CODEBOOK

Gabriel Olivares G

20/2/2021

---

title: "CODEBOOK"

author: "Gabriel Olivares G"

date: "20/2/2021"

output: word\_document

---

#Loading of the required packages

library(tidyverse)

library(dplyr)

library(readr)

library(reshape2)

# Cleaning up

rm(list=ls())

# Establish paths for reading the files that corresponds to the project.

setwd("~/R/COURSERA/Getting and cleaning data/getdata\_projectfiles\_UCI HAR Dataset/UCI HAR Dataset")

# contents of the working directory

(dir1<-dir())

# Getting the activity labels and variable names that are in the main directory

act\_labels<-read.table(dir1[1])

colnames(act\_labels)[2]<-"activity"

features<-read.table(dir1[2])

path\_test<-"C:/Users/gog/OneDrive/Documentos/R/COURSERA/Getting and cleaning data/getdata\_projectfiles\_UCI HAR Dataset/UCI HAR Dataset/test"

path\_train<-"C:/Users/gog/OneDrive/Documentos/R/COURSERA/Getting and cleaning data/getdata\_projectfiles\_UCI HAR Dataset/UCI HAR Dataset/train"

# Reading test files

setwd(path\_test)

test\_files<-dir(path\_test)

dir\_test<-dir(test\_files)

sub\_test<-read.table(test\_files[2],quote = "\"",comment.char = "")

colnames(sub\_test)<-"id"

x\_test<-as\_tibble(read.table(test\_files[3],quote = "\"",comment.char = ""))

y\_test<-as\_tibble(read.table(test\_files[4],quote = "\"",comment.char = ""))

# Code to assign features and Activity Labels to the test and train files

colnames(x\_test)<-features[,2]

colnames(y\_test)<-"tlabels"

# reading train files

setwd(path\_train)

train\_files<-dir(path\_train)

dir\_train<-dir(train\_files)

sub\_train<-as\_tibble(read.table(train\_files[2], quote = "\"",comment.char = ""))

colnames(sub\_train)<-"id"

x\_train<-as\_tibble(read.table(train\_files[3],quote = "\"",comment.char = ""))

colnames(x\_train)<-features[,2]

y\_train<-as\_tibble(read.table(train\_files[4],quote = "\"",comment.char = ""))

colnames(y\_train)<-"tlabels"

path\_data\_test<-"~/R/COURSERA/Getting and cleaning data/getdata\_projectfiles\_UCI HAR Dataset/UCI HAR Dataset/test/Inertial Signals/"

path\_data\_train<-"~/R/COURSERA/Getting and cleaning data/getdata\_projectfiles\_UCI HAR Dataset/UCI HAR Dataset/train/Inertial Signals/"

# joining activity names corresponding to the activity file labels (act\_labels)

y\_test<-merge(y\_test, act\_labels,by.x="tlabels",by.y="V1",sort=FALSE)

y\_train<-merge(y\_train, act\_labels,by.x="tlabels",by.y="V1",sort=FALSE)

x\_test<-cbind.data.frame(sub\_test,y\_test,x\_test)

x\_train<-cbind.data.frame(sub\_train,y\_train,x\_train)

# merge the x\_train and x\_test sets into one "data\_base"

data\_base<-as\_tibble(rbind.data.frame(x\_train,x\_test),.name\_repair = make.names)

#Extraction of the measurements of the mean and standard deviation for each measurement

mean\_std<-as\_tibble(select(data\_base,id,tlabels,activity,contains(c("mean","std"))),.name\_repair = make.names)

# Independent tidy data set with the average of each variable for each activity and each subject.

# data\_of\_means<-select(mean\_std,id,tlabels,activity,contains("mean"))

means\_by\_id<-aggregate.data.frame(mean\_std[,4:89],mean\_std[,1],mean)

means\_by\_activity<-aggregate.data.frame(mean\_std[,4:89],mean\_std[,c(2,3)],mean)

tidy\_data\_means<-merge.data.frame(means\_by\_id,means\_by\_activity,all=TRUE)

tidy\_data\_means<-select(tidy\_data\_means,id,activity,tlabels,colnames(tidy\_data\_means)[1:86])

tidy\_data\_means<-arrange (tidy\_data\_means,id,tlabels)

# WRITTING THE DATA FILE FOR STEP 5 OF THE SUBMISSION.

setwd("~/R/COURSERA/Getting and cleaning data/getdata\_projectfiles\_UCI HAR Dataset")

write.table(tidy\_data\_means,file="tidy\_means.txt",row.name=FALSE)