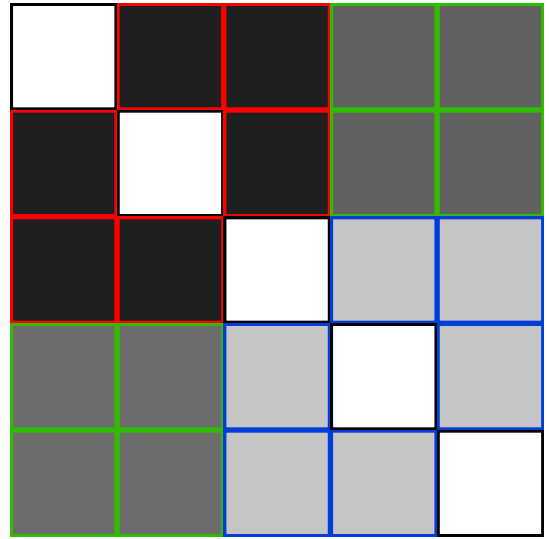
$$\epsilon_{i,j} \sim Bern(p_k), (i,j) \in \mathcal{C}_k$$

This matrix binary entries, whose probability to be one is proportional to the darkness of the entry.

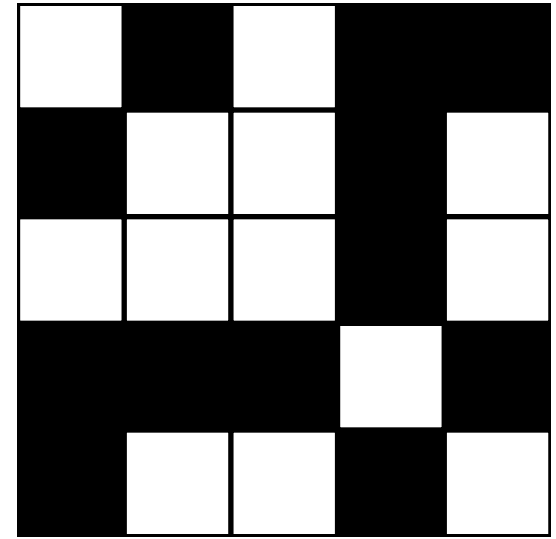


$\mathcal{C}_1$ $\mathcal{C}_2$

$\mathcal{C}_3$

Modulo 2 Addition

Adjacency Matrix



$$= \tilde{\mathcal{G}}$$