**ACST890**

Question 1:

> Fibonacci<-function(n){

+ x=numeric(n)

+ x[1]=1

+ x[2]=1

+ for(i in 3:n)

+ x[i]=x[i-1]+x[i-2]

+ return(x)

+ }

Then if you want the first 10 number

Just type

> Fibonacci(10)

[1] 1 1 2 3 5 8 13 21 34 55

Question 3:

a) > setwd("~/Downloads")

> dataset<-read.csv("PersonenSchaden.csv",header = TRUE)

b) > summary(dataset$total)

Min. 1st Qu. Median Mean 3rd Qu. Max.

10 6297 13854 38367 35123 4485797

> var(dataset$total)

[1] 8277562110

> sd(dataset$total)

[1] 90981.11

c)

> hist(dataset$total,breaks = 200,xlab = "dollar values of the claims",main = "Histogram of dollar values of the claims")

d) > delay<-dataset$finmonth-dataset$accmonth

> hist(delay,xlab = "Settlement delay",main = "Histogram of settlement delay")

e) > h<- hist(dataset$legrep)

> h$density=h$counts/sum(h$counts)

> plot(h,freq = FALSE,xlab = "legal representation",ylab = "proportion",main = "histogram of the legal representation")

f) > injury<- rbind(dataset$inj1,dataset$inj2,dataset$inj3,dataset$inj4,dataset$inj5)

> his<- hist(injury)

> his$density=his$counts/sum(his$counts)

> plot(his,freq = FALSE,xlab = "injury code",ylab = "proportion",main = "Histogram of injury code")

h) > Indollar<- log(dataset$total)

> hist(Indollar,xlab = "log dollar values of the claims",main = "histogram of log dollar values of the claims")

i) Claim size against Operational time

> plot(dataset$op\_time,dataset$total,ylab = "claim size",xlab = "operational time")

i) log of Claim size against Operational time

> plot(dataset$op\_time,dataset$total,ylab = "log claim size",xlab = “operational time",col=colour,log = "y")

k)  
> colour<-factor(dataset$legrep,levels = c(0,1),labels = c("blue","yellow"))

> plot(dataset$op\_time,dataset$total,ylab = "log claim size",xlab = “operational time",col=colour,log = "y")