IMPORTANT NOTES. Please upload your homework to Canvas or email your homework to our TA: ys688 at stat.rutgers.edu. For the simulation and data analysis problems, please put the code you developed at the end of the homework report (no separated files).

Use the `IPOdecision` data (0=withdraw) for the following analysis.

(a) Fit a logistic regression model using all predictors in the data file. Comment on which predictors are significant.

(b) Use backward selection procedure to find the (sub)optimal set of predictors to explain the IPO completion/withdrawn decision. Note: Backward selection starts with the larest model and remove the lest significant predictor (largest p-value of the z-test) one by one, each time re-estimating the model, until all coefficients are significant at 5% level.

(c) Run an ANOVA analysis to compare the full model in (a) and the model you obtained in (b). Which one do you prefer? (Write the null hypothesis etc). Write down in detail the model you preferred, in mathmatical equations.