Question 1

What is the optimal value of alpha for ridge and lasso regression? What will be the changes in the model if you choose double the value of alpha for both ridge and lasso? What will be the most important predictor variables after the change is implemented?

Answer:

Optimal value of alpha for ridge: 9.0

Optimal value of alpha for lasso: 0.0001

After doubling alpha for ridge and lasso i.e. 18 and 0.0002

For Ridge: Coeff values are increasing as alpha will increase.r2\_score of train data is also drop from .807 to 0.45

For Lasso: As alpha value increased more feautrues removed from model. But r2score is also dropped by 1% in both test and train data

Top Features: Neighborhood\_NoRidge, Neighborhood\_NridgHt, OverallQual, overallQual Neighborhood\_Veenkar