

```

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title: "Multiple Binary Logistic Regression"  

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output:  

  pdf_document:  

    number_sections: true  

    toc: true  

    fontsize: 11pt  

    geometry: margin=1in  

---
```

R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

Including Plots

You can also embed plots, for example:

```
# Example: Multiple Binary Logistic Regression  
model1 <- glm(Admit ~ Gender + Dept, family = binomial, data = ucb, weights = Freq)  
summary(model1)
```

```
##  
## Call:  
## glm(formula = Admit ~ Gender + Dept, family = binomial, data = ucb,  
##       weights = Freq)  
##  
## Coefficients:  
##              Estimate Std. Error z value Pr(>|z|)  
## (Intercept) -0.58205   0.06899 -8.436  <2e-16 ***  
## GenderFemale -0.09987   0.08085 -1.235   0.217  
## DeptB        0.04340   0.10984  0.395   0.693  
## DeptC        1.26260   0.10663 11.841  <2e-16 ***  
## DeptD        1.29461   0.10582 12.234  <2e-16 ***  
## DeptE        1.73931   0.12611 13.792  <2e-16 ***  
## DeptF        3.30648   0.16998 19.452  <2e-16 ***  
## ---  
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1  
##  
## (Dispersion parameter for binomial family taken to be 1)  
##  
## Null deviance: 6044.3  on 23  degrees of freedom  
## Residual deviance: 5187.5  on 17  degrees of freedom  
## AIC: 5201.5  
##  
## Number of Fisher Scoring iterations: 6
```

```
exp(cbind(OR = coef(model1), confint.default(model1)))
```

```
##          OR      2.5 %     97.5 %
## (Intercept) 0.558751  0.4880808  0.6396537
## GenderFemale 0.904955  0.7723432  1.0603362
## DeptB       1.044353  0.8420782  1.2952170
## DeptC       3.534593  2.8679612  4.3561761
## DeptD       3.649559  2.9659470  4.4907358
## DeptE       5.693389  4.4465469  7.2898549
## DeptF      27.288901 19.5567778 38.0780573
```

Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.