fit <- lm(y ~ x1 + x2 + x3 , data=mydata)

# show results

summary(fit)

str(fit)

str(summary(fit))

e.g.

model2<- **lm**(log(wage) ~ education + experience + I(experience^2), data = PSID1982)

(round(**coef(model2)['(Intercept)']**,3)) #retrieves intercept

(summary(model2)$**r.squared**) #retrieves R2

#**Calculate the value the predicted value of wage for the average education and experience and for 18 years of education and 30 years of experience**

means <- data.frame(education = mean(PSID1982$education),

experience = mean(PSID1982$experience))

values <- data.frame(education = 18, experience = 30)

exp(predict(model2, means))

exp(predict(model2, values))

#Check if residuals sum and mean are equal to zero for model2

u = **resid**(model2)

round(sum(u), 2)

round(mean(u), 2) # mean of errors equal to zero

* **Calculate the predicted y y-hat and see how similar y-bar and y-bar-hat**

yhat=**fitted**(model2) # use the fitted function fitted to find yhat

yhat1=**predict**(model2) # another option use the function predict

# Let' compare the means of y and the predicted values

mean(log(PSID1982$wage), na.rm=TRUE) # remember to eliminate the missing values if any

mean(yhat)

mean(yhat1)

#Check if the correlation between residuals and regressors is zero

round(cor(u, model2$model$education), 3)

round(cor(u, model2$model$experience), 3)

#**Incorporate Results into *Text***

$$log(wage)= `r round(coef(model2)[1],3)`+ `r round(coef(model2)['education'],3)`\*education +

`r round(coef(model2)['experience'],3)`\*experience + `r round(coef(model2)['I(experience^2)'],3)`\*experience^2 +u$$

