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?

   Ans → the optimal value of alpha for ridge regression is 0 and for lasso, it is 1. Too high values of alpha can lead to model becoming underfit.

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?
   Ans → we would go with Lasso because it helps n feature seletcion. Models built using lasso regression are easier to understand as it contains lesser features than ridge.
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?
   Ans → NA
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?
   Ans → almost every dataset in real life contains outliers. The model created should be such thatit is not affected by outliers, at t he same time, we cannot remove all the outliers as it can result in data being lost. This may result in reduced accuracy. Hence the model should be robust enough to handle outliers as well as generalizable so that accuracy doesn't fall much with different test data.