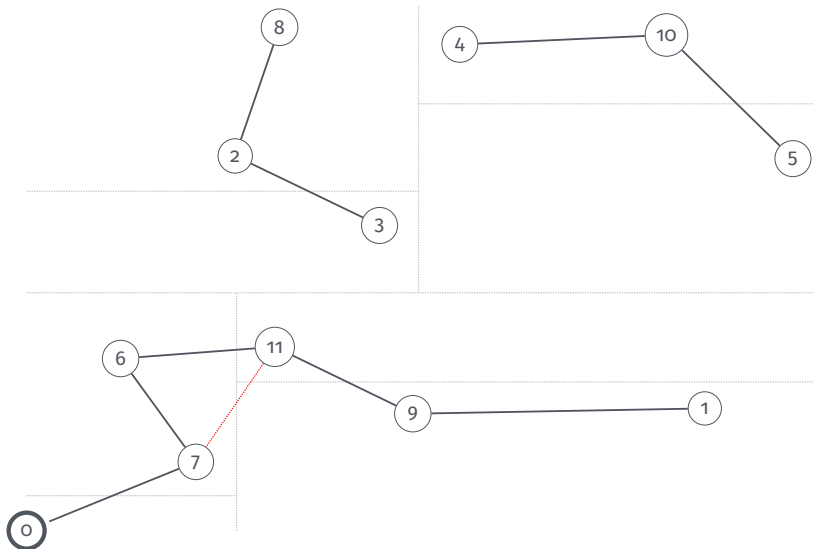




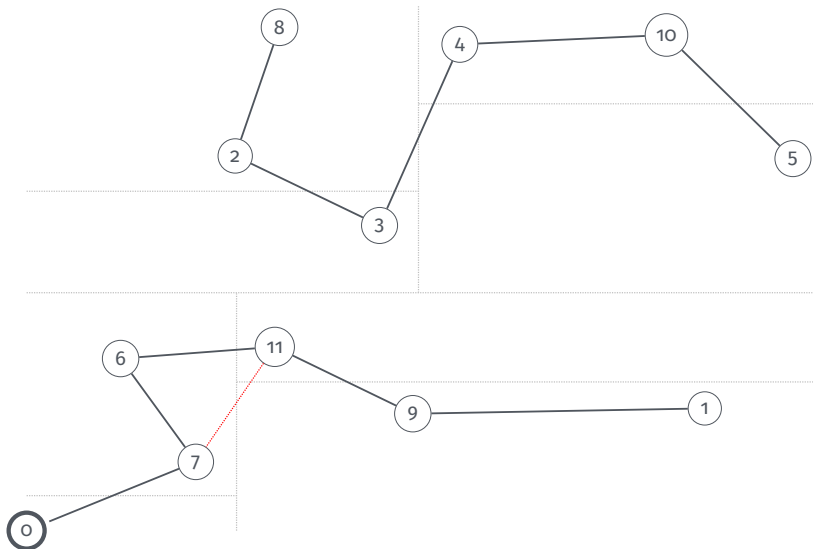
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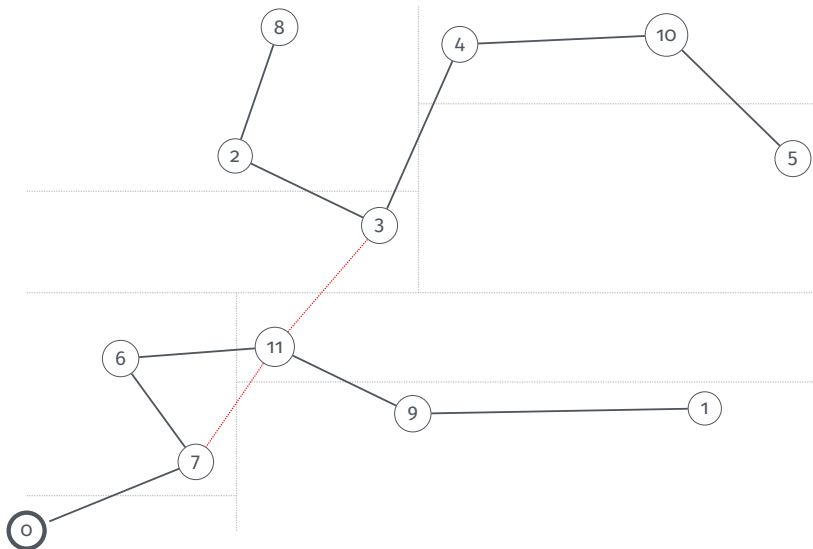
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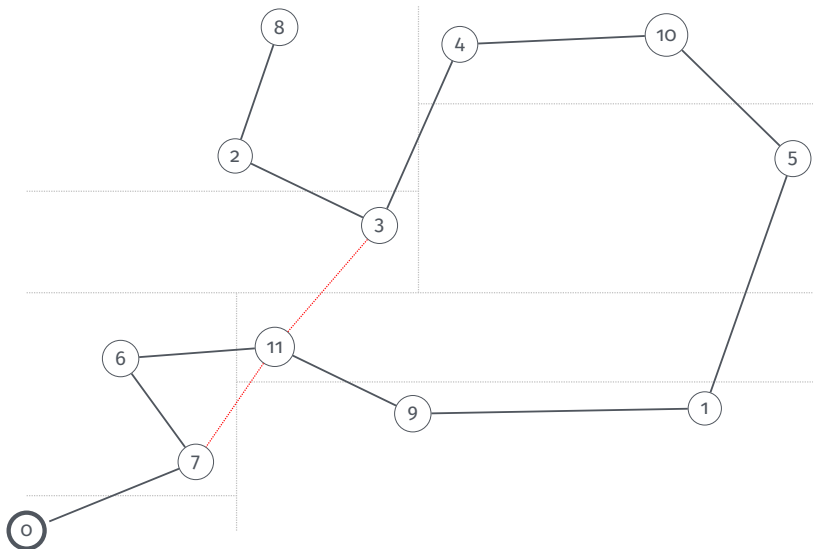
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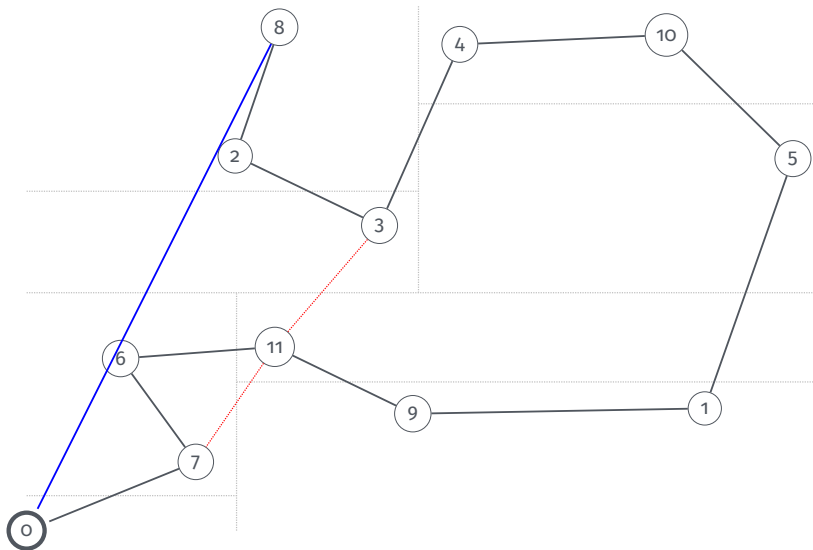
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# EXAMPLE



- vertical and horizontal cuts are arbitrary and may not be optimal
- how to identify whether a magnet has been linked more than one time already?
- how to identify the two nodes that need to be linked so we can close the loop?