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 : Best Model is Ridge Linear Regression with alpha 0.8 and R2 Score 0.7908769243254044
, if we double the alpha we do not see any change in R2 score. And the most imp feature turns to be **LotShape_Reg** that is lot shape regular.

Question 2
You have determined the optimal value of lambda for ridge and lasso regression during the assignment. Now, which one will you choose to apply and why?

Answer :The optimal value for lambda is 0.8 with model ridge that performing well and also R2 square is good as compared to lasso.

Question 3
After building the model, you realised that the five most important predictor variables in the lasso model are not available in the incoming data. You will now have to create another model

excluding the five most important predictor variables. Which are the five most important predictor variables now?

Answer :

Top 5 features: (Price is heavily affected if -)
1. If building type is Two-family Conversion; originally built as one-family dwelling
2. Property has Shed (over 100 SF)
3. If building type is Single-family detached
4. If building foundation is Poured concrete
5. If building foundation is Cinder Block

Question 4

How can you make sure that a model is robust and generalisable? What are the implications of the same for the accuracy of the model and why?

Answer :

R2 Score is best with ridge model even after changing the alpha value the model shows the constancy in the prediction.