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?**

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?**

   I will choose Lasso regression as the complexity of the model is less. Since the number of features it considers to build the model is much lesser than Ridge regression with little to no reduction in the R2 score, Lasso regression is a much better solution for this problem.

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?**

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?**

   - Simple models are more generic and can handle any new data much better
   - Simple models are also more robust and need lesser training data
   - A simple model like the one we achieved with Lasso regression are more likely to not overfit unlike complex models which tend to memorize data and overfit.
   - We can ensure that the model does not overfit by Regularization which ensures that the model is not naive but also simple