1 Super vertex coloring

Definition: Let G be an undirected graph. $c:V(G)\to\{1,2,...,k\}$ is a super vertex coloring iff: $\forall v_1,v_2\in V(G),c(v_1)=c(v_2)\Rightarrow v_1\notin N(v_2)$ and there is no $u\in V(G)$ such that $v_1,v_2\in N(u)$

2 i dont know yet