> fds <- read.csv(file.choose(), header=TRUE)

> summary(fds)

NATION HDI LE2013 MEANYRSCH

Afghanistan : 1 Min. :0.3370 Min. :45.60 Min. : 1.300

Albania : 1 1st Qu.:0.5625 1st Qu.:64.95 1st Qu.: 5.450

Algeria : 1 Median :0.7170 Median :73.20 Median : 8.500

Andorra : 1 Mean :0.6856 Mean :70.58 Mean : 7.902

Angola : 1 3rd Qu.:0.8110 3rd Qu.:76.70 3rd Qu.:10.300

Antigua and Barbuda: 1 Max. :0.9440 Max. :83.60 Max. :12.900

(Other) :181

EYRSCH GNI2013 HDI2012 CHINRANK

Min. : 4.10 10,339 : 2 Min. :0.3330 Min. :-5.00000

1st Qu.:11.10 1,011 : 1 1st Qu.:0.5585 1st Qu.: 0.00000

Median :12.90 1,090 : 1 Median :0.7150 Median : 0.00000

Mean :12.81 1,129 : 1 Mean :0.6837 Mean :-0.04278

3rd Qu.:15.10 1,142 : 1 3rd Qu.:0.8100 3rd Qu.: 0.00000

Max. :19.90 1,147 : 1 Max. :0.9430 Max. : 4.00000

(Other):180

DL

high :53

low :43

medium :42

very high:49

> summary(fds[,c("MEANYRSCH","EYRSCH")])

MEANYRSCH EYRSCH

Min. : 1.300 Min. : 4.10

1st Qu.: 5.450 1st Qu.:11.10

Median : 8.500 Median :12.90

Mean : 7.902 Mean :12.81

3rd Qu.:10.300 3rd Qu.:15.10

Max. :12.900 Max. :19.90

> attach(fds)

> boxplot(MEANYRSCH,EYRSCH,horizontal=TRUE)

>

> boxplot(MEANYRSCH,EYRSCH,horizontal=TRUE)

> hist(MEANYRSCH)

>

> hist(EYRSCH)

> qqnorm(MEANYRSCH)

> qqline(MEANYRSCH)

Error in int\_abline(a = a, b = b, h = h, v = v, untf = untf, ...) :

plot.new has not been called yet

> qqnorm(MEANYRSCH)

> qqline(MEANYRSCH)

> qqnorm(EYRSCH)

> qqline(EYRSCH)

> qqnorm(EYRSCH)

> qqnorm(MEANYRSCH)

> par(mfrow=c(1,2))

>

> par(mfrom=c(1,2))

Warning message:

In par(mfrom = c(1, 2)) : "mfrom" is not a graphical parameter

> hist(EYRSCH)

> hist(sqrt(EYRSCH))

> par(mfrow=c(1,2))

>

par(mfrow=c(1,2))

hist(EYRSCH)

hist(sqrt(EYRSCH))

hist(log10(MEANYRSCH))

> par(mfrow=c(2,1))

> hist(MEANYRSCH)

> hist(log(MEANYRSCH))

>

> par(mfrow=c(2,1))

> par(mfrow=c(2,1))

> boxplot(MEANYRSCH)

> boxplot(log(MEANYRSCH))

>

> boxplot(HDI, horizontal=TRUE)

> hist(HDI)

> qqnorm(HDI)

> qqline(HDI)

>

> boxplot(HDI~DL)

> fds <- read.csv(file.choose(),header=TRUE)

> fds1 <- subset(fds, DL=="very high")

> attach(fds1)

The following objects are masked from fds:

CHINRANK, DL, EYRSCH, GNI2013, HDI, HDI2012, LE2013, MEANYRSCH,

NATION

> boxplot(MEANYRSCH, EYRSCH, horizonal=TRUE)

> boxplot(MEANYRSCH, EYRSCH, horizontal=TRUE)

> par(mfrow=c(1,1))

> boxplot(MEANYRSCH, EYRSCH, horizontal=TRUE)

> par(mfrow=c(2,1))

> hist(MEANYRSCH)

> hist(EYRSCH)

>

> qqnorm(MEANYRSCH)

> qqline(MEANYRSCH)

>

> qqnorm(EYRSCH)

> qqline(EYRSCH)

**PART 2**

fds <- read.csv(file.choose(), header=TRUE)

attach(fds)

cor(cbind(MEANYRSCH,EYRSCH,HDI),use="pairwise.complete.obs")

MEANYRSCH EYRSCH HDI

MEANYRSCH 1.0000000 0.7997989 0.8976834

EYRSCH 0.7997989 1.0000000 0.8950789

HDI 0.8976834 0.8950789 1.0000000

> plot(MEANYRSCH,EYRSCH)

> plot(MEANYRSCH, HDI)

> plot(EYRSCH, HDI)

> lm(HDI~EYRSCH)

Call:

lm(formula = HDI ~ EYRSCH)

Coefficients:

(Intercept) EYRSCH

0.05618 0.04915

> model1=lm(HDI~EYRSCH)

> summary(model1)

Call:

lm(formula = HDI ~ EYRSCH)

Residuals:

Min 1Q Median 3Q Max

-0.198922 -0.044069 0.009931 0.043908 0.198798

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.05618 0.02361 2.379 0.0184 \*

EYRSCH 0.04915 0.00180 27.302 <2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.06978 on 185 degrees of freedom

Multiple R-squared: 0.8012, Adjusted R-squared: 0.8001

F-statistic: 745.4 on 1 and 185 DF, p-value: < 2.2e-16

> qt(.975,185)

[1] 1.97287

>

> lm(EYRSCH~HDI)

Call:

lm(formula = EYRSCH ~ HDI)

Coefficients:

(Intercept) HDI

1.631 16.302

model2=lm(EYRSCH~HDI)

summary(model2)

Call:

lm(formula = EYRSCH ~ HDI)

Residuals:

Min 1Q Median 3Q Max

-3.7415 -0.7308 -0.1609 0.7383 3.3208

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 1.6307 0.4198 3.885 0.000143 \*\*\*

HDI 16.3015 0.5971 27.302 < 2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 1.271 on 185 degrees of freedom

Multiple R-squared: 0.8012, Adjusted R-squared: 0.8001

F-statistic: 745.4 on 1 and 185 DF, p-value: < 2.2e-16

> qt(.975,185)

[1] 1.97287

>

> confint(model2, level=.99)

0.5 % 99.5 %

(Intercept) 0.5381014 2.723232

HDI 14.7475343 17.855483

>

> newdata=data.frame(HDI=5)

> predict(model2, newdata, interval="prediction", level=.95)

fit lwr upr

1 83.13821 77.46831 88.80811

>