

# APPM 2720 Lecture 2.2

---

## Using built in functions in R and writing your own.

See the script **Rfunctions.R**

## Using the apply function

See **Rapply.R**

The apply finds statistics for subgroups of the data

- **apply** for regular tables to find stats for say the rows or columns
- **tapply** for stats where the subgroups are given by different categories
- **lapply** for stats where the subgroups are the components of a list.

## Boxplots - a quick definition

Invented by John Tukey as an alternative to a histogram.

- Notch: a line at the median of the data
- upper and lower hinge ( 25% and 75% quartiles)
- box joins the hinges
- inner fence +1.5 IQR from each edge of box
- whiskers line from box to last observation before the inner fences
- points beyond fences are plotted individually and are considered unusual

## An example: mileage (1000s) AudiA4 dataset

