

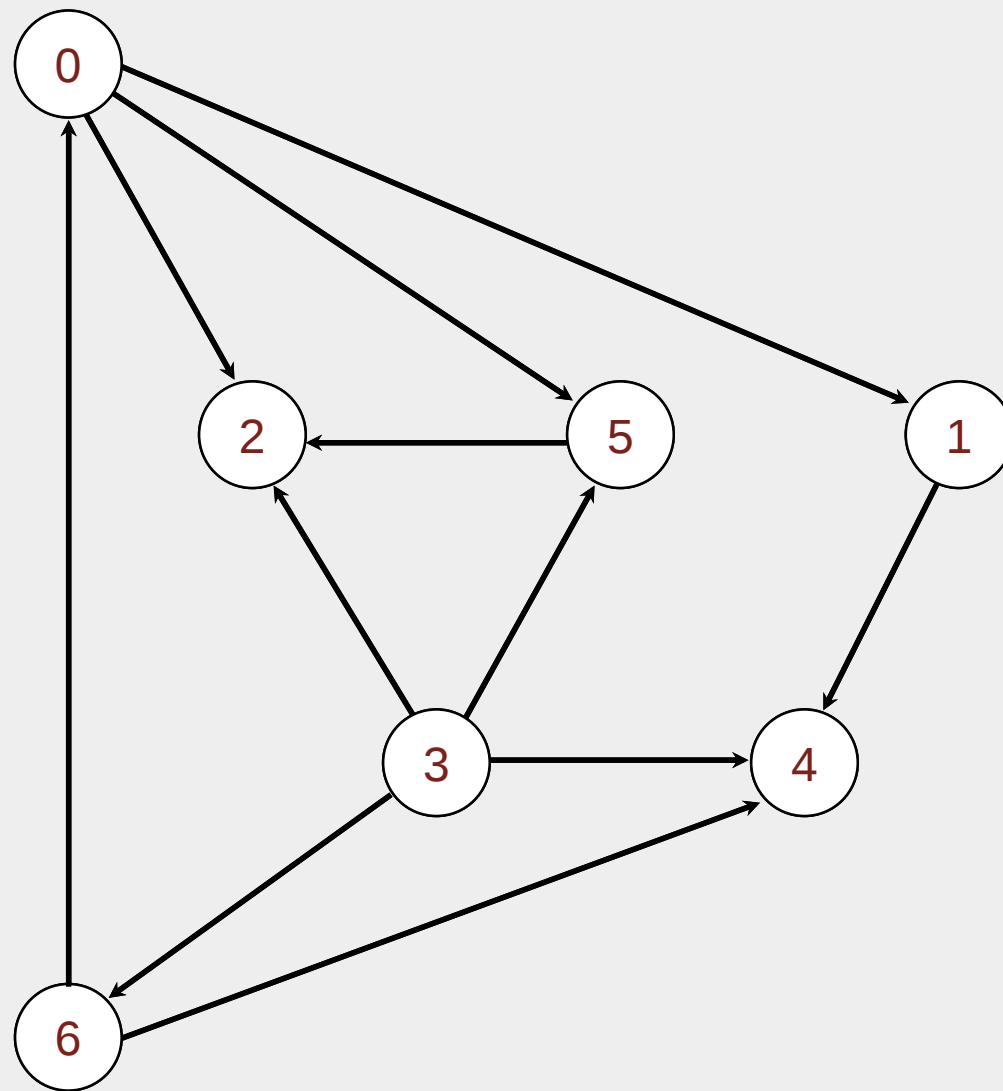
4.2 Topological Sort demo



[click to begin demo](#)

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



0 → 5

0 → 2

0 → 1

3 → 6

3 → 5

3 → 4

5 → 4

6 → 4

6 → 0

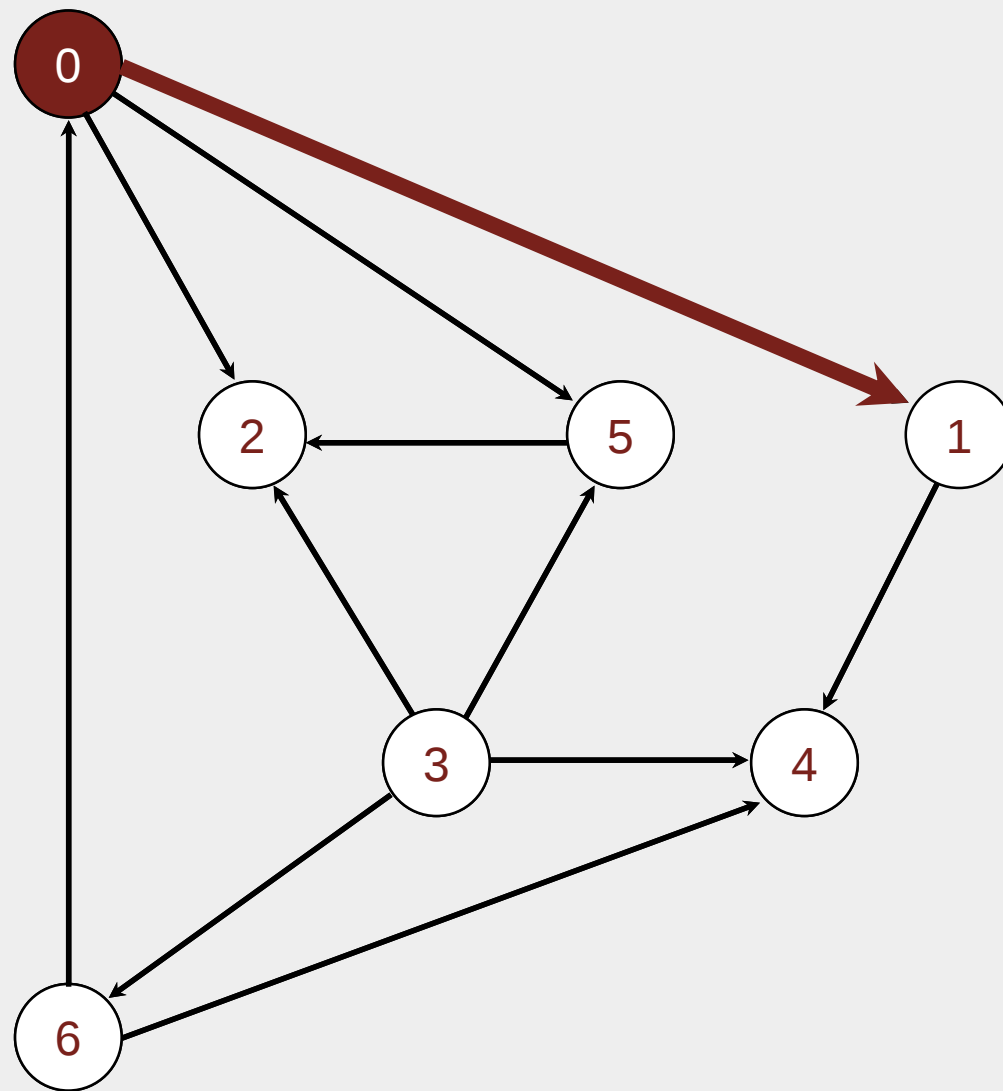
3 → 2

1 → 4

a directed acyclic graph

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.

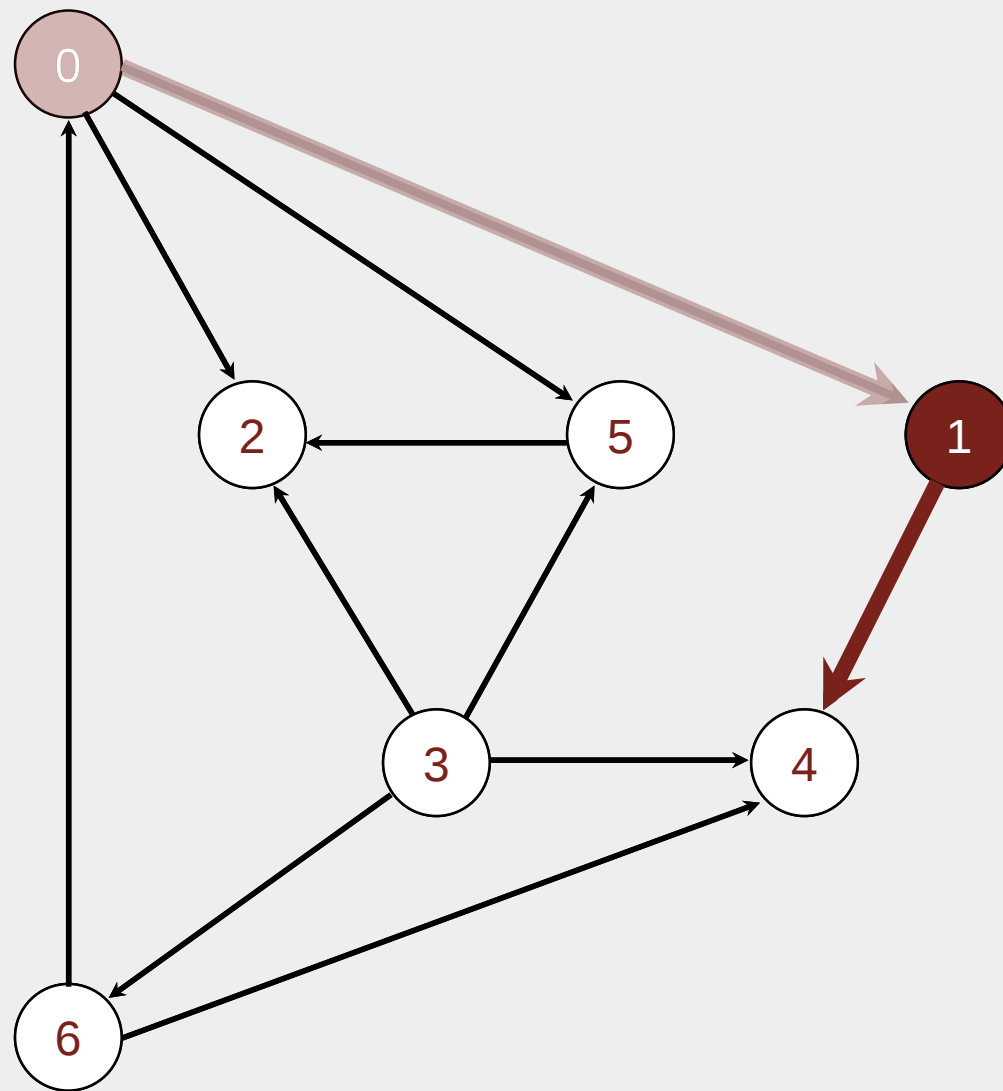


postorder

visit 0

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.

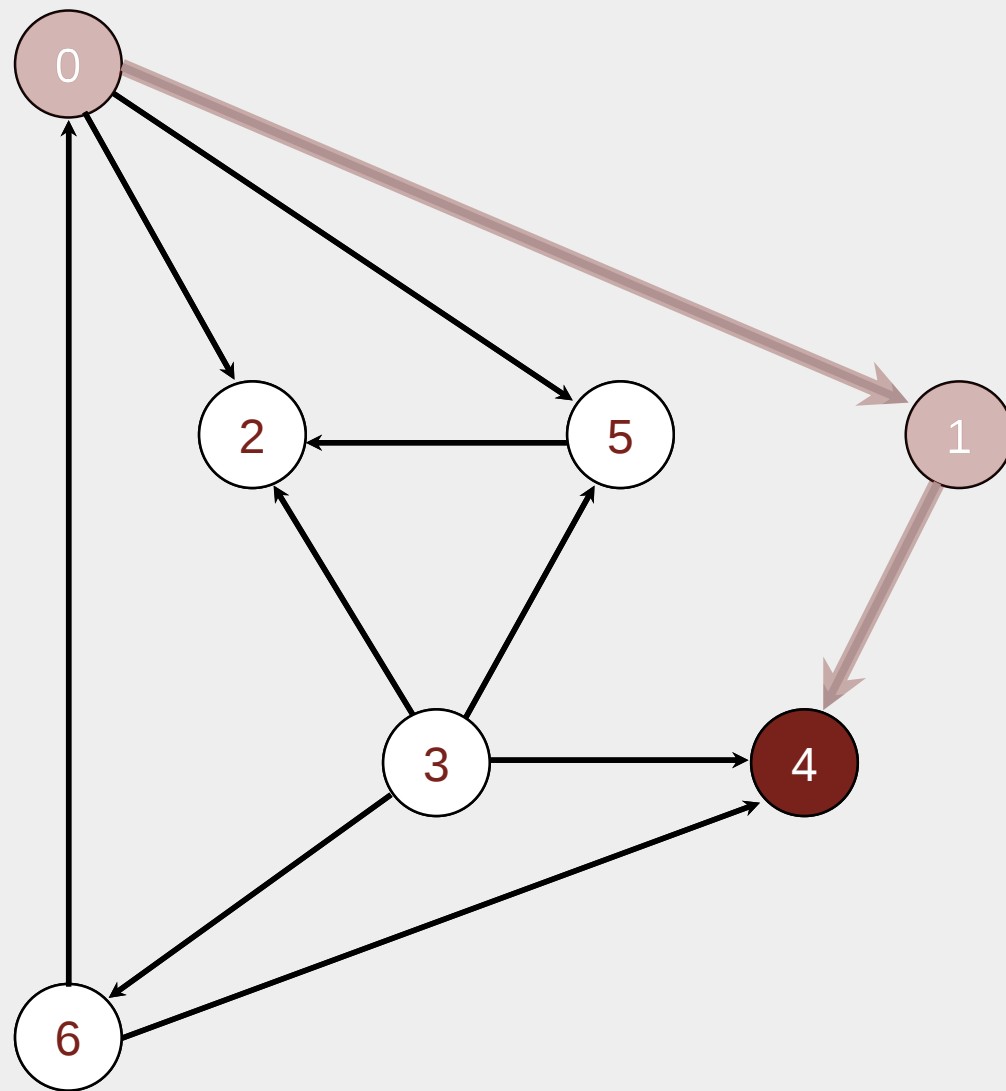


postorder

visit 1

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.

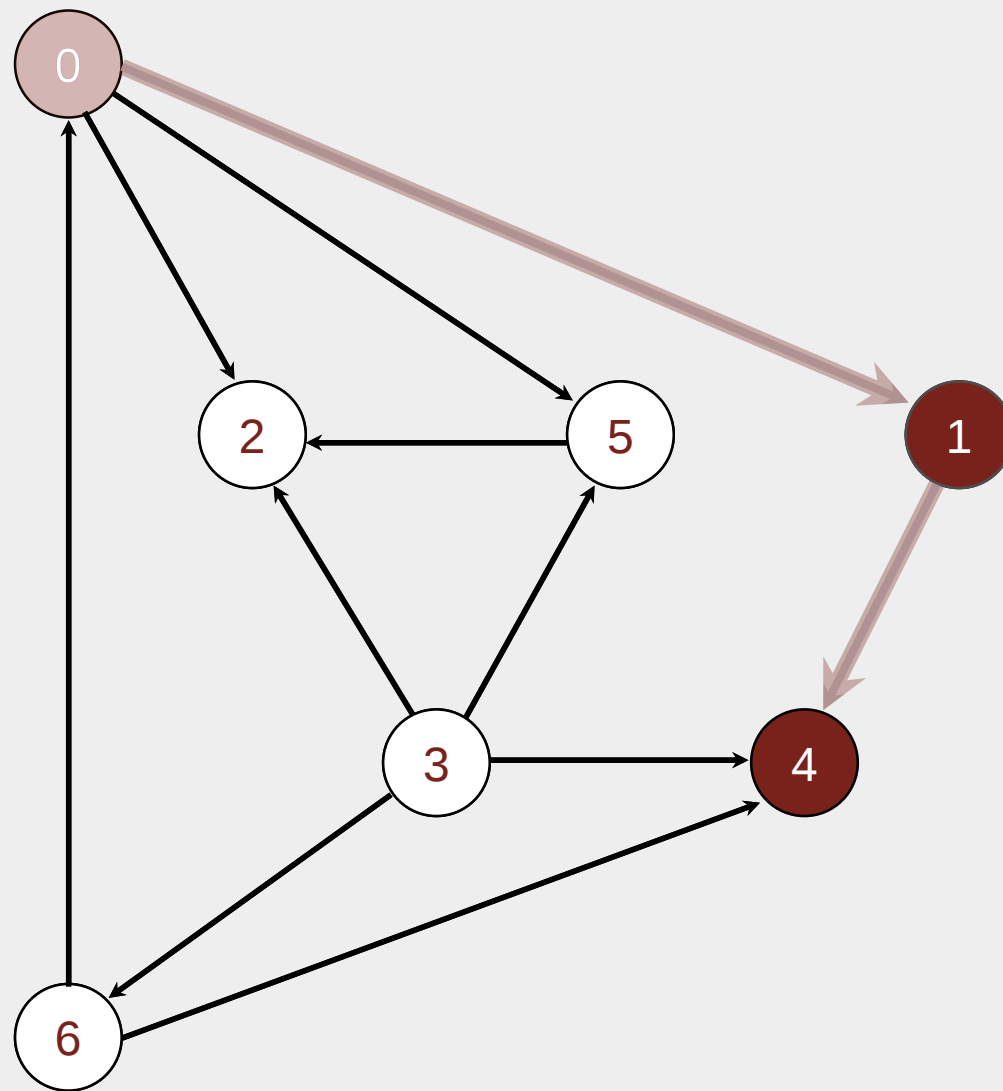


postorder

visit 4

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



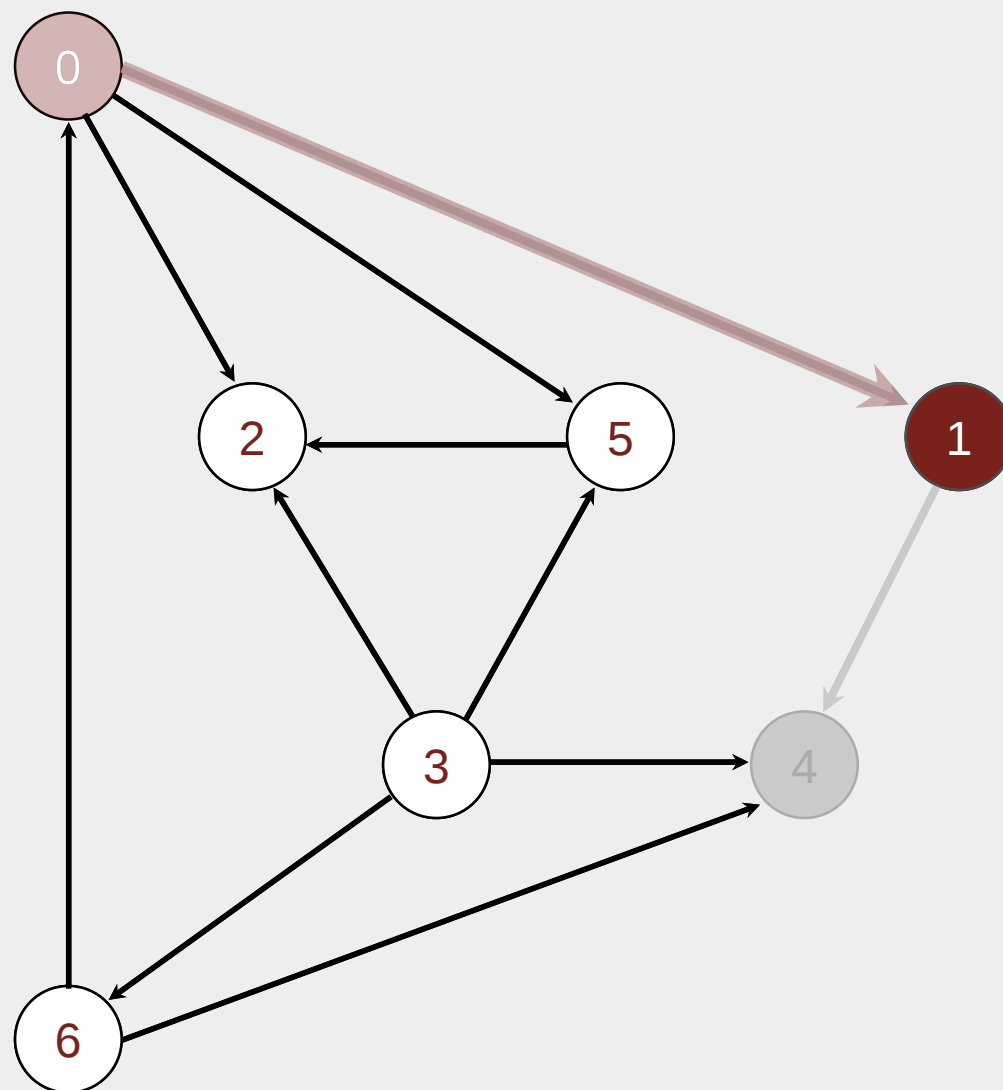
postorder

4

4 done

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



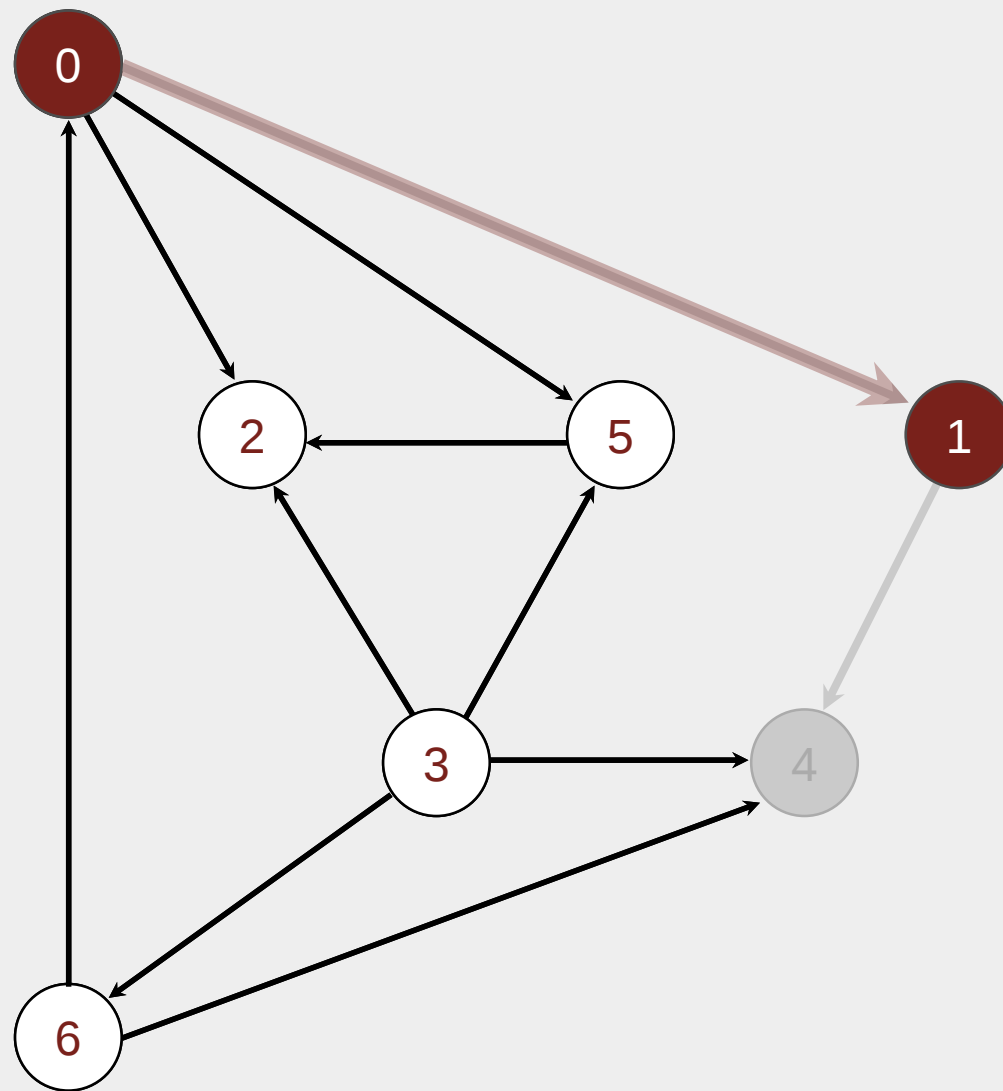
postorder

4

visit 1

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



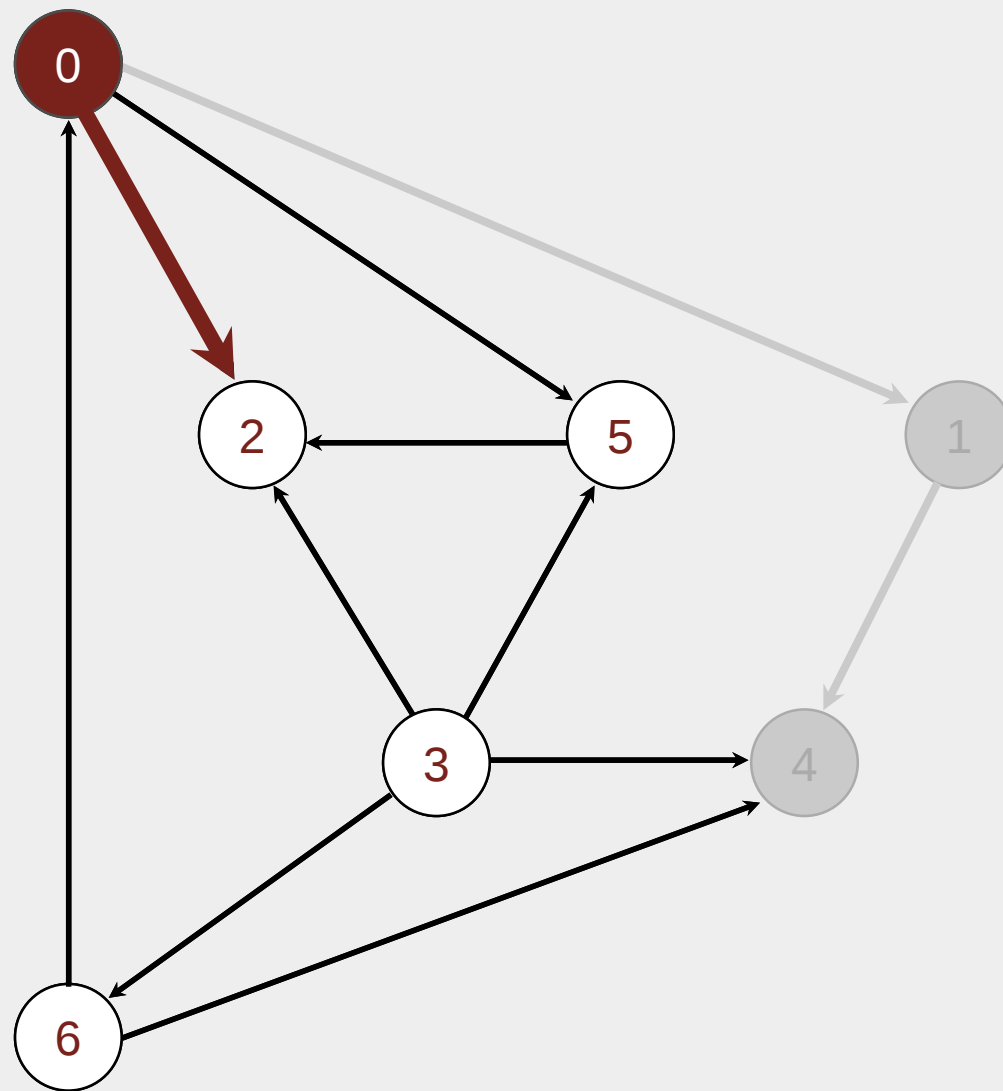
postorder

4 1

1 done

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



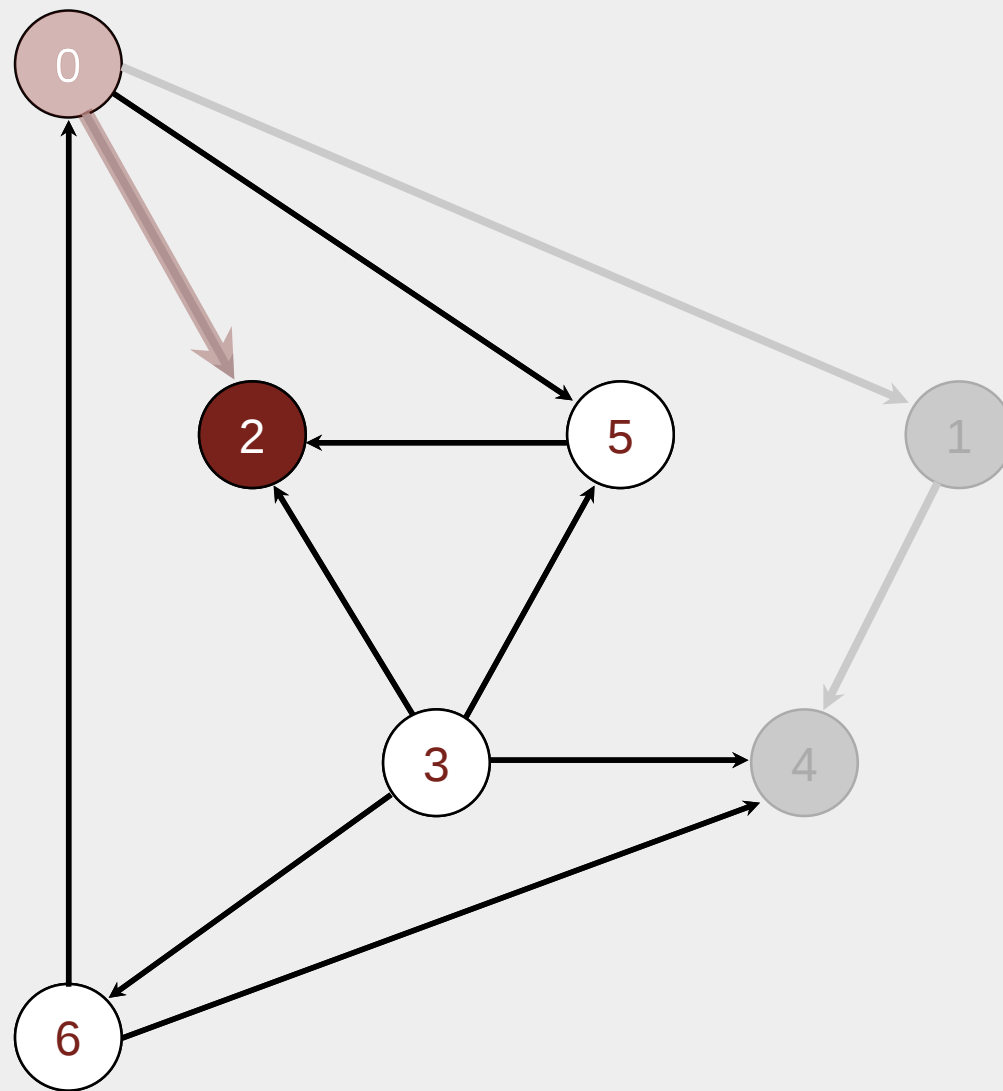
postorder

4 1

visit 0

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



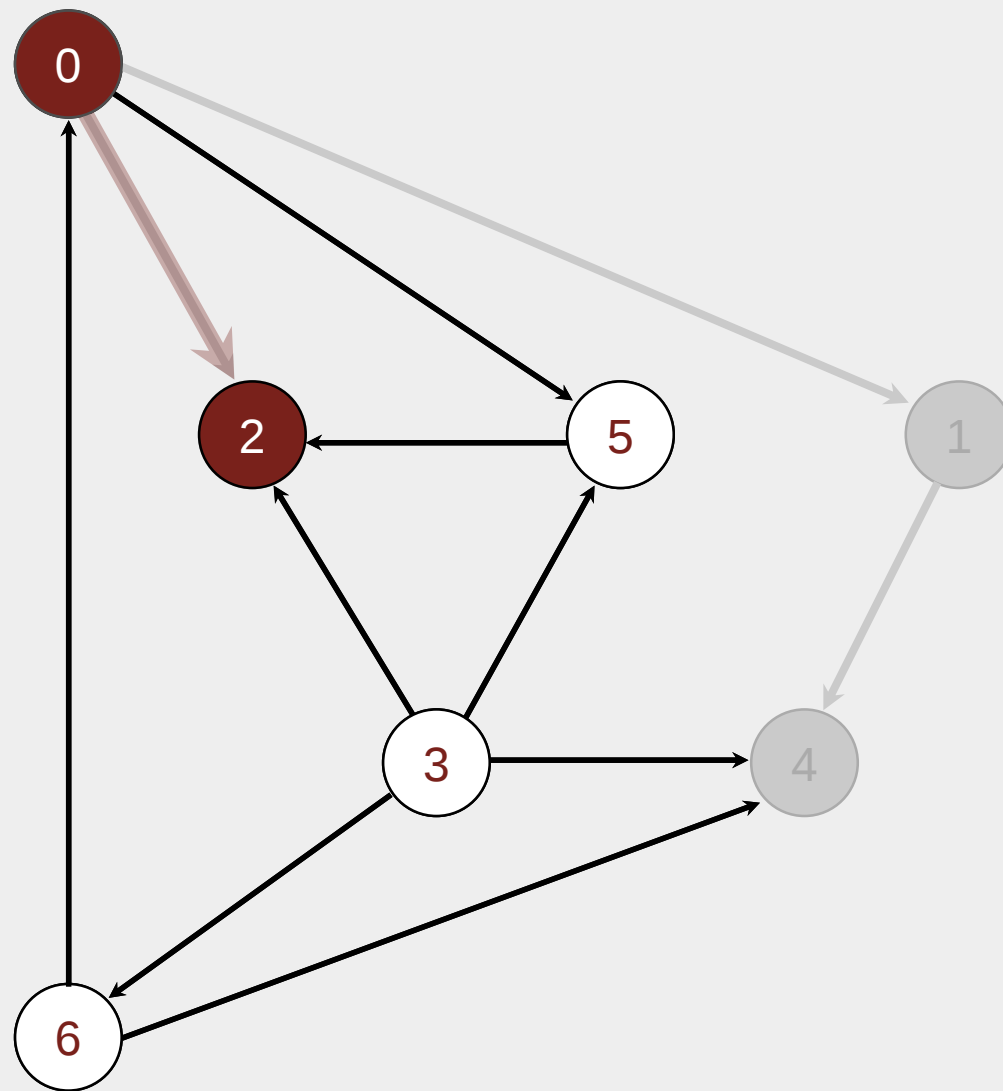
postorder

4 1

visit 2

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



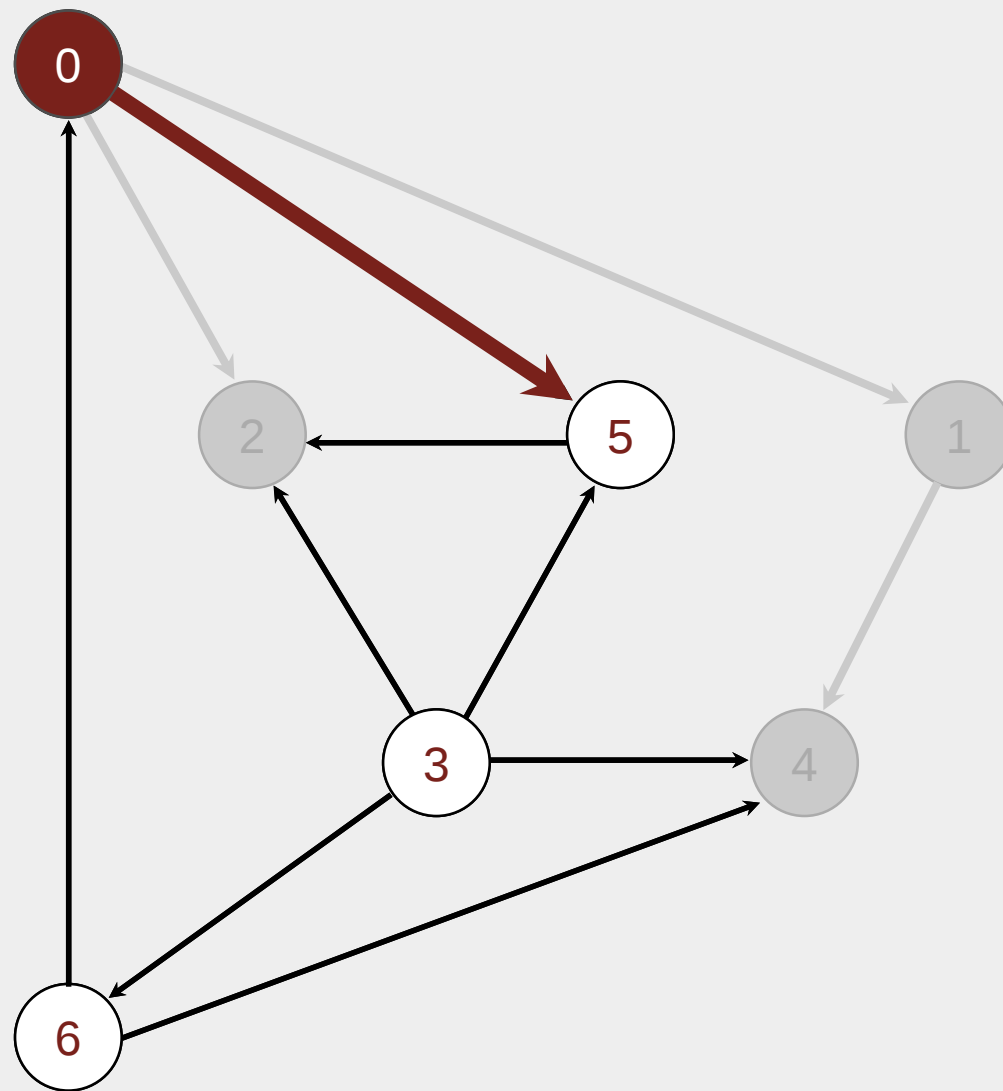
postorder

4 1 2

2 done

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



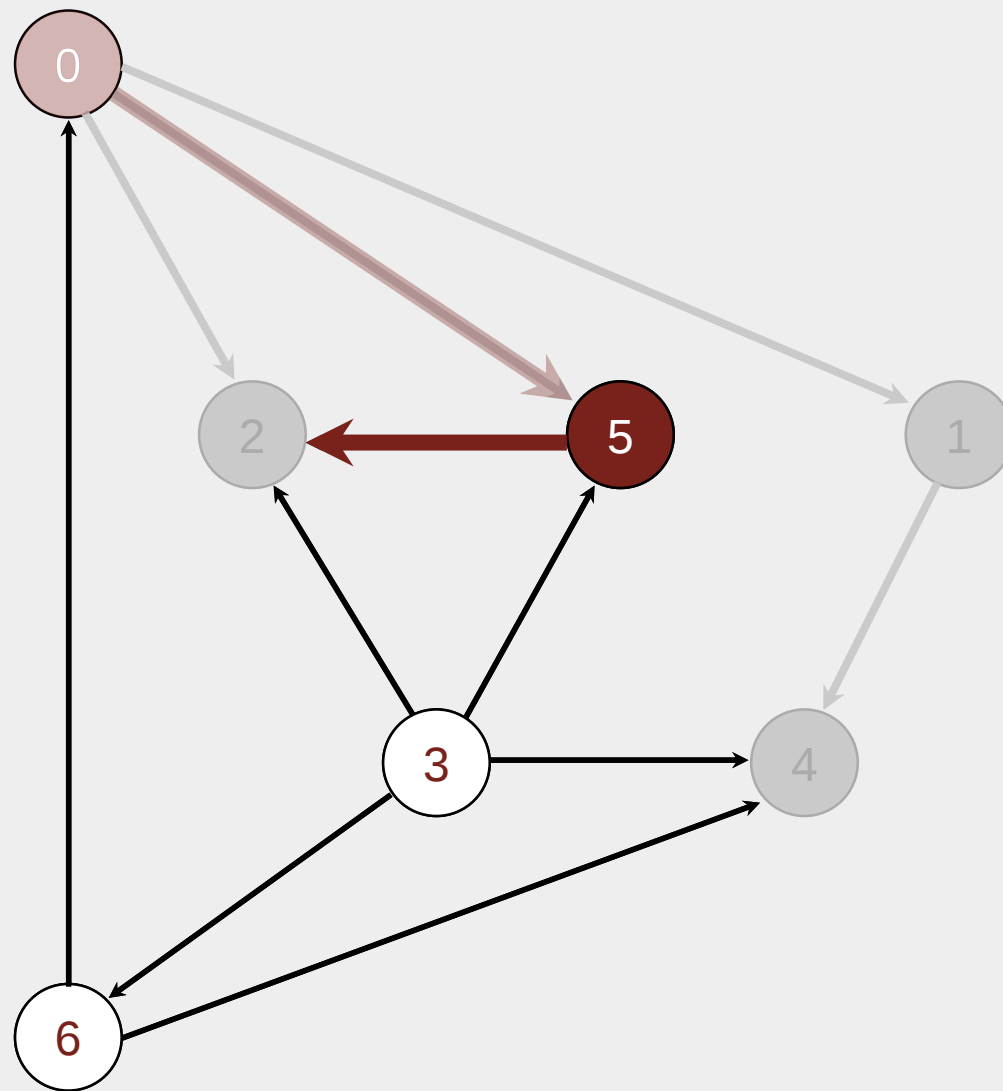
postorder

4 1 2

visit 0

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



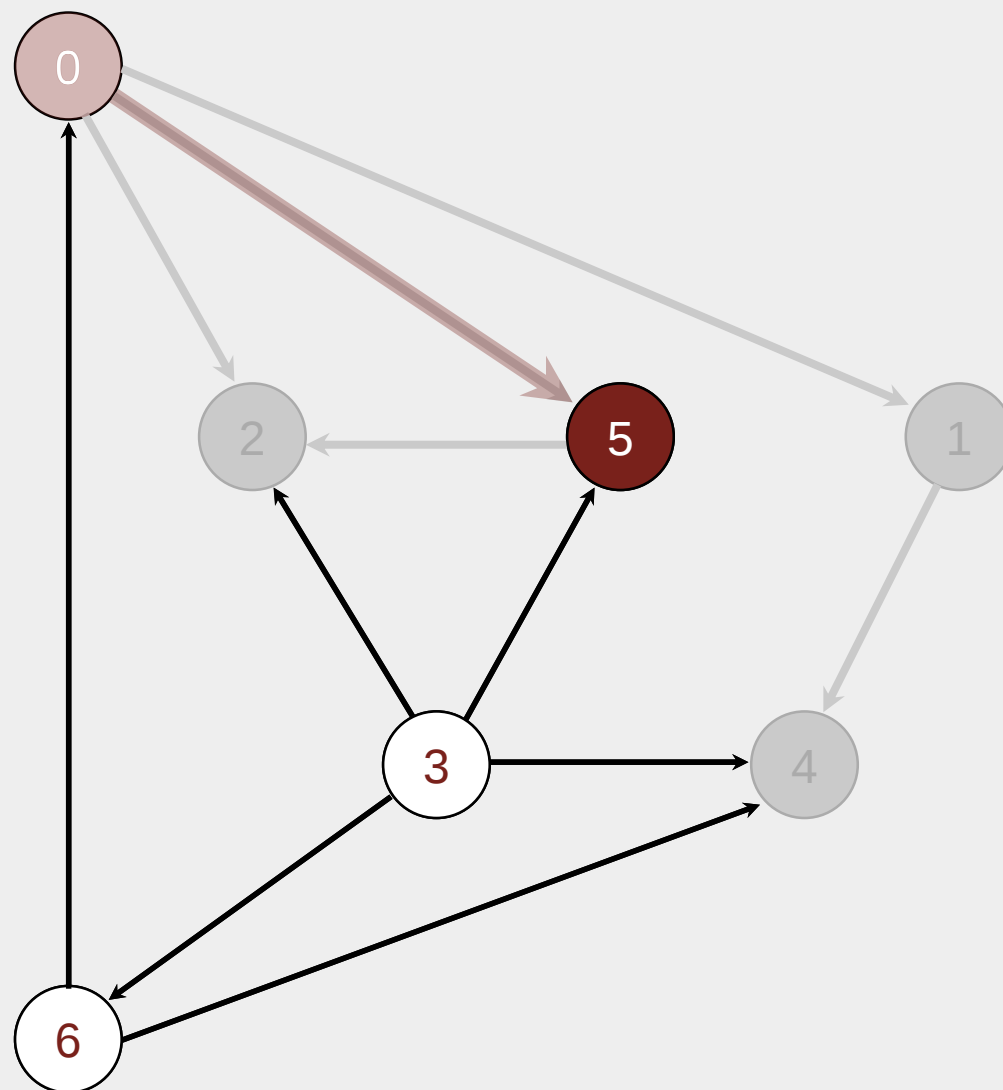
postorder

4 1 2

visit 5

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



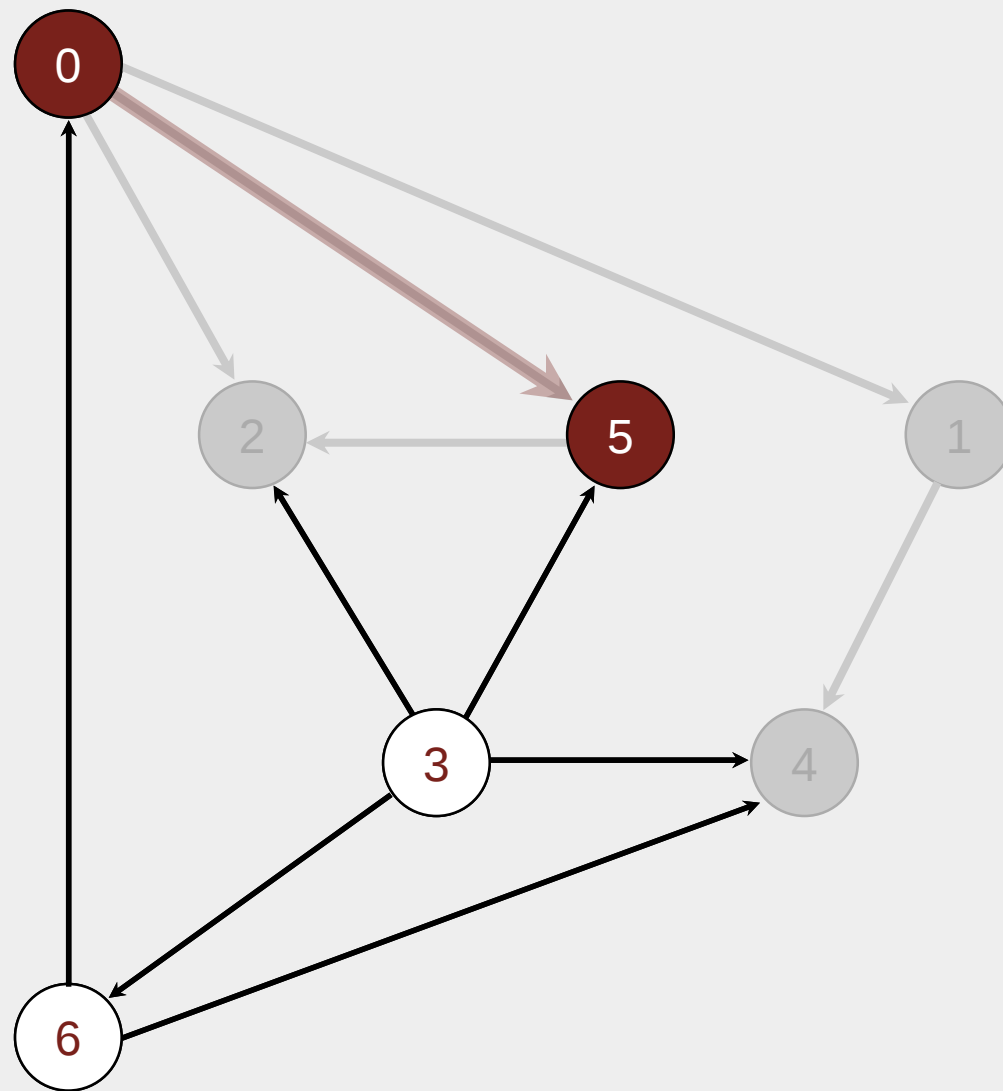
postorder

4 1 2

visit 5

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



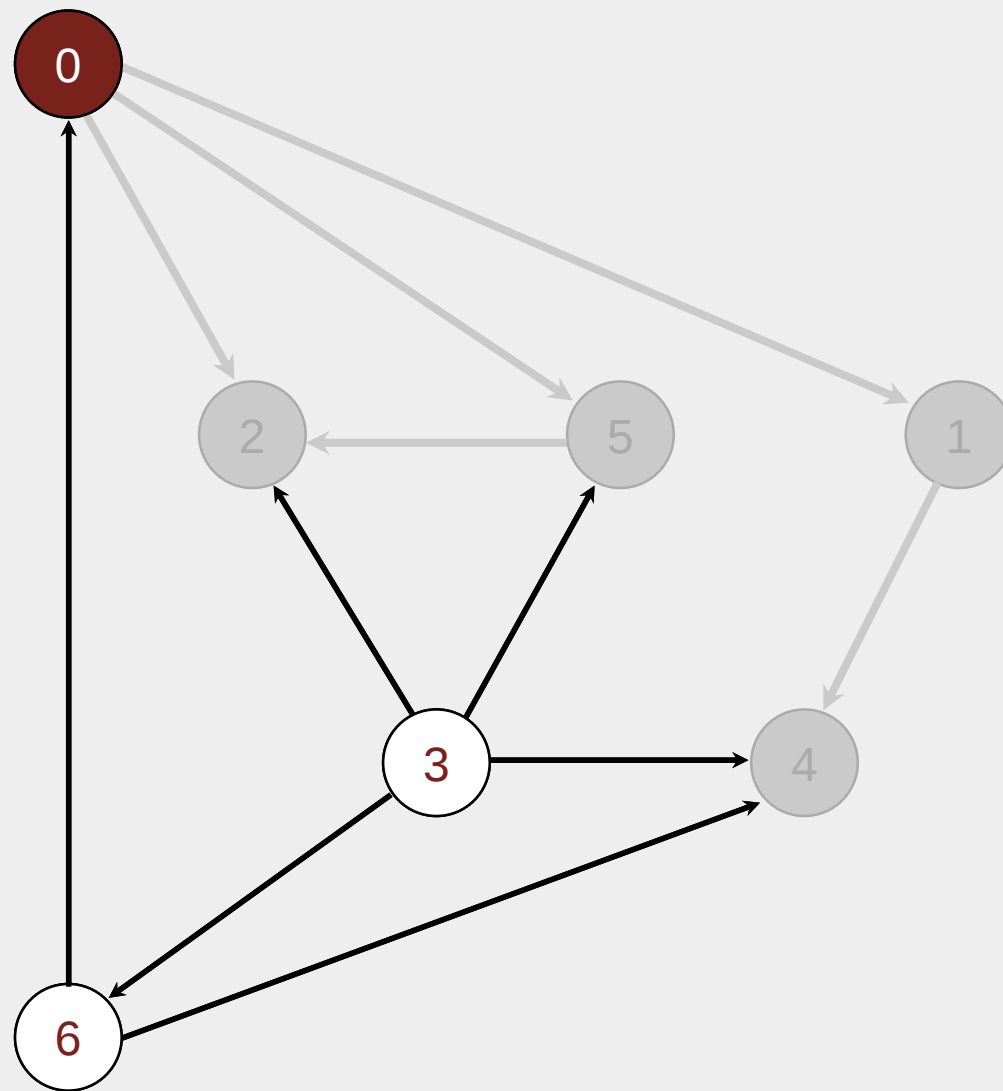
postorder

4 1 2 5

5 done

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



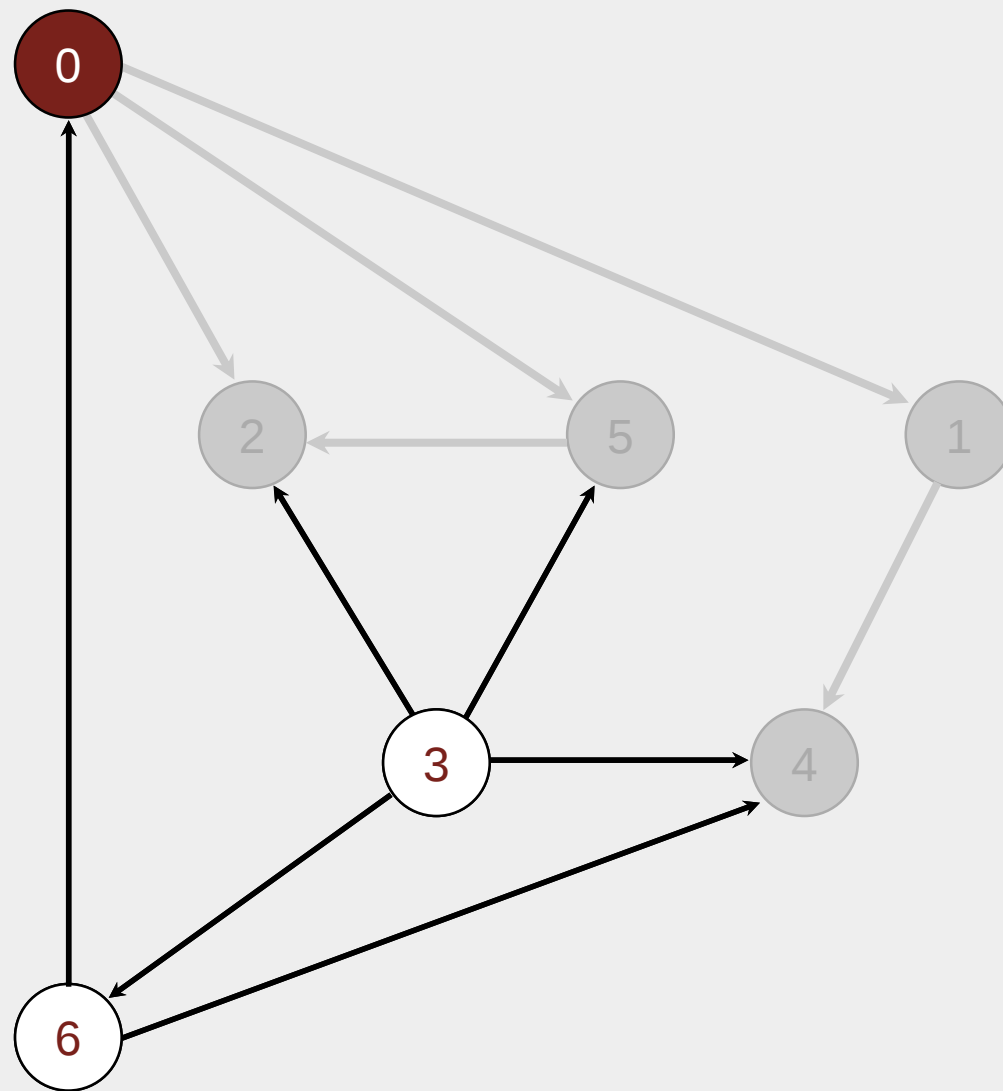
postorder

4 1 2 5

visit 0

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



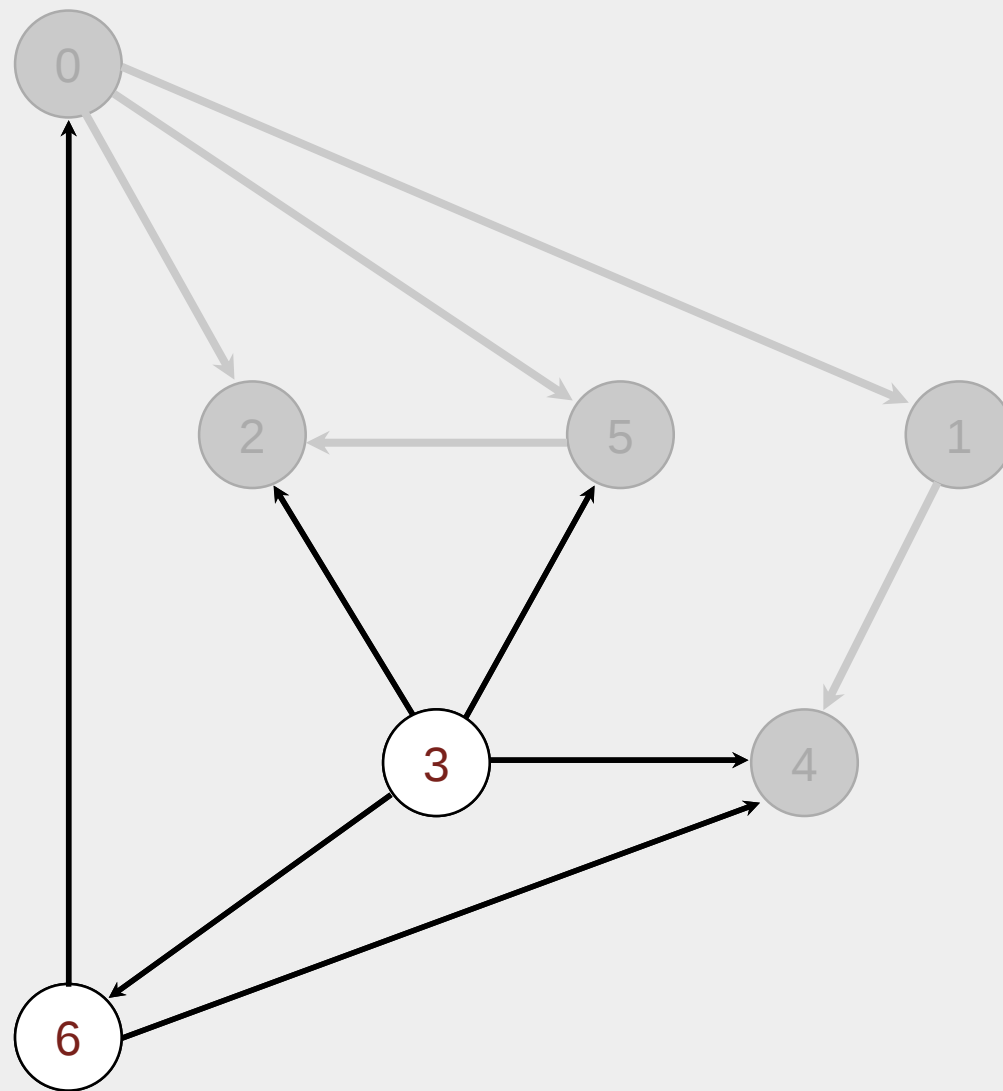
postorder

4 1 2 5 0

0 done

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



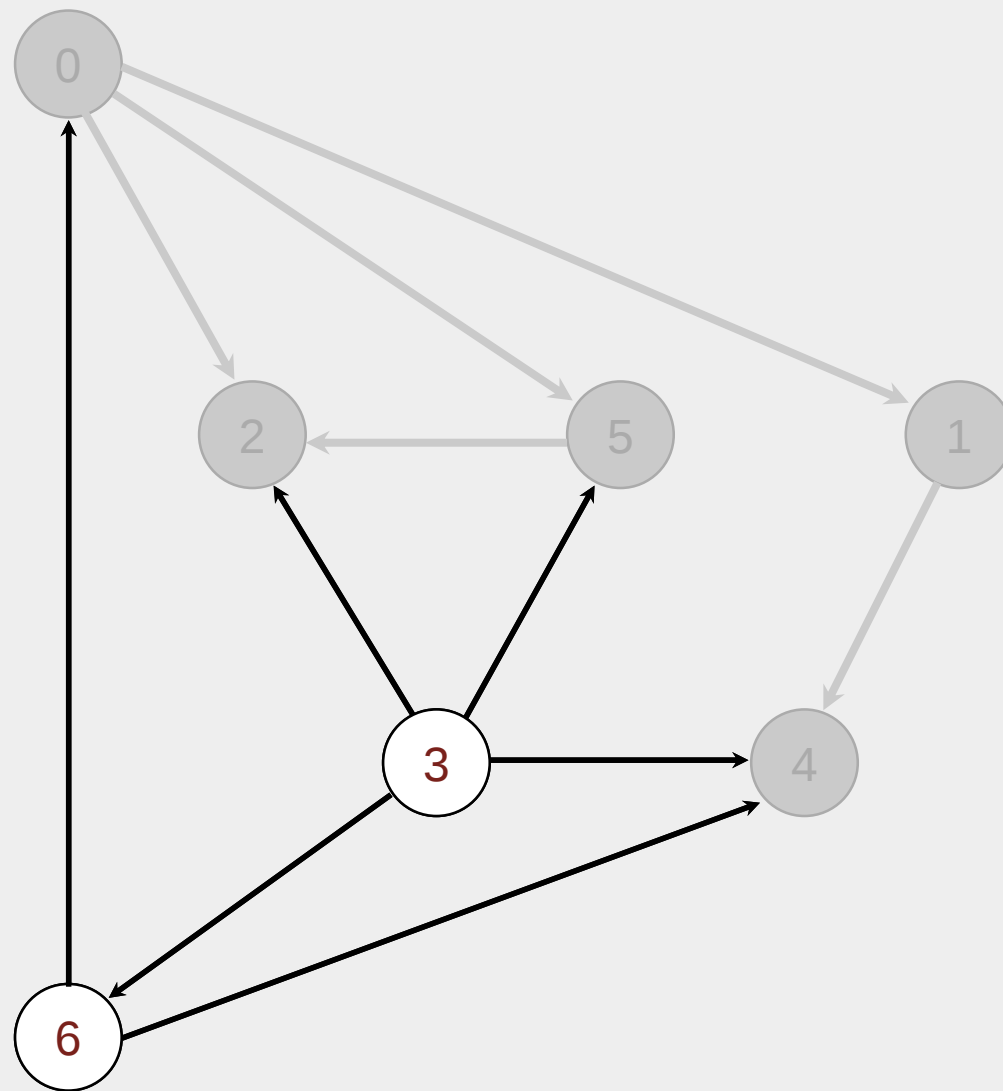
postorder

4 1 2 5 0

check 1

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



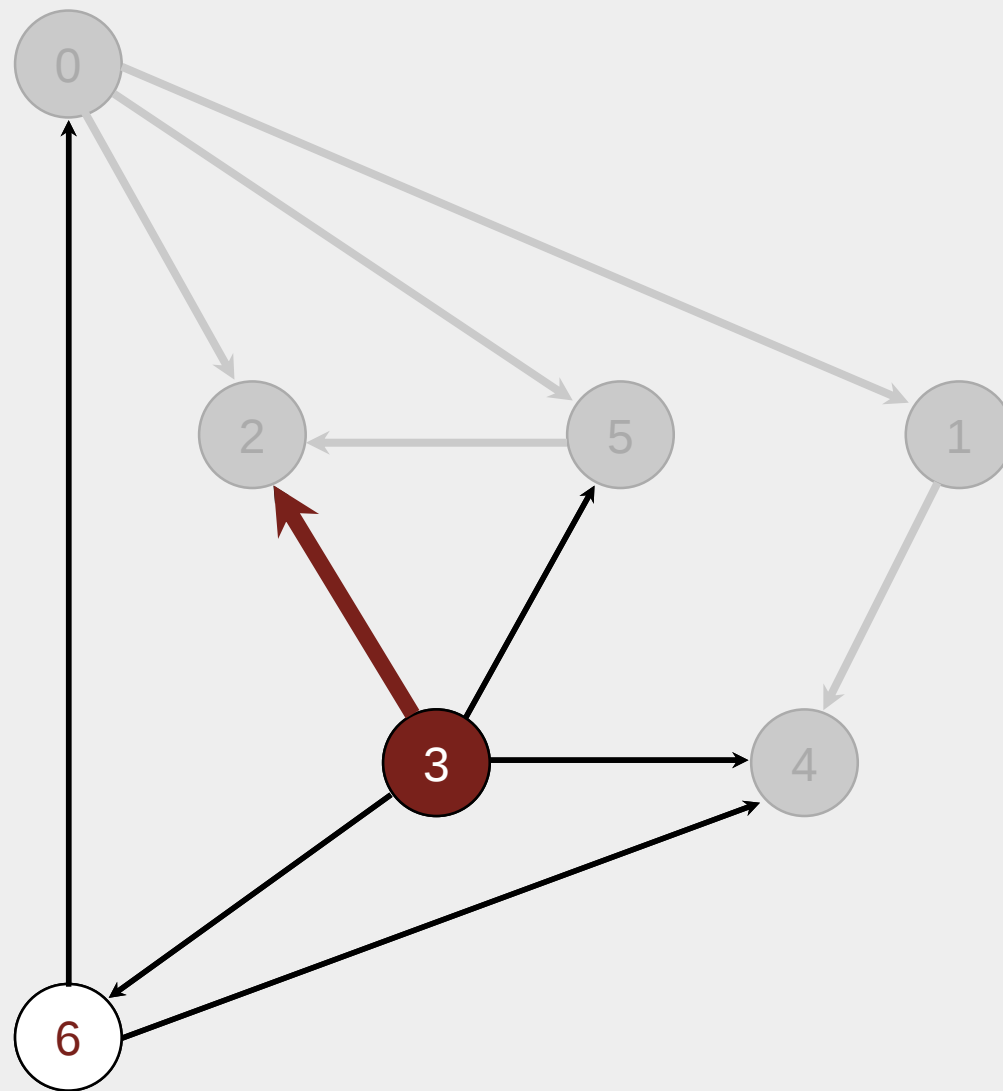
postorder

4 1 2 5 0

check 2

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



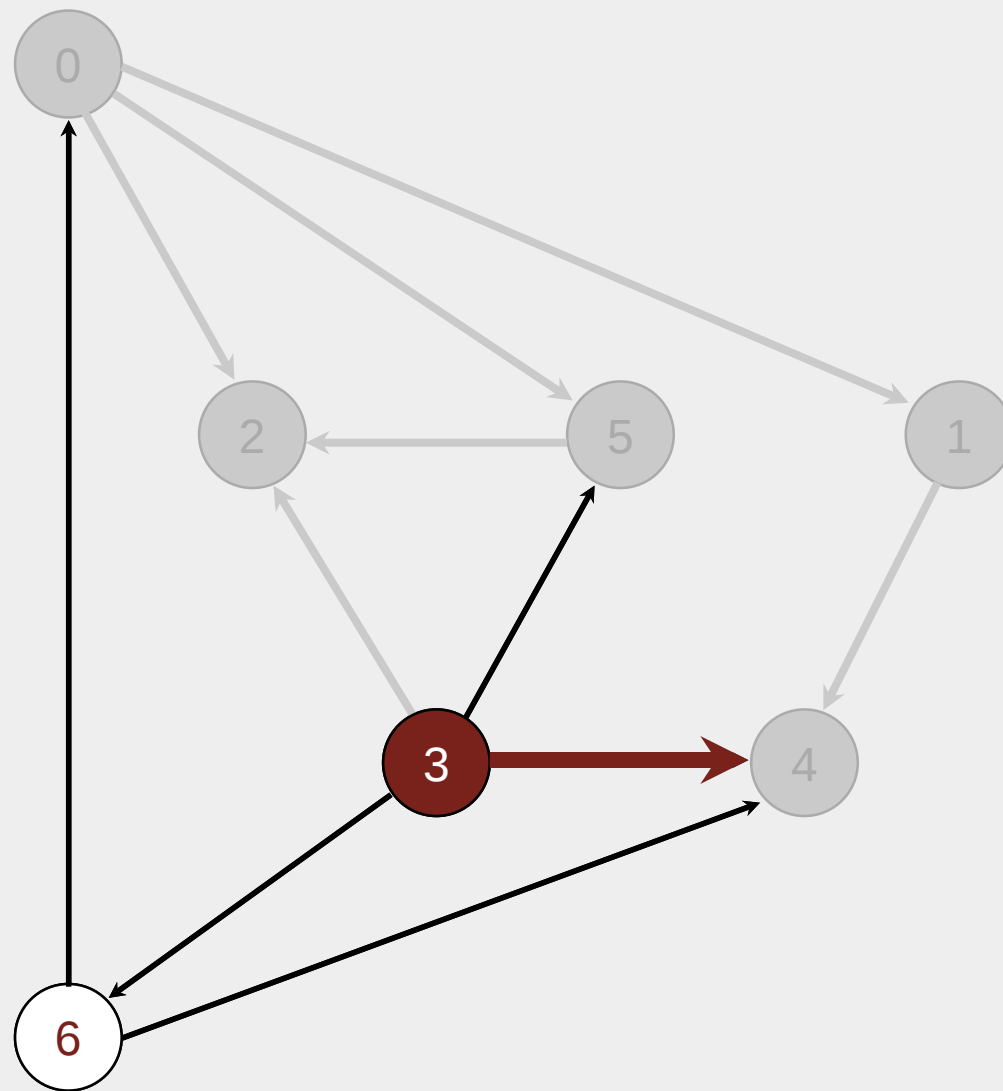
postorder

4 1 2 5 0

visit 3

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



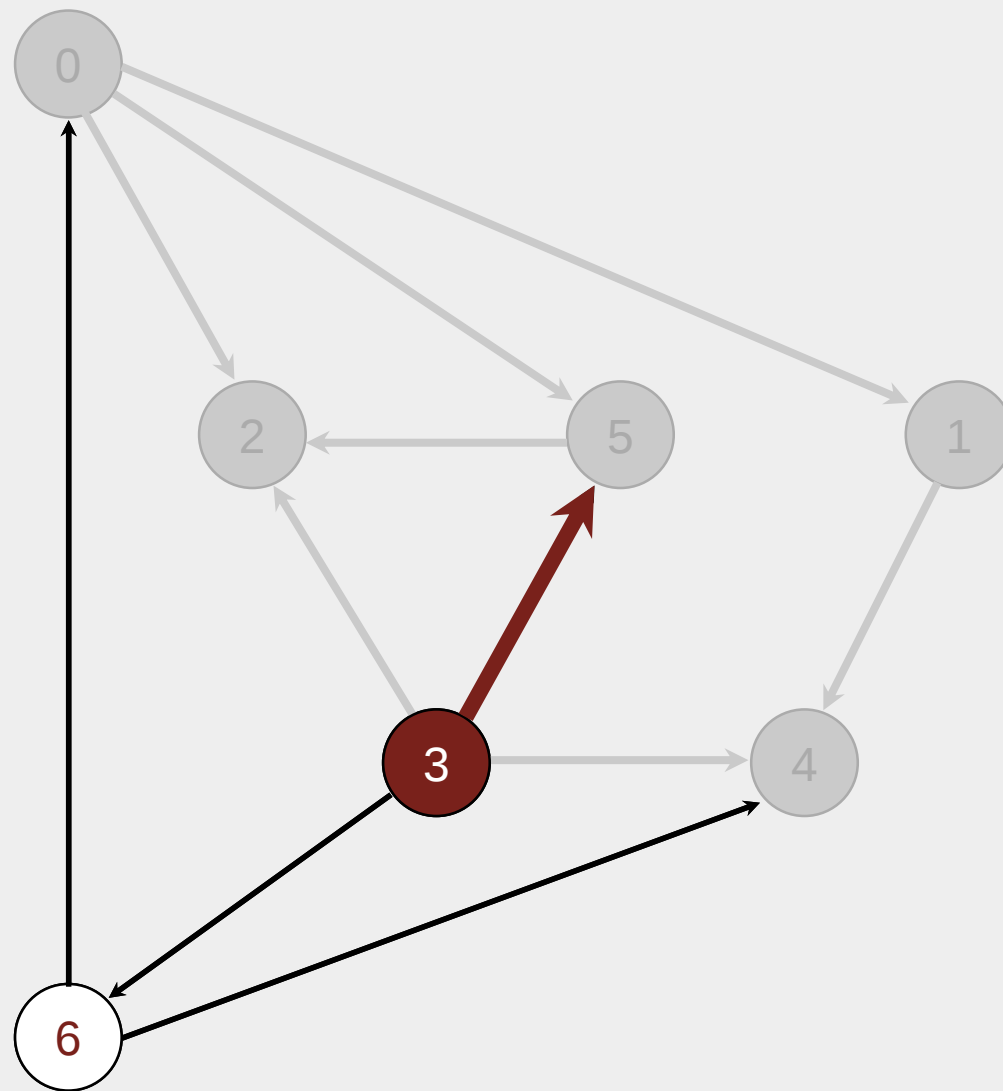
postorder

4 1 2 5 0

visit 3

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



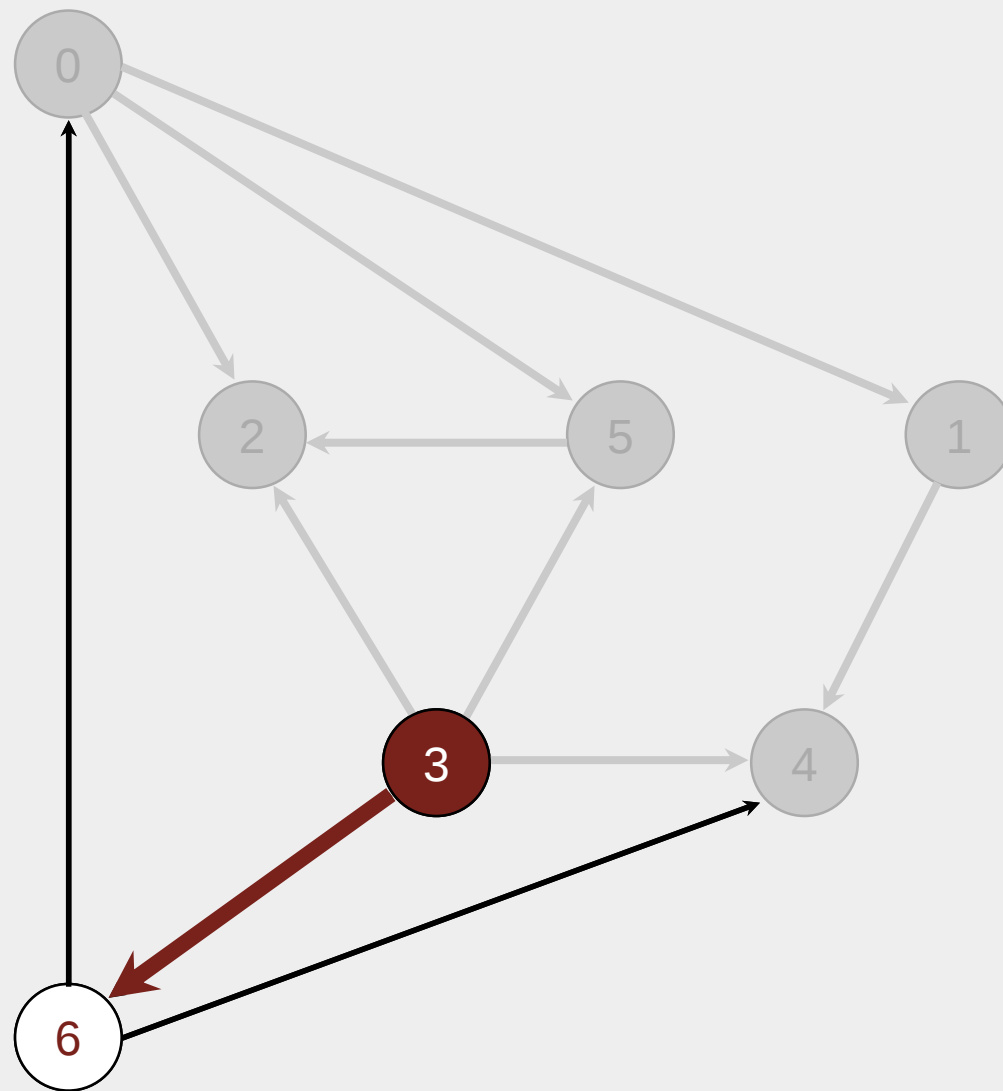
postorder

4 1 2 5 0

visit 3

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



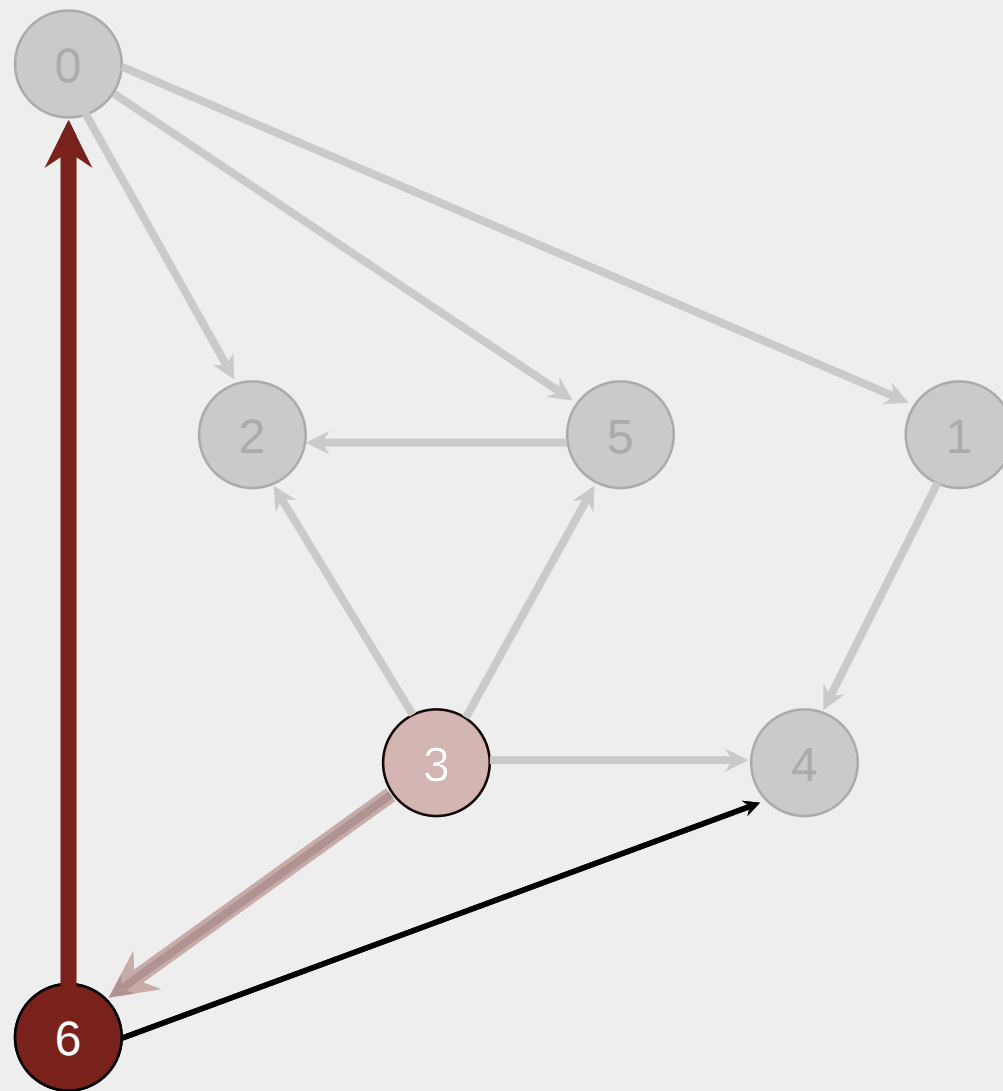
postorder

4 1 2 5 0

visit 3

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



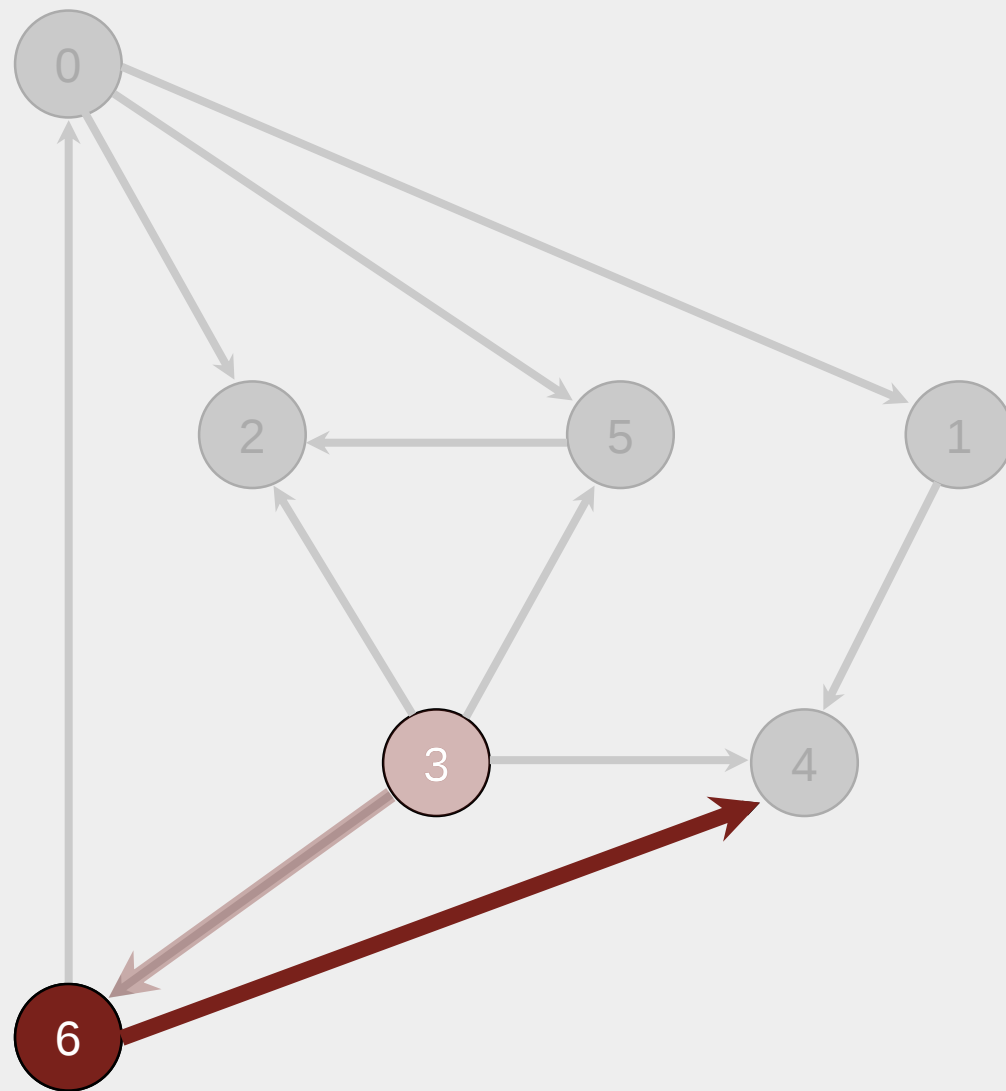
postorder

4 1 2 5 0

visit 6

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



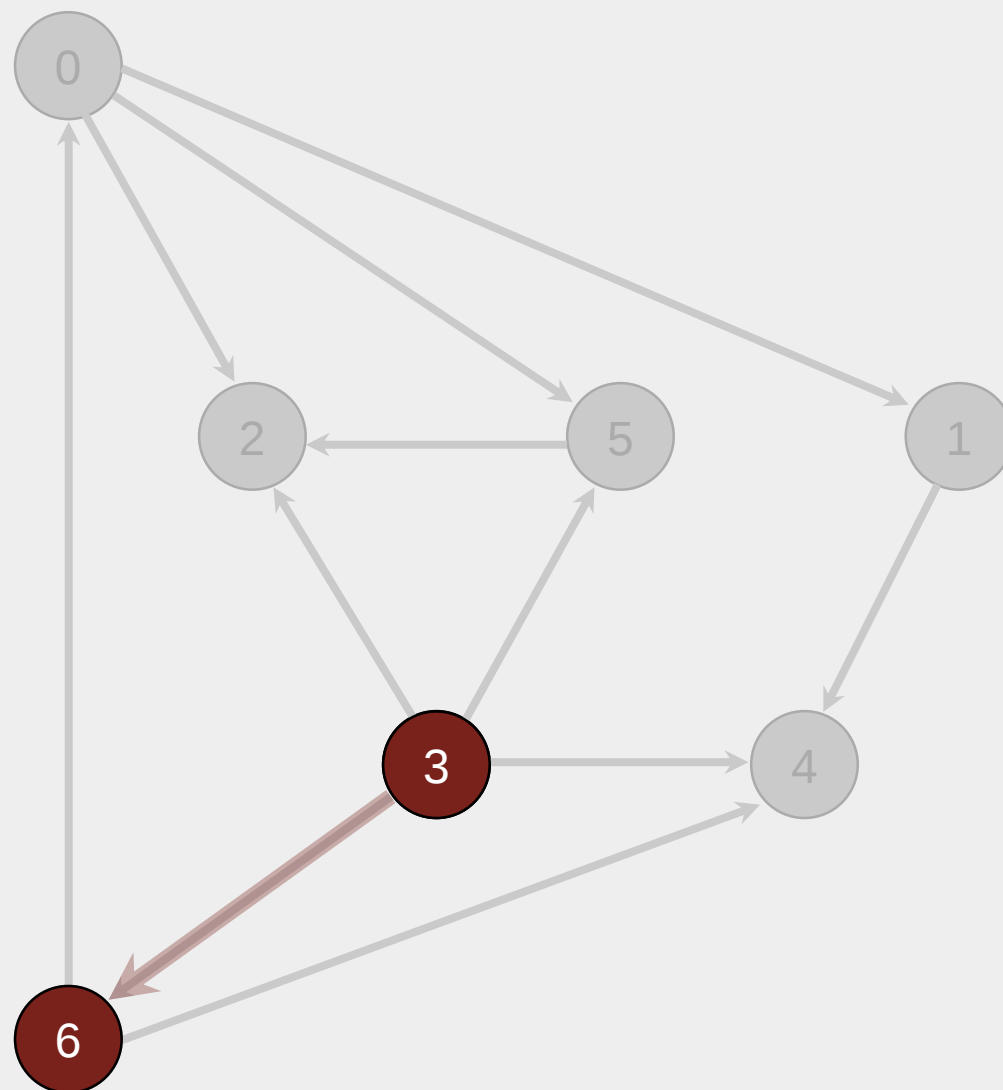
postorder

4 1 2 5 0

visit 6

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



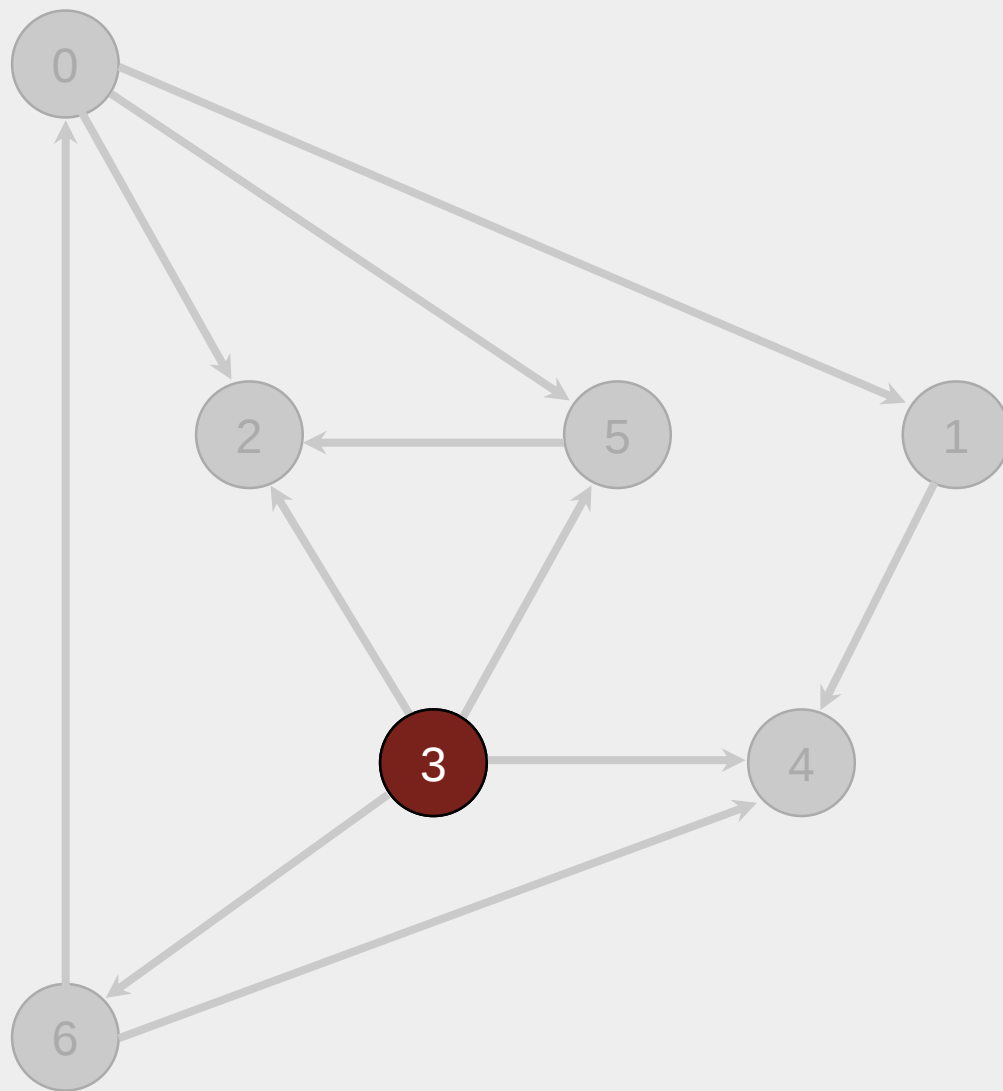
postorder

4 1 2 5 0 6

6 done

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



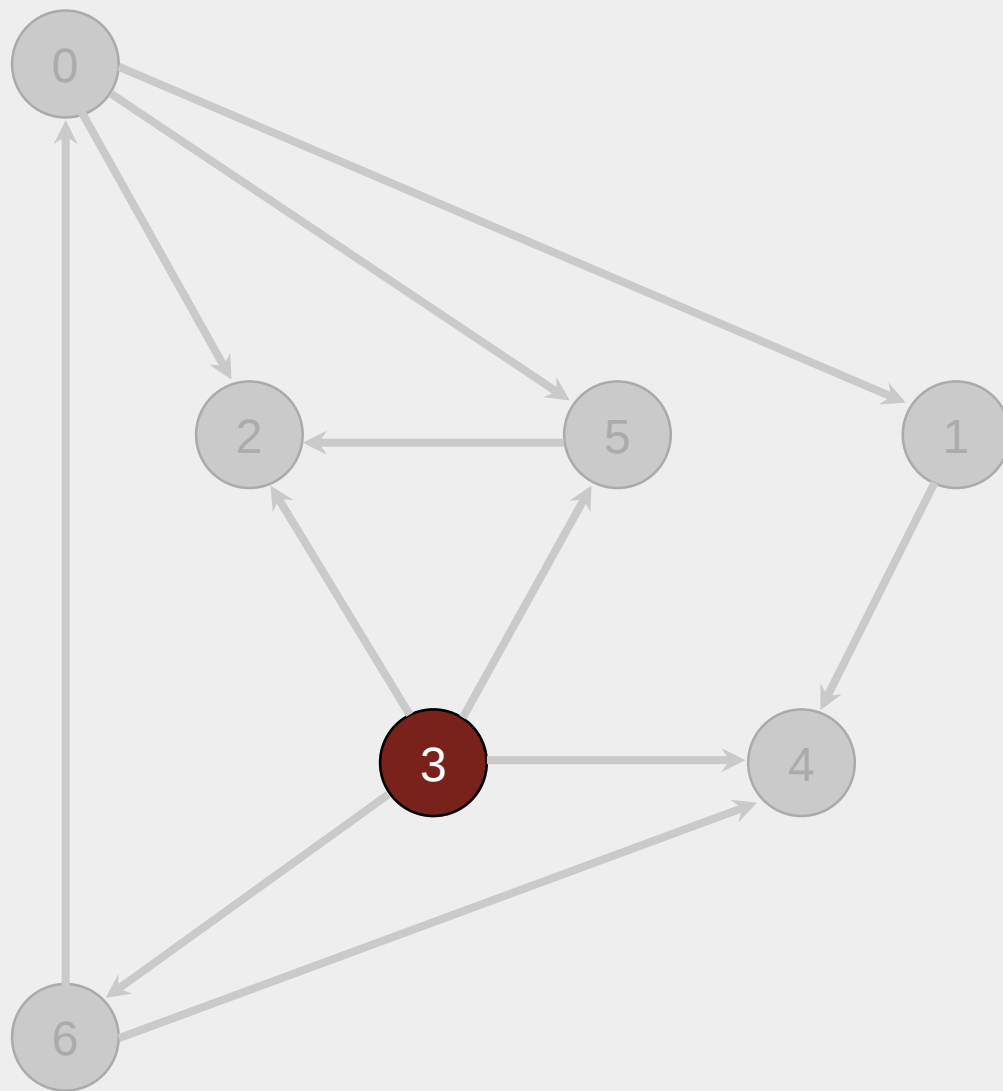
postorder

4 1 2 5 0 6

visit 3

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



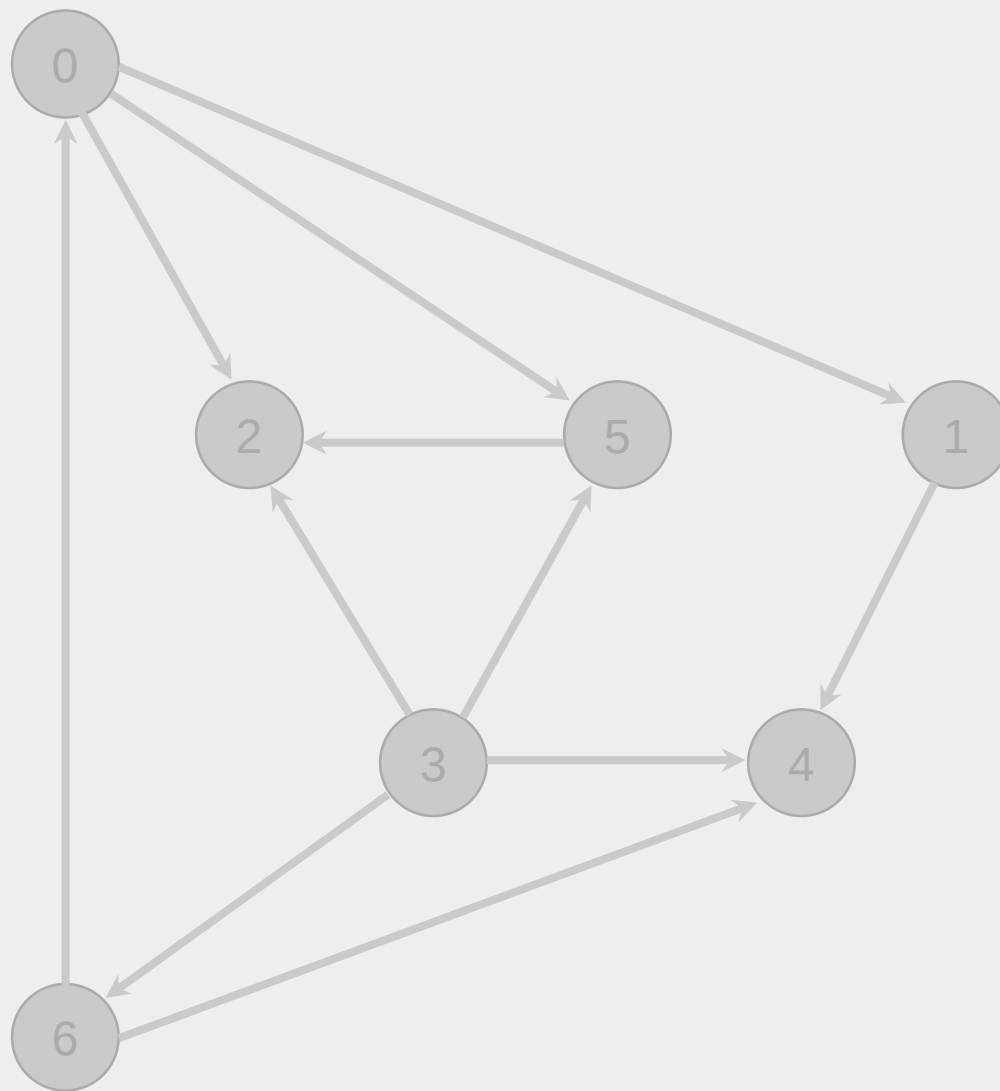
postorder

4 1 2 5 0 6 3

3 done

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



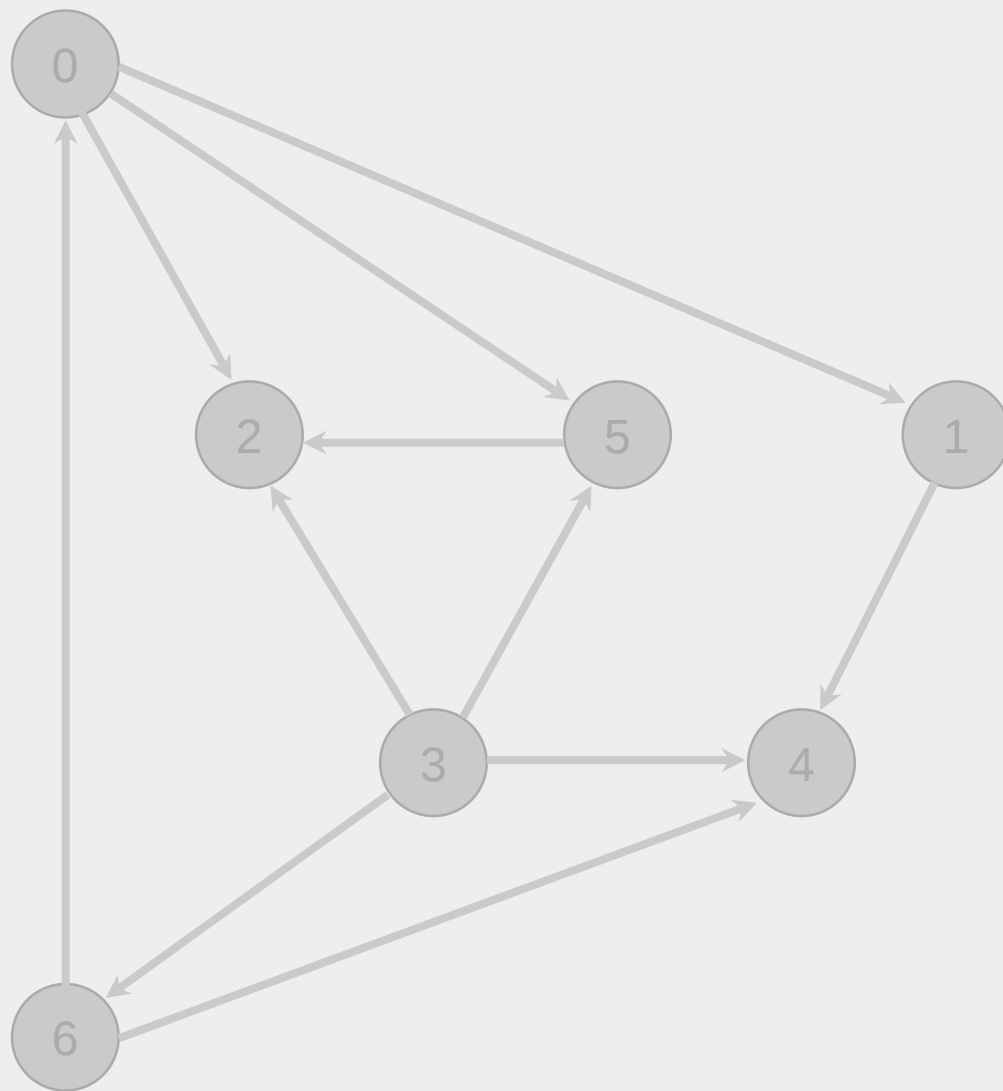
postorder

4 1 2 5 0 6 3

check 4

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



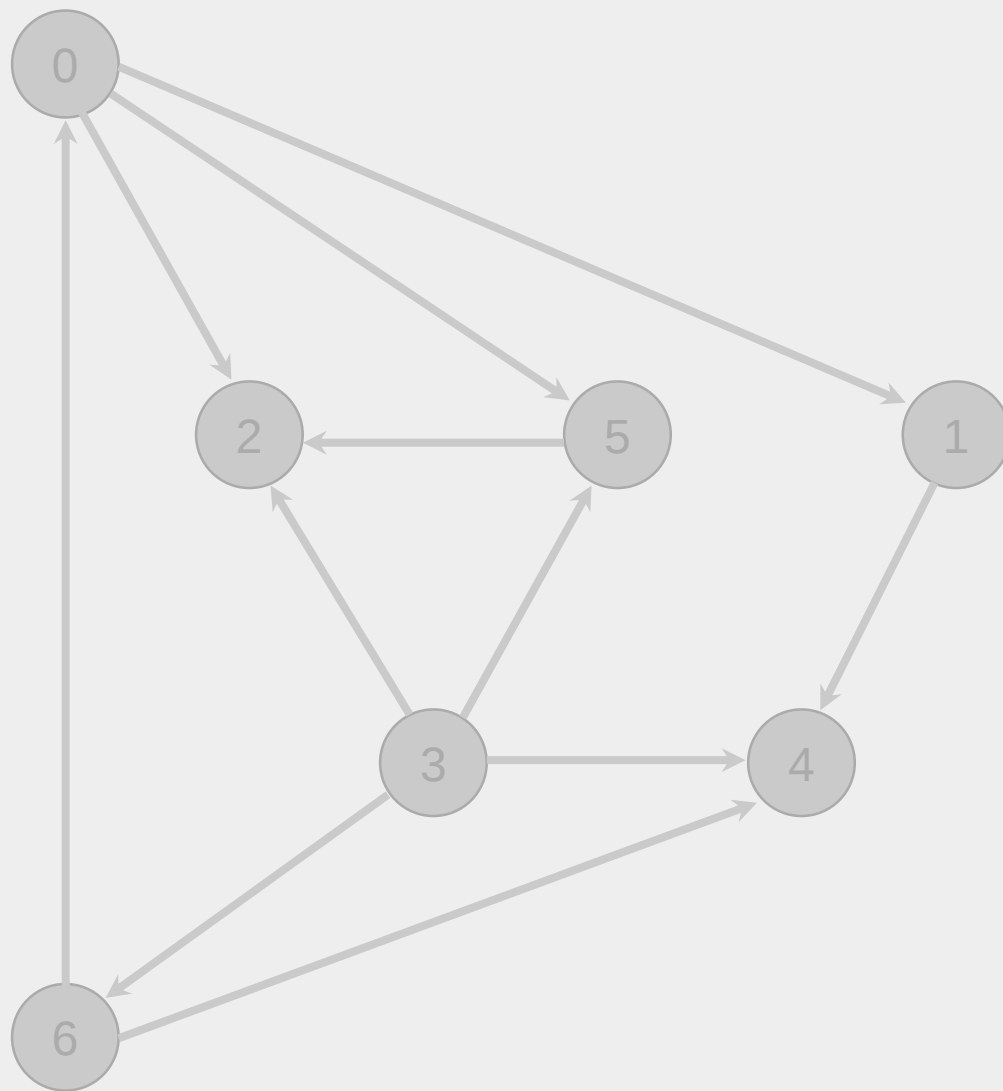
postorder

4 1 2 5 0 6 3

check 5

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



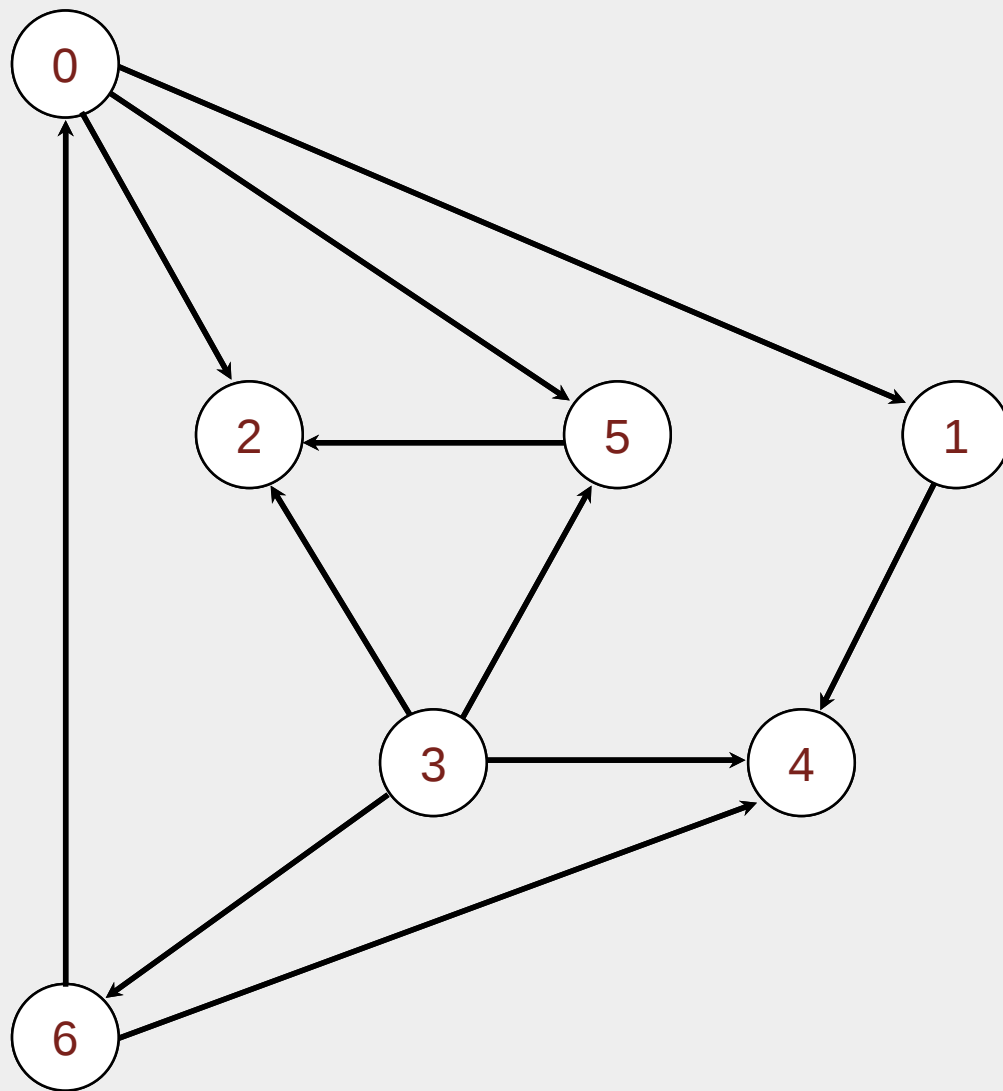
postorder

4 1 2 5 0 6 3

check 6

Topological sort algorithm

- Run depth-first search.
- Return vertices in reverse postorder.



postorder

4 1 2 5 0 6 3

topological order

3 6 0 5 2 1 4

done