Econ 4848
Stata Handout 2

Commands.

1. `reg`: the command reg performs ordinary least squares estimation (or method of moments estimation) under classical assumptions. In addition, its output lists a series of statistics associated with a linear regression. Example: `reg regressand regressor1 regressor2` . Let's try this small code using the data set wage1.dta.

```
capture log close
set logtype text, permanently
log using first.txt, replace
clear
set memory 100m
set more on
use wage1.dta, clear
describe
reg wage educ
log close
exit
```

2. `predict`: after an estimation command, obtains predictions, residuals and a number of additional statistics based on the previously run estimation. General syntax is:

   `predict` newvar, options

   Example:

   `regress` y x

   `predict` yhat, xb

   `predict` uhat, residuals

   Some of the options are:

   `xb`: linear prediction

   `residuals`: linear regression residuals.

`pr(a,b)`: the probability $P(y|a < y < b)$

`e(a,b)`: the expectation $E(y|a < y < b)$

`stdp`: standard error of the linear prediction

`stdf`: standard error of the forecast

`stdr`: standard error of the residual

3. `scatter`: scatter draws scatterplots. It is both a command and a plottype in Stata. The general syntax is,

   `scatter` variable list, options

   Scatter may be combined with other plot types such as `line`, `lfit` as in,

   `scatter` y x ||`lfit` y x ||`line` y x

   Example:

   `regress` y x

   `scatter` y x ||`lfit` y x

   If more than two variables are specified, all but the last are given the interpretation of being y (vertical axis) variables. For example,

   `scatter` y1var y2var xvar

   would plot y1var versus xvar and overlay that with a plot of y2var versus xvar. It is the same as typing

   `scatter` y1var xvar || scatter y2var xvar

   For a list of all the options on `scatter` type `help scatter` in Stata.

   It is easy to run regressions in Stata and conveniently present the results. Try using the following commands:

   ```
   quietly regress y x
   estimates store model1
   quietly regress y1 x1
   estimates store model2
   estimates table model1 model2, stats(r2 rmse) b se
   ```