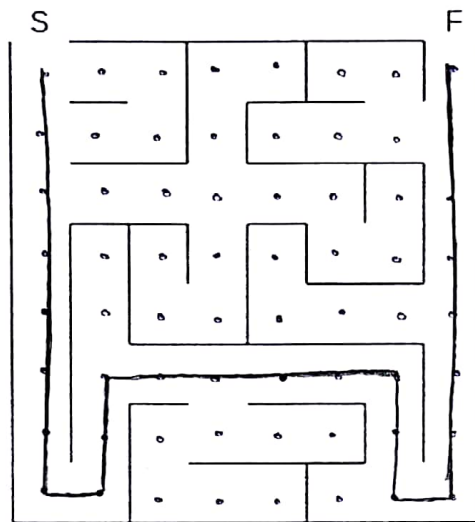


Maze Worksheet

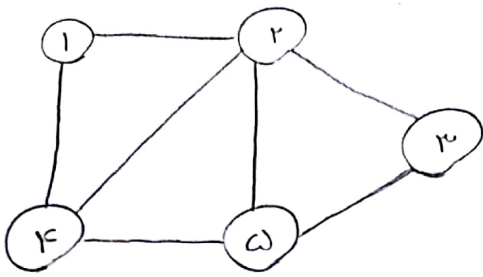
Consider the following maze:



Show how to model the maze as a graph.

این نقشه را به یک گراف تبدیل کنید و در هر گره یک تگ قرار دهید.

Perform a breadth-first search on the maze to show how this algorithm can be used to find the shortest path from start to finish.



$$\begin{matrix} & 1 & 2 & 3 & 4 & 5 \\ \begin{matrix} 1 \\ 2 \\ 3 \\ 4 \\ 5 \end{matrix} & \begin{bmatrix} 0 & 1 & 0 & 1 & 0 \\ 1 & 0 & 1 & 1 & 1 \\ 0 & 1 & 0 & 0 & 1 \\ 1 & 1 & 0 & 0 & 1 \\ 0 & 1 & 1 & 1 & 0 \end{bmatrix} \end{matrix}$$

$$2 \times 4 = 8 \quad (1)$$

$$2 \times 4 + 4 \times 2 = 16 + 8 = 24 \quad (2)$$

$$(100)^T \times F = F_{000} \quad : \text{row } 0 \quad (3)$$

$$= \text{sum of row } 0$$