

### 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

Tried alpha (lambda with 0.1, 0.5, 1, 10,100,1000,10000) values for ridge and lasso.  
For ridge at alpha 10000 it reaches zero. For Lasso it is 1

For if doubled, there is no high impact but the maximum 10000. For lasso, the optimum point is 1 about the alpha it goes -ve value for test data.

SaleType is the important predictor variable.

### 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

Ridge . It be scrutinized between nearest values more, to get nearer to 0.

### 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

LandSlope, Condition1,HouseStyle,ExterQual and Heating

### 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

Compare ordinary least square, it handles more number of predictor variables during the correlation between them.

It addresses the overfitting and underfitting w.r.t other models