Qus - 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 lass? What will be the most important predictor variables after the change is implemented?

Ans:- We can come up with an optimal value of alpha for ridge and lass regression by using Grid Seach method. And in my model the optimal value of alpha for ridge is 100 and for lasso is 0.002.

And if you choose the double value of alpha means you are increasing the penalty , then in that case you will have higher bias and low variance, because you are penalizing the model more as lass will convert more and more variable in zero values. It means you are putting more constraints on coefficients, and you are tending towards underfitting the model.

We will take higher coefficients value target features.

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

Ans:- For Choosing the model between ridge and lasso , we will see the performance of the model on the Train data as well as test data. Suppose you have model 1 lesso based and model 2 ridge based , in that case whichever is performing better on train and test set , we will take it. And if both are performing equally well, then we will chose lasso based model as it also helps us in feature selection.

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

Ans:- We will exclude top 5 features and take next coming features after those top 5 features and those top 5 features are :

1- GrLivArea
2- OverallQuall
3- TotalBsmtSF
4- GarageCars
5- OverallCond

Qus 4:- How can you make sure that model is robust and generalisable? What are the implications of the same for the accuracy of the model and why?

Ans:-Your model should follow “occam’s razor” principal means your model should be simple, it should based on low bias and low variance terms, Ensure your model is giving good performance on training and test data set, and also make sure that once you deploy your model into production, you need to ensure performance you are getting on raw data points is as good as it was on test and training data set.