Lab 2 - CSPs – Artiﬁcial Intelligence

# Modeling the problem as CSP:

Variables: All colors, all pets, all smokes, all drinks , all nationalities. 5 of each.

Domains: The number of each house, from 1 to 5.

Constraints: No house number can have two of any variable. And no house can have the same variable as any other house.

# How big is the state space?

To find the size of the state space we the size of the domain and the number of variables must be known.

The size of the Domain is 6 because houses can also have no number

Each house has 25 variables, which is 5 types of variables(color, nation, drink, smoke, pet) and each type contains 5 variables, so the state space is 625.