**INPUT :**

#make this example reproducible

set.seed(1)

#create simple function to generate random last names

randomNames <- function(n=5000){do.call(paste0,replicate(5,sample(LETTERS,n,TRUE),FALSE))}

#create data frame

df <- data.frame(last\_name=randomNames(500),gpa=rnorm(500,mean=82,sd=3))

#view first six rows of data frame

head(df)

#define function to obtain systematic sample

obtain\_sys = function(N,n){ k= ceiling(N/n) r= sample(1:k,1), seq(r,r+k\*(n-1),k) }

#obtain systematic sample

sys\_sample\_df = df[obtain\_sys(nrow(df),100),]

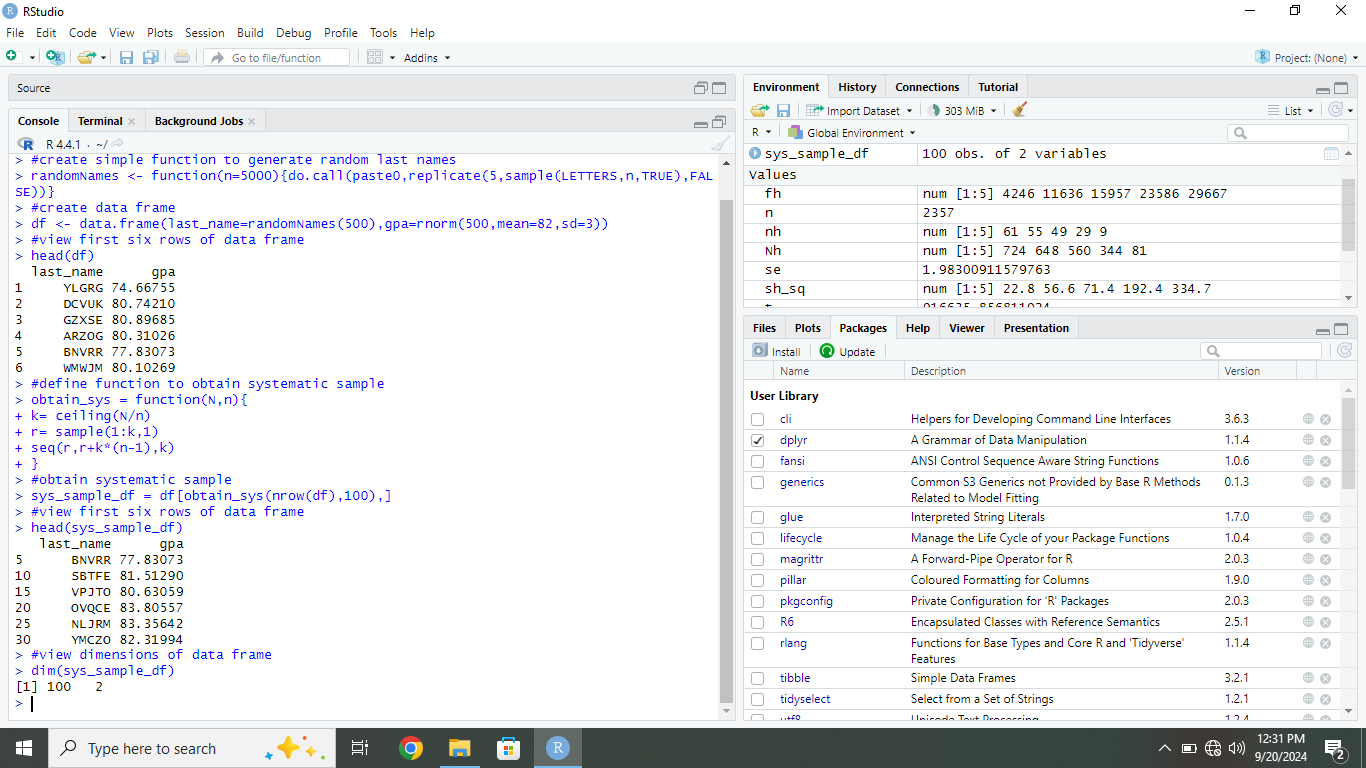
#view first six rows of data frame

head(sys\_sample\_df)

#view dimensions of data frame

dim(sys\_sample\_df)

**OUTPUT:**

****