Chap5

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First, set working directory. 'data' is a table with two columns and same number of rows, and should be numeric. Columns have headers indicating the names of the variables. **User will also input desired variable names in double quotes**

```
data <- read.csv("chap5.csv", header = FALSE, skip = 1)
colnames(data) <- c("Expt", "Control")
```

We now combine the observations into one long column (score)

```
colnames(data) <- c("V1", "V2")
score=c(data$V1,data$V2)
```

We generate a second column (group), that identifies the group for each score

```
levels=factor(c(rep("Expt",5),rep("Control",5)))
```

We now form a data frame with the dependent variable and the factors, then print the table.

```
data=data.frame(score=score,group=levels)
knitr::kable(xtable(data))
```

score	group
1	Expt
2	Expt
5	Expt
6	Expt
6	Expt
8	Control
8	Control
9	Control
11	Control
14	Control

We now generate the ANOVA table based on the linear model

```
aov1=aov(score~levels)
print(model.tables(aov(score~levels),type = "means"),digits=3)
```

```
## Tables of means
## Grand mean
##
## 7
##
##  levels
## levels
## Control    Expt
```

```
##      10       4
```

```
summary(aov1)
```

```
##             Df Sum Sq Mean Sq F value  Pr(>F)
## levels       1     90      90      15 0.00472 **
## Residuals    8     48       6
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```