STAT 445 Lab 4
ASSIGNMENT # 4
Due: Lab 5 (at the end)

**Question 1.** Copy the file '**/home/grad/jafar/stat445/assign4.dat**'. The file is also on the course website. It has 500 observations on a single variable '*change*'.

**(a)** Construct a suitable histogram of *change*.

**(b)** Overlay the standard normal density and the $t_5$ density (with different line types) on the histogram above.

**(c)** Construct qqplots of *change* for both normal and $t_5$ distributions on a single page.

**(d)** Which of the two distributions appear to provide a better fit to *change*? Base your comments on both (b) and (c).

**Question 2.**

**(a)** Generate a random sample of size 200 from exponential distribution with population mean 5 (let us call the variable *expon*). Show R codes only.

**(b)** Construct a boxplot and a stem-and-leaf plot of *expon*.

**(c)** Take a random sample of size 100 with replacement from *expon* (show R codes only). Repeat (b) on the subsample.

**(d)** Which do you prefer for describing the distribution of a set of data: a boxplot or a stem-and-leaf plot? Why?