There are two families. So, while selecting a family to be interviewed, there is a probability $P_1 = ½$ to select a black family and a probability $P_2 = 1 – ½ = ½$ to select a white one.
Using the multiplying rule, if families are selected randomly, the probability of all 10 families being black is $(1/2)^{10} = 1/1024$.
The probability is very small, so, if all selected people are either white or black, we would consider this as a racial bias in the selection.