Graphs

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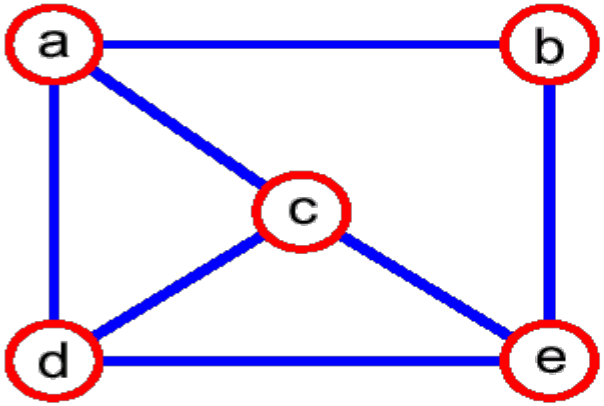


V= {a,b,c,d,e}

E=
{(a,b),(a,c),(a,d),
(b,e),(c,d),(c,e),
(d,e)}

CODING BLOCKS

Terminology

1. Adjacent Vertices
2. Degree
3. Path
4. Connected Graph
5. Subgraph
6. Connected Components
7. Tree
8. Forest
9. Spanning Tree

Number of edges

1. Complete Graph
2. Connected Graph
3. Tree

How to implement Graph?

1. Edge List
2. Adjacency lists
3. Adjacency matrix

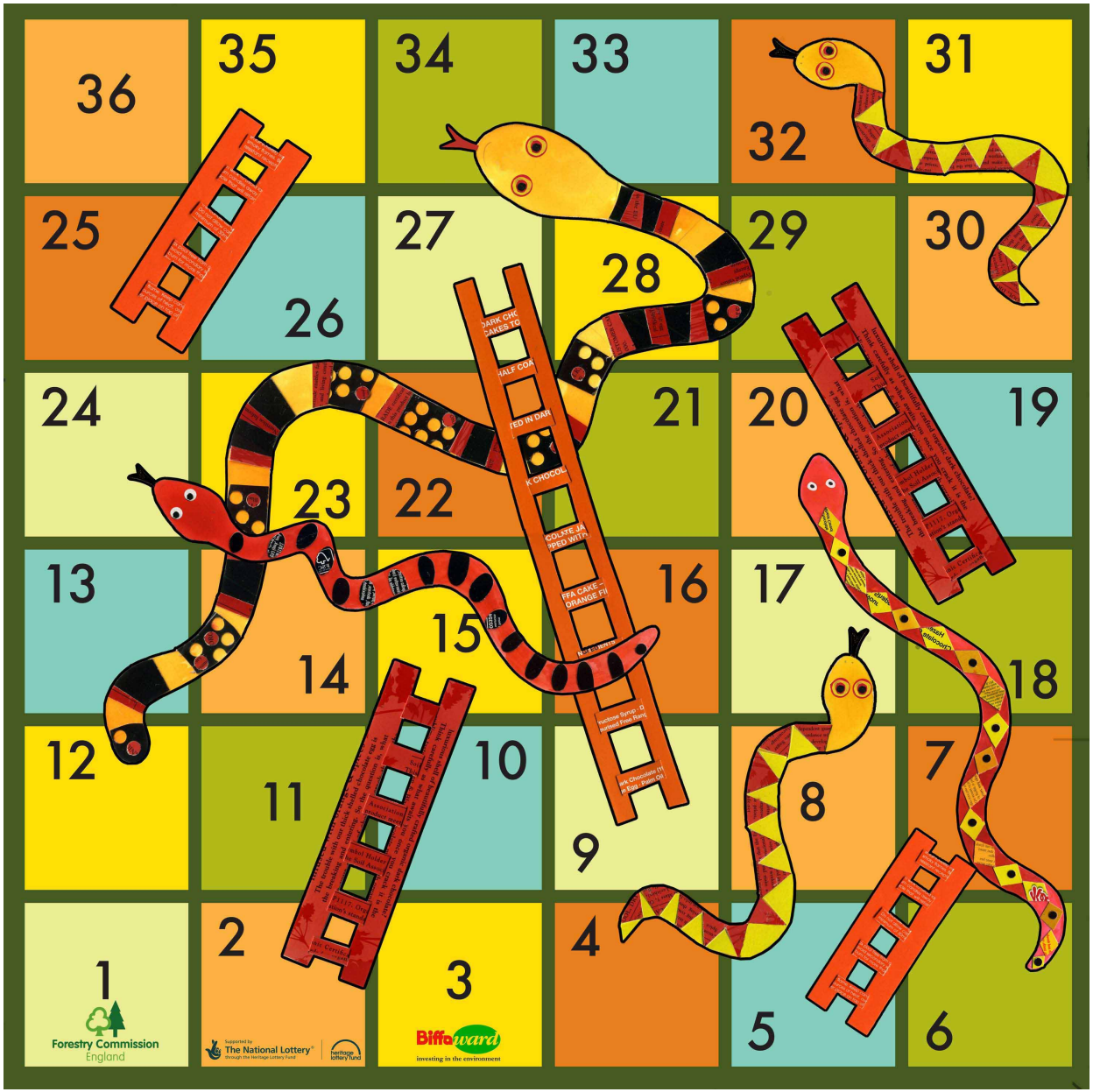
Searching in a Graph

How to Search through a Graph?

1. Breadth First Search
2. Depth First Search

Problems

1. Implement isConnected for our graph
2. Return all the connected components of the graph
3. Snakes and Ladders Problem.

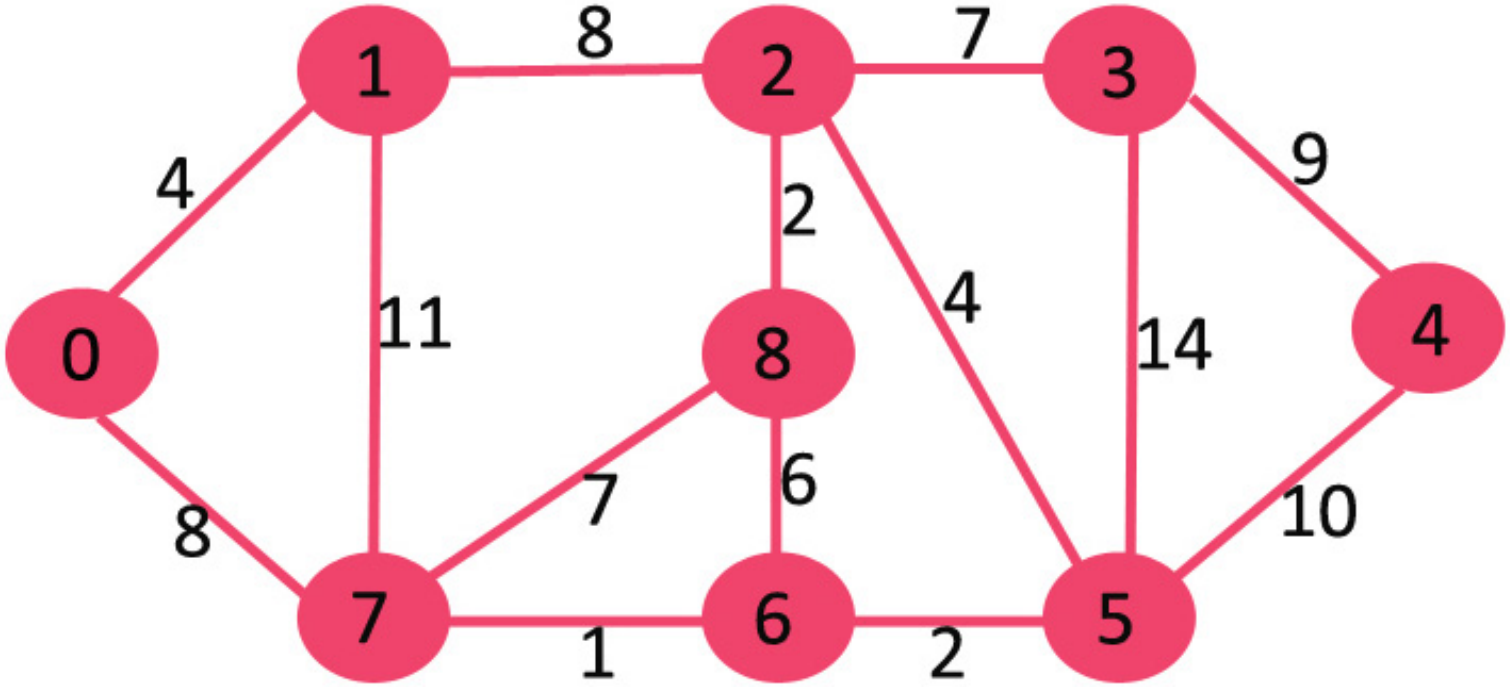


CODING BLOCKS

Some more Graph variations

1. Directed Graphs
2. Weighted Graphs

Shortest Path on Weighted Graph- Dijkstra's Algorithm



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