

# BANA 7042: Assignment 5

## Multinomial & Ordinal Regression

### Overview

Please review Chapter 7 of “Extending the Linear Model with R: Generalized Linear, Mixed Effects and Nonparametric Regression Models” (second edition) by Julian J. Faraway. The chapter covers multinomial and ordinal regression models, which are used for modeling categorical response variables with more than two categories. You can find a PDF copy of the book in [resources/elmr2.pdf](#) ([direct link](#)).

For this assignment, please do Exercise 1 (a)–(j) from chapter 7 located on pp. 147–148. You can load the associated data set using the following code:

```
# install.packages("faraway") # Uncomment this line to install the faraway package if you do not have it installed
head(hsb <- faraway::hsb)
```

	id	gender	race	ses	schtyp	prog	read	write	math	science	socst
1	70	male	white	low	public	general	57	52	41	47	57
2	121	female	white	middle	public	vocation	68	59	53	63	61
3	86	male	white	high	public	general	44	33	54	58	31
4	141	male	white	high	public	vocation	63	44	47	53	56
5	172	male	white	middle	public	academic	47	52	57	53	61
6	113	male	white	middle	public	academic	44	52	51	63	61