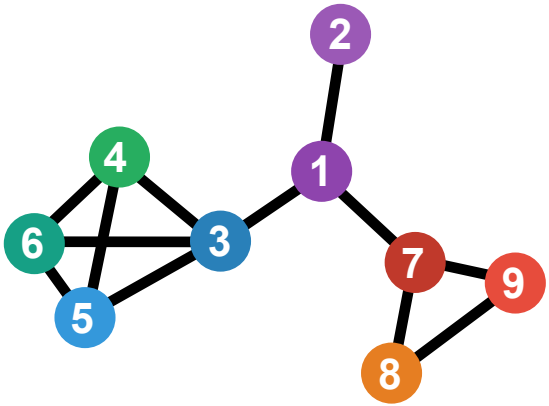
$$\mathbf{A} = \begin{bmatrix} 0 & 1 & 1 & 0 & 0 & 0 & 1 & 0 & 0 \\ 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 1 & 0 & 0 & 1 & 1 & 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 1 & 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 1 & 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 1 & 1 & 0 & 0 & 0 & 0 \\ 1 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 \\ 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 1 \\ 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & 0 \end{bmatrix}$$

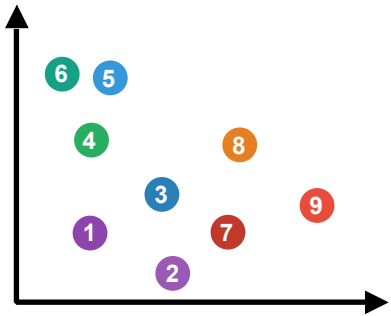
a) Graph adjacency matrix representation

$$\mathbf{E} = \begin{bmatrix} 0.3 & 0.2 \\ 0.6 & 0.1 \\ 0.6 & 0.3 \\ 0.3 & 0.5 \\ 0.4 & 0.6 \\ 0.2 & 0.6 \\ 0.7 & 0.2 \\ 0.7 & 0.5 \\ 1.2 & 0.2 \end{bmatrix}$$

c) Graph embedding onto 2D space



b) Graph visualization



d) Embedding Visualization