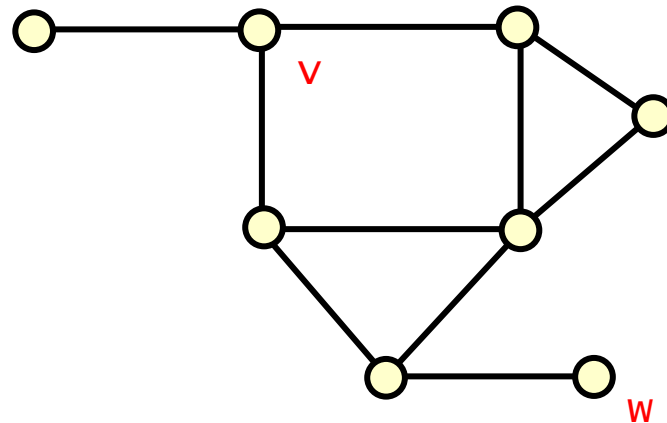
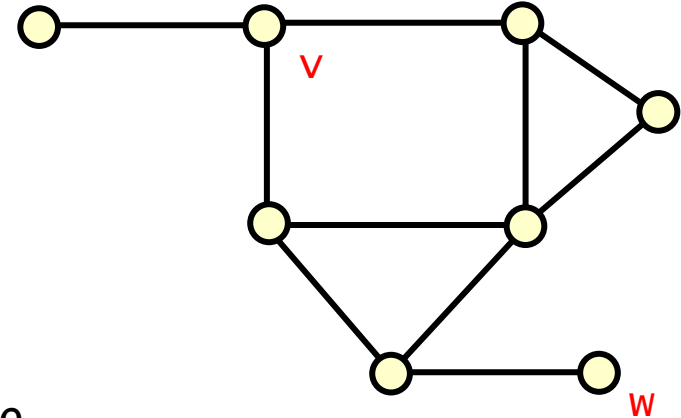


Distance between two vertices – Example

Distance between **v** and **w**

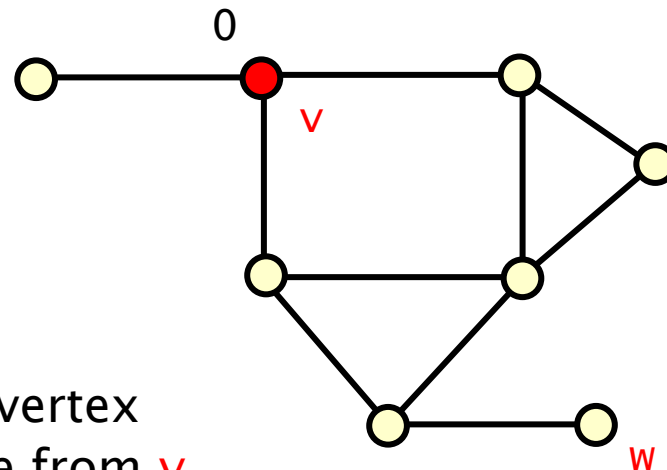
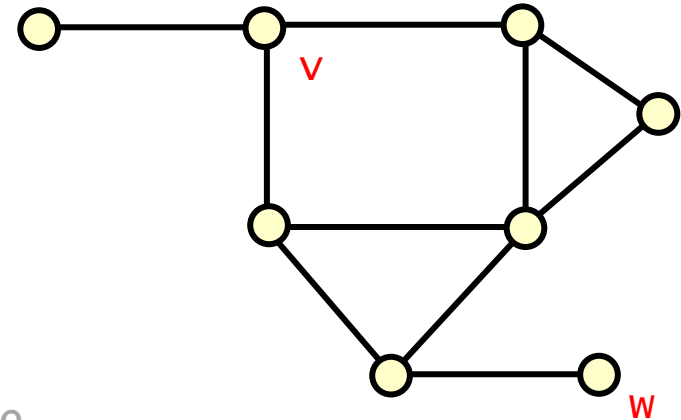
- assign distance to **v** to be 0
- carry out a breadth-first search from **v**
- when visiting a new vertex for first time assign its distance to be **1+** the distance to its predecessor in the BF spanning tree



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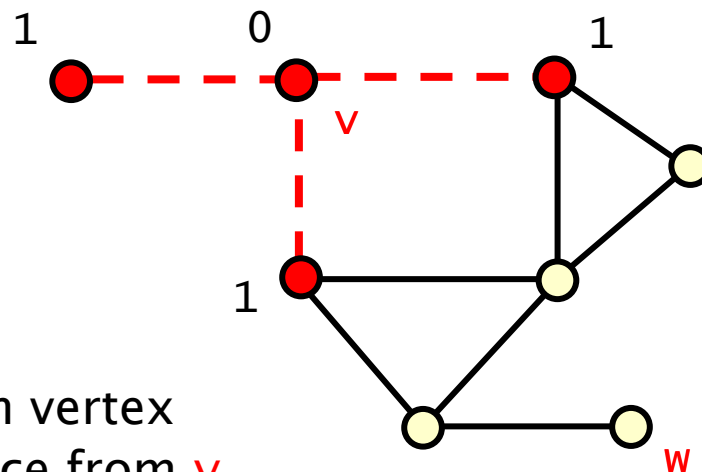
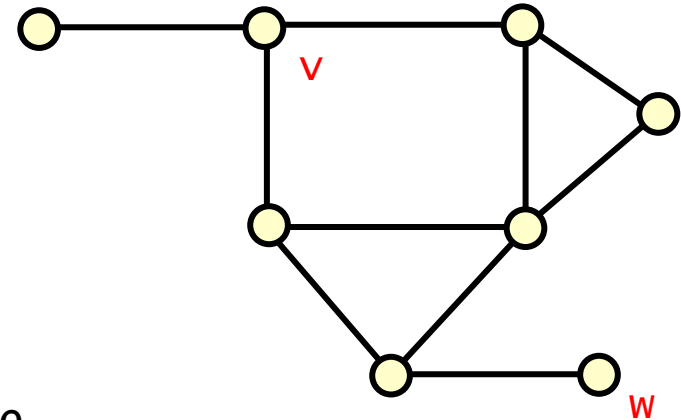


number beside each vertex
indicates the distance from **v**

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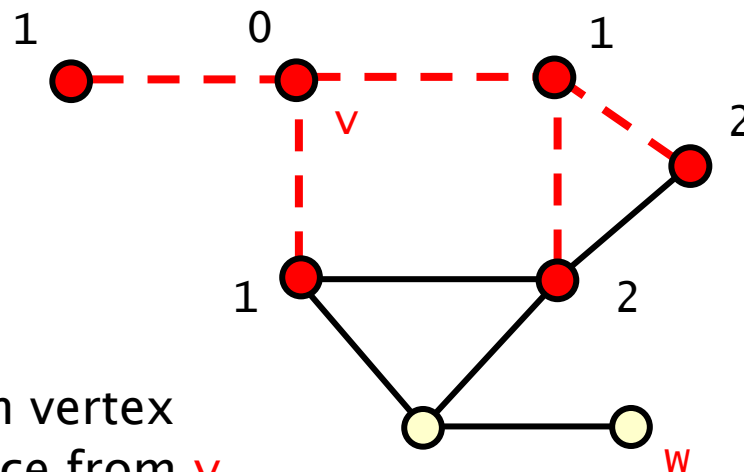
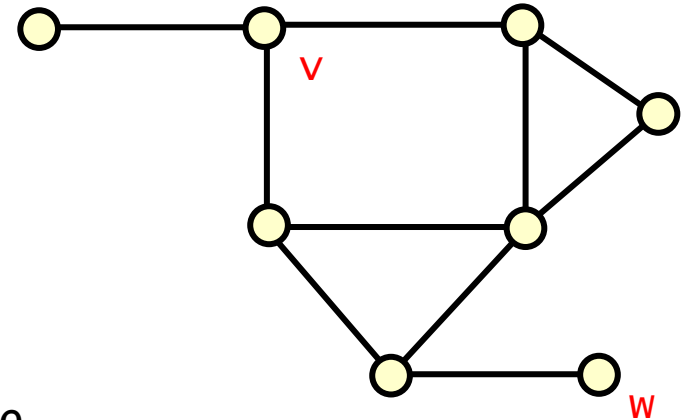


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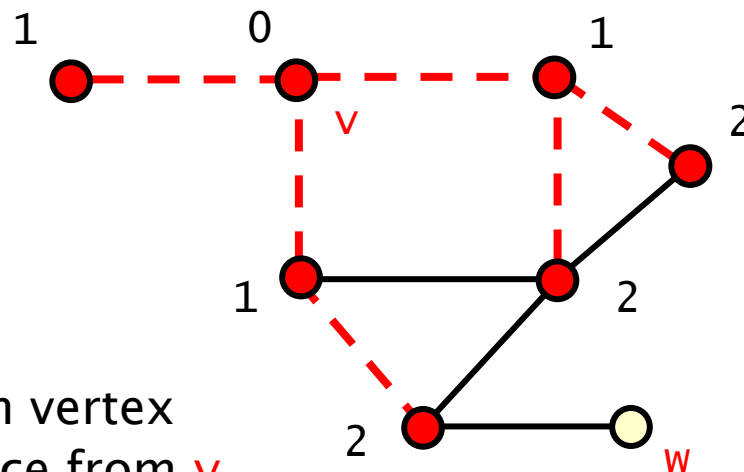
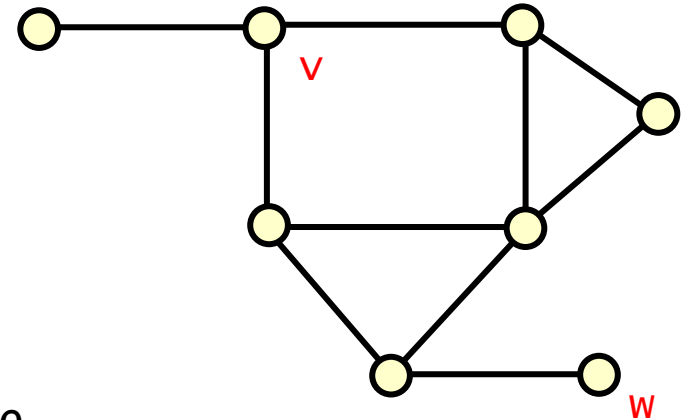


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Distance between two vertices – Example

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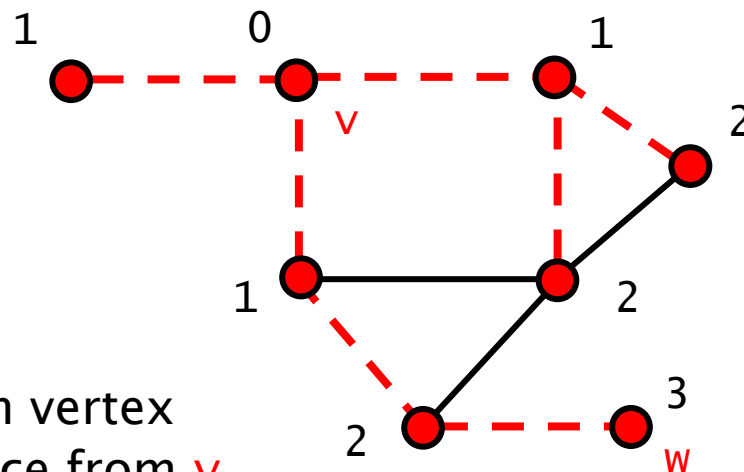
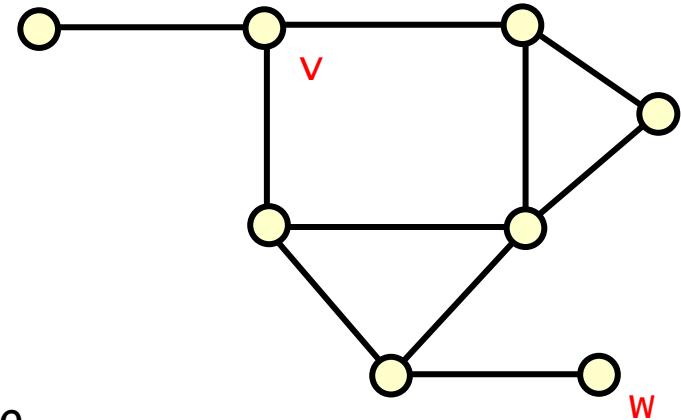


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Distance between two vertices – Example

Distance between **v** and **w**

- assign distance to v to be 0
- carry out a breadth-first search from v
- when visiting a new vertex for first time assign its distance to be $1 +$ the distance to its predecessor in the BF spanning tree

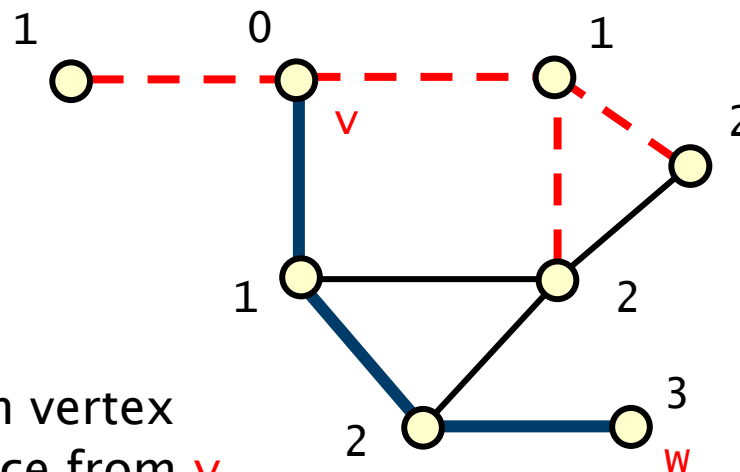
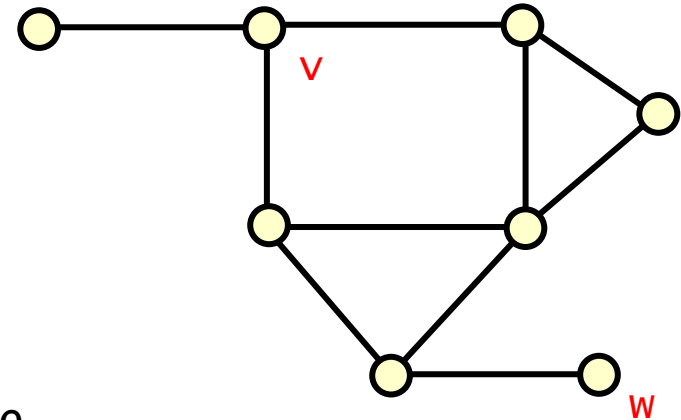


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 shortest path