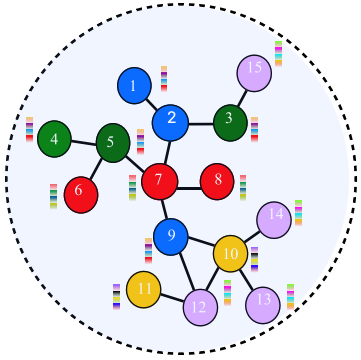
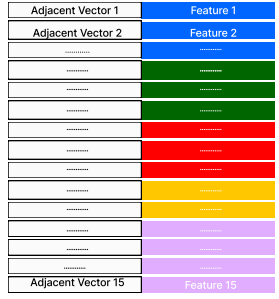
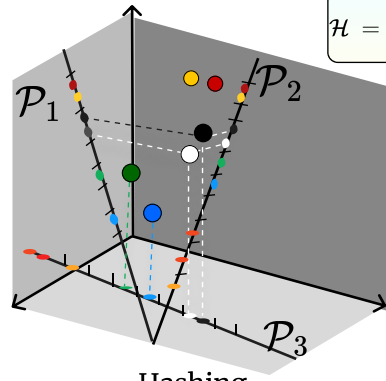


$\mathcal{G}(V, A, X)$

$$F = \{(1-\alpha) \cdot X \oplus \alpha \cdot A\}$$



Augmented Features



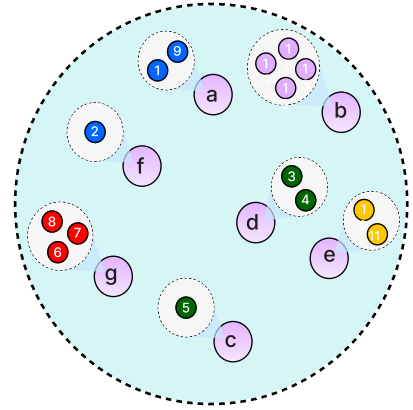
$$\mathcal{H} = \left\lfloor \frac{< F \cdot \mathcal{P} > + b}{r} \right\rfloor$$

Hashing

	a	b	c	d	e	f	g
p1.F	2	1,9,3	4	10,11	6,7,8	5	12,13,14,15
p2.F	1,2	9	3,4	10,11,12	5,7,8	6	13,14,15
p3.F	2	1,9	3,4	10,11	6,7,8	5	12,13,14,15
p4.F	9,2	1	3,4	10	6,7,8,14	5,11	12,13,15
p5.F	2	1	3,4,8	10,11	6,7	5,9	12,13,15
p6.F	2	1,9	3,4	10,11	6,7,8	5	12,13,14,15
p7.F	2	1,9	3,4	11	6,7	5	12,13,14,15

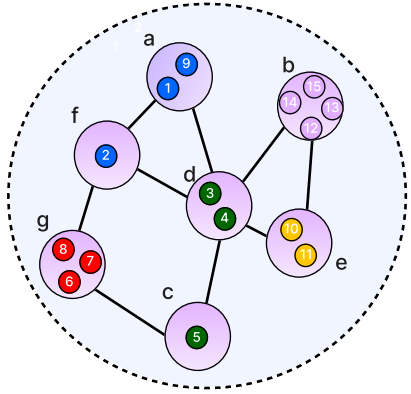
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
a	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
b	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
c	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
d	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
e	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
f	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
g	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0

Coarsening Matrix

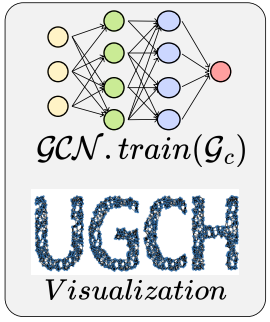


Super Node formation

$A_c,\ F_c$



$\mathcal{G}_c(V_c, A_c, F_c)$



Downstream Tasks using $\mathcal{G}_c$