Question 1
What is the optimal value of alpha for ridge and lasso regression? What will be the changes in the model if you choo se double the value of alpha for both ridge and lasso? What will be the most important predictor variables after the c hange is implemented?
Answer: The optimal value we calucated for Ridge and Lasso are: Reidge :0.01595422271115424 Lasso: 0.015875 58118082229
If we made the chnages on alpha as suggutsed , it afffeced on R2 score and downgraded it.
these are important variables
GrLivArea , OverallQual, MSZoning_RL, TotalBsmtSF, MSZoning_RM, OverallCon, MSZoning_FV .etc.

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: So after building a mdel using Lasso and Ridge , we observed that there is slight difference between Lasso and Ridge, Lasso have ability to eliminate and makes it to zero if feature is very less useful. however Ridge such do es not this functality, so i will go for lasso if there are small significant number of parameters, other wise will fo for Ridge.

Question 3
After building the model, you realised that the five most important predictor variables in the lasso model are not avai lable in the incoming data. You will now have to create another model excluding the five most important predictor v ariables. Which are the five most important predictor variables now?
Answer: These are the five most imortant variables :
GrLivAr
OverallQual
MSZoning_RL
TotalBsmtSF
MSZoning_RM

Question 4
How can you make sure that a model is robust and generalisable? What are the implications of the same for the accu racy of the model and why?
Answer
We calculated the mean seqaured error for both Redge and Lasso , also calculated the R2 value as well.
Mean sqaured error
Ridge :0.01595422271115424
Lasso: 0.01587558118082229
R2 Score
Ridge : R2 score on Train datset: 0.9278094061668625
R2 score on Test datset: 0.8915028372858621
Lasso: R2 score on Train datset: 0.9277597237432917
R2 score on Test datset: 0.8920376413353598