knitr Intro

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The objective of this section is to briefly introduce you to `knitr` for producing documents. At the highest level, `knitr`, is an `R` package that takes a text document and produces code for a presentable document format.
We will be using `knitr` to take an `.Rnw` file and ultimately produce a `.pdf` file, via LaTeX. Let's start by creating some data and running a regression. To do this using knitr, type the following:

```
<<list(chunk1, echo=TRUE>>=
set.seed(1202015)
x <- rnorm(1000)
y <- 3 + 2*x + rnorm(1000)
resultsOLS <- lm(y ~ x)
@
```

These are the OLS results:

```
summary(resultsOLS)
```

```
##
## Call:
## lm(formula = y ~ x)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -3.3915 -0.6676 -0.0186  0.6949  3.3754
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)  3.00642    0.03233   93.00   <2e-16 ***
## x            2.04074    0.03225   63.28   <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1.021 on 998 degrees of freedom
```

```
## Multiple R-squared:  0.8005,Adjusted R-squared:  0.8003
## F-statistic:  4005 on 1 and 998 DF,  p-value: < 2.2e-16
```

Let's keep trying:

```
library(xtable)
xtable(resultsOLS)

## % latex table generated in R 3.1.2 by xtable 1.7-4 package
## % Tue Jan 20 17:10:11 2015
## \begin{table}[ht]
## \centering
## \begin{tabular}{rrrrr}
##   \hline
##  & Estimate & Std. Error & t value & Pr($>$$|$t$|$) \\
##   \hline
## (Intercept) & 3.0064 & 0.0323 & 93.00 & 0.0000 \\
##   x & 2.0407 & 0.0322 & 63.28 & 0.0000 \\
##    \hline
## \end{tabular}
## \end{table}
```

One more time:

```
library(xtable)
xtable(resultsOLS)
```

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	3.0064	0.0323	93.00	0.0000
x	2.0407	0.0322	63.28	0.0000