Ex 1. Find a topological sort of this graph.

1. Start with node 1.

2. Next consider node 2.


Continuing forward, we get the following list:

List node: 1 2 4 3 9 8 5 10 6 7
Ex 2: Execute BFS on this graph. Show resulting BFS tree.

\[ V = T \]
\[ d = 0 \]
\[ \pi = \text{nil} \]

\[ V = T \]
\[ d = 2 \]
\[ \pi = 2 \]

\[ V = T \]
\[ d = 2 \]
\[ \pi = 2 \]

\[ V = T \]
\[ d = 3 \]
\[ \pi = 3 \]

\[ V = T \]
\[ d = 4 \]
\[ \pi = 4 \]

Ex 3: Find the strongly connected components of this graph.

\[ V = T \]
\[ \pi = 1 \]
\[ S = 2 \]
\[ e = 19 \]

\[ V = T \]
\[ \pi = 2 \]
\[ S = 3 \]
\[ e = 18 \]

\[ V = T \]
\[ \pi = 3 \]
\[ S = 4 \]

\[ V = T \]
\[ \pi = 4 \]
\[ S = 5 \]
\[ e = 12 \]

\[ V = T \]
\[ \pi = 5 \]
\[ S = 6 \]
\[ e = 11 \]

\[ V = T \]
\[ \pi = 6 \]
\[ S = 7 \]
\[ e = 9 \]

\[ V = T \]
\[ \pi = 7 \]
\[ S = 8 \]
\[ e = 9 \]

\[ V = T \]
\[ \pi = 9 \]
\[ S = 10 \]
\[ e = 10 \]