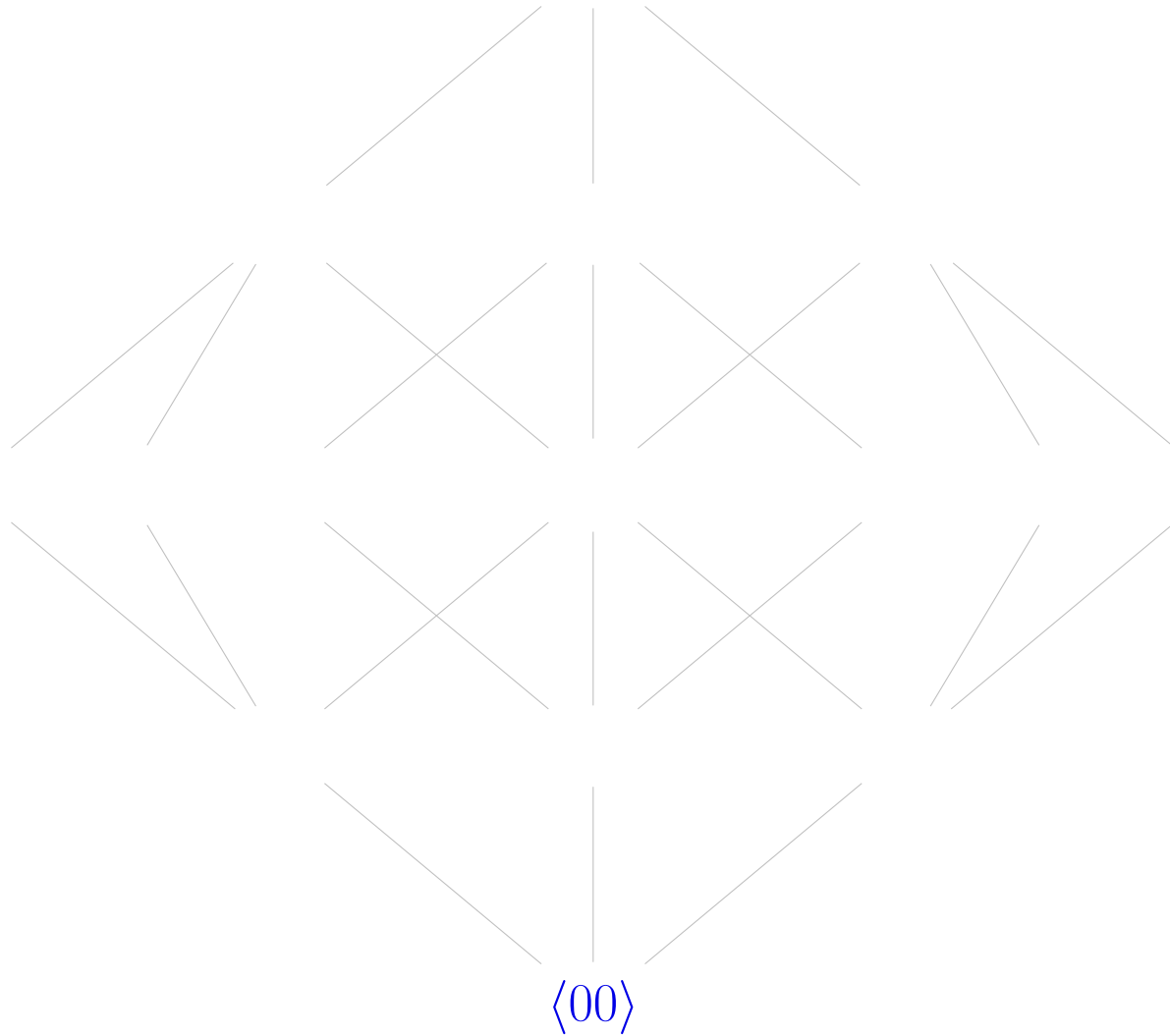# Supplemental material for Visual Algebra (Math 4120), HW 13

#1: Subring lattice of $R = \mathbb{Z}_4 \times \mathbb{Z}_4$. Each subgroup is colored based on whether it is an ideal, subring but not an ideal, or subgroup that is not a subring.

$$\mathbb{Z}_4 \times \mathbb{Z}_4 = \langle 10, 01 \rangle$$

$$\langle 00 \rangle$$

$$\mathbb{Z}_6 \times \mathbb{Z}_3 = \langle 10, 01 \rangle$$

$$\langle 00 \rangle$$