

Course Project

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packages

this packages are required to perform reading and other dplyr related functions

```
library(data.table)
library(tidyr)
library(dplyr)
```

```
##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:data.table':
##
##   between, first, last

## The following objects are masked from 'package:stats':
##
##   filter, lag

## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union
```

fetching file from internet

this part will fetchs the .zip file from the given link then check for existing file or directory if doesn't exist it will create the file/directory and download and save the .zip file in directory

```
zipfileurl<-"https://d396qusza40orc.cloudfront.net/getdata%2Fprojectfiles%2FUCI%20HAR%20Dataset.zip"
if(file.exists("data")){
  download.file(zipfileurl,destfile = "./data/dataset.zip")
} else {
  dir.create("data")
  download.file(zipfileurl,destfile = "./data/dataset.zip")
}
```

#Unzipping

After saving the file in local directory or working directory We need to unzip the given file to extract the files required for cleaning and analysis

```
unzip("./data/dataset.zip")
```

Reading

After UnZipping the file we will read required file using fread() method for faster reading and set column Name accordingly for appropriate tables

```
feat<-fread("./UCI HAR Dataset/features.txt",col.names = c("no","func"))
activity<-fread("./UCI HAR Dataset/activity_labels.txt",col.names = c("act_code","activity"))
sub_test<-fread("./UCI HAR Dataset/test/subject_test.txt",col.names = "subject")
sub_train<-fread("./UCI HAR Dataset/train/subject_train.txt",col.names = "subject")
x_test<-fread("./UCI HAR Dataset/test/X_test.txt",col.names = feat$func)
x_train<-fread("./UCI HAR Dataset/train/X_train.txt",col.names = feat$func)
y_test<-fread("./UCI HAR Dataset/test/Y_test.txt",col.names = "code" )
y_train<-fread("./UCI HAR Dataset/train/Y_train.txt",col.names = "code")
```

Merging

Now we will merge test and train dataframe/tables for cleaning process we will use rbind() and cbind() methods to merge the dataframes

```
mergeX<-rbind(x_test,x_train)
mergeY<-rbind(y_test,y_train)
mergeSub<-rbind(sub_test,sub_train)
mergedD<-cbind(mergeSub,mergeX,mergeY)
```

Extracting required Measurements

According to question we gone fetching only columns having data set related to subject,activity,mean and standard deviation this subsetting is performed using dplyr packages select() method with its attributes such as contains() for pattern matching

```
tidydataset<-mergedD%>%select("subject","code",contains("mean"),contains("std"))
```

here the contains("mean") and contains("std") will fetch all column names which contains mean and std in it.

Descriptive activity names to name the activities in the data set

we gone use activity dataframe to set activity name in the new tidydataset

```
tidydataset$code<-activity[tidydataset$code,2]
```

this line will take data in 2 column of activity data frame that is activityName and assign it to tidydataset\$code column with appropriate code match

Appropriately labels the data set with descriptive variable names.

for this task we gone use `gsub()` method to rename/replace new variable name to make it more readable and easy to understand

```
names(tidydataset)<-gsub("subject", "Sub", names(tidydataset), ignore.case = T)
names(tidydataset)<-gsub("-", "", names(tidydataset), ignore.case = T)
names(tidydataset)<-gsub("code", "ActivityName", names(tidydataset), ignore.case = T)
names(tidydataset)<-gsub("\\\\()", "", names(tidydataset), ignore.case = T)
names(tidydataset)<-gsub("acc", "Accelerometer", names(tidydataset), ignore.case = T)
names(tidydataset)<-gsub("gyro", "Gyroscope", names(tidydataset), ignore.case = T)
names(tidydataset)<-gsub("^t", "Time", names(tidydataset), ignore.case = T)
names(tidydataset)<-gsub("^f", "Frequency", names(tidydataset), ignore.case = T)
names(tidydataset)<-gsub("BodyBody", "Body", names(tidydataset), ignore.case = T)
names(tidydataset)<-gsub("tBody", "TimeBody", names(tidydataset), ignore.case = T)
names(tidydataset)<-gsub("Mag", "Magnitude", names(tidydataset), ignore.case = T)
names(tidydataset)<-gsub("gravity", "Gravity", names(tidydataset), ignore.case = T)
names(tidydataset)<-gsub("angle", "Angle", names(tidydataset), ignore.case = T)
names(tidydataset)<-gsub("mean", "Mean", names(tidydataset), ignore.case = T)
names(tidydataset)<-gsub("std", "Std", names(tidydataset), ignore.case = T)
names(tidydataset)<-gsub("Freq", "Frequency", names(tidydataset), ignore.case = T)
names(tidydataset)<-gsub("Frequencyuency", "Frequency", names(tidydataset), ignore.case = T)
```

From the data set in step 4, creates a second, independent tidy data set with the average of each variable for each activity and each subject.

First we will create a new independent tidy data set with the average of each variable for each activity with each subject we will use pipelining method for this line of code to make it compact and readable first we will group the dataframe by subject and activityName column of tidydataset after that we gone use `summarise_all()` method to summarize all the columns in dataset using mean function once all this is done we gone assign the resulting tidy data set to new variable

```
ResultTidy<-tidydataset%>%group_by(Sub,ActivityName)%>%summarise_all(mean)
```

Now writing the new dataset into directory to save it.

```
fileName<-readline(prompt="Enter FileNames with .txt extension: ")
```

```
## Enter FileNames with .txt extension:
```

```
if(file.exists(fileName)){
  message("File already exists")
  newFileName<-readline(prompt="Enter FileNames : ")
  write.table(ResultTidy,newFileName,row.names = F)
  message("File Created")
}else{
  write.table(ResultTidy,fileName,row.names = F)
  message("File Created")
}
```

```

## "Sub" "ActivityName" "TimeBodyAccelerometerMeanX" "TimeBodyAccelerometerMeanY" "TimeBodyAccelerometerMeanZ"
## 1 "LAYING" 0.22159824394 -0.0405139534294 -0.11320355358 -0.24888179828 0.70554977346 0.4458177198 0.0
## 1 "SITTING" 0.261237565425532 -0.00130828765170213 -0.104544182255319 0.831509933404255 0.20441159268
## 1 "STANDING" 0.278917629056604 -0.0161375901037736 -0.110601817735849 0.942952000377358 -0.272983832
## 1 "WALKING" 0.277330758736842 -0.0173838185273684 -0.111148103547368 0.935223201473684 -0.2821650212
## 1 "WALKING_DOWNSTAIRS" 0.289188320408163 -0.00991850461020408 -0.107566190908163 0.931874418979592 -0.
## 1 "WALKING_UPSTAIRS" 0.255461689622641 -0.0239531492643396 -0.0973020020943396 0.89335109754717 -0.3
## 2 "LAYING" 0.281373403958333 -0.0181587397583333 -0.107245610416667 -0.509754238125 0.752536639375 0
## 2 "SITTING" 0.27708735173913 -0.0156879937282609 -0.109218272456522 0.940477273043478 -0.10563002449
## 2 "STANDING" 0.277911472222222 -0.0184208270166667 -0.105908536055556 0.896928566851852 -0.370062696
## 2 "WALKING" 0.276426586440678 -0.0185949199145763 -0.105500357966102 0.91301733338983 -0.34660709 0
## 2 "WALKING_DOWNSTAIRS" 0.27761534806383 -0.0226614158361702 -0.116812942382979 0.861831345531915 -0.3
## 2 "WALKING_UPSTAIRS" 0.247164790395833 -0.0214121132045833 -0.152513899520833 0.790717418541667 -0.4
## 3 "LAYING" 0.275516852741935 -0.0189556785048387 -0.101300477506452 -0.241758478064516 0.83703209967
## 3 "SITTING" 0.257197599134615 -0.00350299841730769 -0.0983579203269231 0.901098984615385 0.127303379
## 3 "STANDING" 0.280046513278689 -0.0143376555065574 -0.101621722633148 0.93503077852459 -0.3017351303
## 3 "WALKING" 0.275567462068966 -0.0171767844203448 -0.112674859827586 0.936506743275862 -0.2619863579
## 3 "WALKING_DOWNSTAIRS" 0.292423484693878 -0.0193554079328571 -0.116139842908163 0.939057787755102 -0
## 3 "WALKING_UPSTAIRS" 0.260819873067797 -0.0324109410555932 -0.110064863437288 0.883533436101695 -0.3
## 4 "LAYING" 0.263559214981481 -0.0150031841055556 -0.110688150314815 -0.420664662222222 0.91516510425
## 4 "SITTING" 0.27153827992 -0.007163065158 -0.10587459588 0.8693030064 0.211622539936894 0.1101204810
## 4 "STANDING" 0.280499745892857 -0.00948911098553571 -0.0961574905535714 0.95619779125 -0.07590090610
## 4 "WALKING" 0.278582015166667 -0.0148399475341667 -0.11140306485 0.963999696833333 -0.08585402656666
## 4 "WALKING_DOWNSTAIRS" 0.279965329555556 -0.00980200850666667 -0.1067775246 0.947731858666667 -0.062
## 4 "WALKING_UPSTAIRS" 0.270876696730769 -0.0319804295729615 -0.114219455519231 0.946264314423077 -0.2
## 5 "LAYING" 0.278334325576923 -0.0183042123269231 -0.107937603673077 -0.483470597692308 0.95489034615
## 5 "SITTING" 0.273694139545455 -0.00990083527045455 -0.108540300265909 0.880731443863636 0.168445524
## 5 "STANDING" 0.282544390892857 -0.00700418554517857 -0.102171095696429 0.960188699107143 -0.03871012
## 5 "WALKING" 0.27784234625 -0.0172850317482679 -0.107741776464286 0.972624959821429 -0.10044028530357
## 5 "WALKING_DOWNSTAIRS" 0.29354392712766 -0.00850107533191489 -0.100319930659574 0.956649352553192 -0
## 5 "WALKING_UPSTAIRS" 0.268459469914894 -0.0325269755153191 -0.107471453914894 0.936821834893617 -0.2
## 6 "LAYING" 0.248656520140351 -0.0102529170561404 -0.133119570368421 -0.47670987877193 0.956593814210
## 6 "SITTING" 0.276778487454545 -0.0145911615290909 -0.110127728709091 0.933692934909091 0.06826286633
## 6 "STANDING" 0.280346248596491 -0.0181236327175439 -0.112172831947368 0.945139003859649 -0.230251036
## 6 "WALKING" 0.283658868070175 -0.0168954189082456 -0.110303165877193 0.958067455087719 -0.2146948522
## 6 "WALKING_DOWNSTAIRS" 0.277045258145833 -0.019536840063125 -0.107209356208333 0.928531455208333 -0.1
## 6 "WALKING_UPSTAIRS" 0.268229355098039 -0.0272425385070588 -0.122082438784314 0.913632241568627 -0.3
## 7 "LAYING" 0.250176694038462 -0.0204411516884615 -0.101361036576923 -0.502814250576923 0.39344427807
## 7 "SITTING" 0.284674637291667 -0.01461097580375 -0.122464597625 0.969147824375 0.00608846646041667 0
## 7 "STANDING" 0.282723539433962 -0.0145740341037736 -0.0997778303207547 0.958728687924528 -0.11760704
## 7 "WALKING" 0.275592961754386 -0.018653665345614 -0.110912234947368 0.932566472280702 -0.15909700368
## 7 "WALKING_DOWNSTAIRS" 0.28030708 -0.0166332372978723 -0.096938308587234 0.930623632765957 -0.129871
## 7 "WALKING_UPSTAIRS" 0.248706923078431 -0.0275639005607843 -0.143769688803922 0.81874656 -0.24095094
## 8 "LAYING" 0.261254282907407 -0.0212281733881481 -0.102245365611111 -0.405930036111111 0.58992243481
## 8 "SITTING" 0.267491472934783 -0.00672550621304348 -0.104461049130435 0.832453878043478 0.2400951170
## 8 "STANDING" 0.279620986111111 -0.0148113067148148 -0.106114996837037 0.957669921111111 -0.090460348
## 8 "WALKING" 0.27468631 -0.0186628865310417 -0.107252090833333 0.913586347916667 -0.217102194583333 -0
## 8 "WALKING_DOWNSTAIRS" 0.283484089210526 -0.0211058674973684 -0.107598135394737 0.914023498421053 -0
## 8 "WALKING_UPSTAIRS" 0.258880152048781 -0.0282415136341463 -0.11512211995122 0.860368718780488 -0.29
## 9 "LAYING" 0.2591955368 -0.020526821662 -0.10754972144 -0.5802528348 -0.1191541962 0.9578730416 0.08
## 9 "SITTING" 0.24832674354 -0.02701677698 -0.07537846886 0.9163245106 -0.0414258228938 0.085263099144
## 9 "STANDING" 0.282310057333333 -0.0200454954022222 -0.0952747481333333 0.961323502222222 -0.01038381
## 9 "WALKING" 0.278502842115385 -0.0180891971284423 -0.110820512307692 0.951867079615385 -0.0314341738
## 9 "WALKING_DOWNSTAIRS" 0.295923445 -0.0203994269075476 -0.0910278793952381 0.938417773333333 -0.0352

```

9 "WALKING_UPSTAIRS" 0.262436475714286 -0.0195101099975714 -0.125219003959184 0.902647777755102 -0.0195101099975714
 ## 10 "LAYING" 0.280230574137931 -0.024294484137931 -0.117168642362069 -0.453069737586207 -0.13929768103
 ## 10 "SITTING" 0.270612056481481 -0.015042681852037 -0.104253238796296 0.791887198148148 -0.041260775
 ## 10 "STANDING" 0.276650300681818 -0.0155418603409091 -0.107964083931818 0.954008785454545 -0.04315978
 ## 10 "WALKING" 0.278574076603774 -0.017022351190566 -0.109057512132075 0.963092149811321 -0.0838277013
 ## 10 "WALKING_DOWNSTAIRS" 0.290401594315789 -0.0200050770710526 -0.110848597247368 0.939807421052632 -0.0200050770710526
 ## 10 "WALKING_UPSTAIRS" 0.267121853404255 -0.0143854920340426 -0.118180420834043 0.931861027446809 -0.0143854920340426
 ## 11 "LAYING" 0.280592970877193 -0.0176598052315789 -0.108786578070175 -0.134832031403509 0.9430179414
 ## 11 "SITTING" 0.276590197358491 -0.0149195616754717 -0.112840218339623 0.871963798301887 0.2137163057
 ## 11 "STANDING" 0.277715562765957 -0.0171990886595745 -0.108686630425532 0.956464535957447 -0.17308270
 ## 11 "WALKING" 0.271821892881356 -0.0166475833623729 -0.106096304033898 0.946468451355932 -0.212045870
 ## 11 "WALKING_DOWNSTAIRS" 0.291605631956522 -0.0178097721219565 -0.111070149978261 0.941746406521739 -0.0178097721219565
 ## 11 "WALKING_UPSTAIRS" 0.263775859277778 -0.0303157822055556 -0.106797216481481 0.892626155555556 -0.0303157822055556
 ## 12 "LAYING" 0.260113433 -0.0175203917146667 -0.108160125666667 -0.3785920653 0.8033788345 0.27504319
 ## 12 "SITTING" 0.275007224901961 -0.0157892988523529 -0.106307228960784 0.926228975490196 0.0830509010
 ## 12 "STANDING" 0.277405834918033 -0.0169002543196721 -0.105526999754098 0.957317821803279 -0.21886535
 ## 12 "WALKING" 0.2771286656 -0.015560927606 -0.10316110632 0.9668735148 -0.1559834498 -0.03608428788 0
 ## 12 "WALKING_DOWNSTAIRS" 0.281521097391304 -0.018084266865793 -0.10955593226087 0.949861980652174 -0.018084266865793
 ## 12 "WALKING_UPSTAIRS" 0.272970338653846 -0.0263574903403846 -0.107339730115385 0.938371473269231 -0.0263574903403846
 ## 13 "LAYING" 0.276716360483871 -0.020440454366129 -0.104331864532258 -0.156852206467742 0.65640094435
 ## 13 "SITTING" 0.274328499591837 -0.00587732936326531 -0.0972465110836735 0.92557651244898 0.101769752
 ## 13 "STANDING" 0.277758431052632 -0.0167891993964912 -0.112124137754386 0.942695296842105 -0.23994314
 ## 13 "WALKING" 0.275883130350877 -0.0185660651947368 -0.111431456192982 0.910855709298246 -0.283658580
 ## 13 "WALKING_DOWNSTAIRS" 0.294907553404255 -0.0143723839108511 -0.101993941531915 0.941875619787234 -0.0143723839108511
 ## 13 "WALKING_UPSTAIRS" 0.258203939581818 -0.0277392253910909 -0.125767265890909 0.847634313454545 -0.0277392253910909
 ## 14 "LAYING" 0.233275439803922 -0.0113424652490196 -0.0868333315509804 -0.145483631627451 0.485396927
 ## 14 "SITTING" 0.279990577037037 -0.00870565463888889 -0.100401490425926 0.939038759814815 -0.03645339
 ## 14 "STANDING" 0.280545613833333 -0.01520781344 -0.103817701790667 0.875319569 -0.226692231166667 -0.01520781344
 ## 14 "WALKING" 0.271959598644068 -0.0217785380966102 -0.106756369135593 0.802973961525424 -0.270314822
 ## 14 "WALKING_DOWNSTAIRS" 0.293422115555556 -0.0200141413657778 -0.0928330165533333 0.81629643 -0.2642
 ## 14 "WALKING_UPSTAIRS" 0.26242106612963 -0.0204388180024074 -0.112279688983333 0.688256122222222 -0.0204388180024074
 ## 15 "LAYING" 0.2894756525 -0.0166296542054167 -0.118530240291667 -0.1719930545 0.899242553055556 -0.0166296542054167
 ## 15 "SITTING" 0.27290337979661 -0.0117188472271186 -0.11366125320339 0.89036426220339 0.2108493050169
 ## 15 "STANDING" 0.278915803962264 -0.0183516360396226 -0.105910832679245 0.965528899622642 -0.16471317
 ## 15 "WALKING" 0.273899207962963 -0.0170809740090741 -0.107621819518519 0.951524391481481 -0.233918282
 ## 15 "WALKING_DOWNSTAIRS" 0.280198851190476 -0.00563047804309524 -0.110526066428571 0.932302200476191 -0.00563047804309524
 ## 15 "WALKING_UPSTAIRS" 0.270187595833333 -0.0287523860708333 -0.116952464895833 0.918544812291667 -0.0287523860708333
 ## 16 "LAYING" 0.274227162571429 -0.0166103510562857 -0.107310493242857 -0.206783742242857 -0.019927022
 ## 16 "SITTING" 0.280768574492754 -0.0102497939956522 -0.0891404038405797 0.942457377971014 -0.08658825
 ## 16 "STANDING" 0.283497402948718 -0.0165999672935897 -0.103657729076923 0.941587749358974 -0.05788670
 ## 16 "WALKING" 0.276023564509804 -0.0204286929452941 -0.108804049803922 0.925981326078431 -0.066824647
 ## 16 "WALKING_DOWNSTAIRS" 0.295586802191489 -0.0183898583787234 -0.119873705148936 0.917818427021277 -0.0183898583787234
 ## 16 "WALKING_UPSTAIRS" 0.255986102627451 -0.0143654945011765 -0.124074517745098 0.826874282745098 -0.0143654945011765
 ## 17 "LAYING" 0.269780085577465 -0.0168462006729577 -0.107006279704225 -0.19913309 0.658792072253521 0
 ## 17 "SITTING" 0.2773570196875 -0.014156274084375 -0.11362408509375 0.94488374765625 -0.00281467317187
 ## 17 "STANDING" 0.277942503333333 -0.0174120064169231 -0.111432145565 0.904678547435897 -0.25748681794
 ## 17 "WALKING" 0.272341855245902 -0.0184875403339344 -0.109792122032787 0.92811236852459 -0.1799273827
 ## 17 "WALKING_DOWNSTAIRS" 0.29391828326087 -0.0167359404347826 -0.0892432745173913 0.928817578043478 -0.0167359404347826
 ## 17 "WALKING_UPSTAIRS" 0.252604768583333 -0.0228645614308333 -0.121290442104167 0.853530565833333 -0.0228645614308333
 ## 18 "LAYING" 0.274691576923077 -0.0173937684615385 -0.107698927907692 -0.220600509076923 0.7197554036
 ## 18 "SITTING" 0.27727001877193 -0.0128691279736842 -0.111904775824561 0.909816469298246 0.12988647622
 ## 18 "STANDING" 0.278458805890411 -0.0166353518150685 -0.108453355945205 0.947573239863014 -0.20420632
 ## 18 "WALKING" 0.273887758571429 -0.0178023631866071 -0.104218315464286 0.92386524875 -0.2543170858928
 ## 18 "WALKING_DOWNSTAIRS" 0.288439468909091 -0.0168666920221818 -0.1033908092 0.932277478363636 -0.225

18 "WALKING_UPSTAIRS" 0.265401201896552 -0.0222060684378914 -0.112655891327586 0.883330258448276 -0.112655891327586
 ## 19 "LAYING" 0.272653733493976 -0.0171426864421687 -0.10898146186747 -0.680043155060241 0.72564662277
 ## 19 "SITTING" 0.273830316164384 -0.016739260030137 -0.10870765430137 0.581371509041096 0.360343534657
 ## 19 "STANDING" 0.27817226 -0.0154244056945205 -0.10904190460274 0.944045837534247 -0.223897807808219
 ## 19 "WALKING" 0.273931172307692 -0.0191773587903846 -0.122736673192308 0.935222559230769 -0.2233381
 ## 19 "WALKING_DOWNSTAIRS" 0.262688053871795 -0.0145942275069487 -0.133695240660974 0.881940855128205
 ## 19 "WALKING_UPSTAIRS" 0.242118808925 -0.0303986615775 -0.151054607725 0.8294283725 -0.3871007085
 ## 20 "LAYING" 0.239507882205882 -0.0144406281132353 -0.104274322538235 -0.472431415573529 0.8648829566
 ## 20 "SITTING" 0.278045439090909 -0.0147229305131818 -0.108369634515152 0.924454522424242 0.0733385412
 ## 20 "STANDING" 0.278076904657534 -0.0180695049161644 -0.100402759931507 0.911231752465753 -0.30593871
 ## 20 "WALKING" 0.272589336470588 -0.021199992245098 -0.113539477098039 0.899965205686274 -0.3444439131
 ## 20 "WALKING_DOWNSTAIRS" 0.296144421355556 -0.00964120773155556 -0.104602925937778 0.91972663 -0.2774
 ## 20 "WALKING_UPSTAIRS" 0.252098317156863 -0.0282258047588235 -0.121023947784314 0.777095717058824 -0.4
 ## 21 "LAYING" 0.271325472455556 -0.0184233048415556 -0.103253832233333 -0.174349174822222 0.599992678
 ## 21 "SITTING" 0.277539616823529 -0.0144009705494118 -0.112057887741176 0.940031368 0.0215206708823529
 ## 21 "STANDING" 0.27695224258427 -0.0167084730205618 -0.110417855808989 0.881213341910112 -0.346155558
 ## 21 "WALKING" 0.279183526730769 -0.0181610317526923 -0.104319332403846 0.862524800961538 -0.370984549
 ## 21 "WALKING_DOWNSTAIRS" 0.3014610196 -0.0173195390157778 -0.09816866218 0.872683205555556 -0.3566732
 ## 21 "WALKING_UPSTAIRS" 0.265194544680851 -0.0237218695148936 -0.125414265340426 0.781177210851064 -0.4
 ## 22 "LAYING" 0.279959721194444 -0.0142629864502778 -0.110800924652778 -0.418494577083333 0.6324840756
 ## 22 "SITTING" 0.273583822709677 -0.0123468446419355 -0.105827369516129 0.839305928709677 0.208553884
 ## 22 "STANDING" 0.279053861587302 -0.0158563207496825 -0.104967423820635 0.954064297619048 -0.22641877
 ## 22 "WALKING" 0.27886459 -0.0167213607957174 -0.107112510934783 0.936096410434783 -0.259644937173913
 ## 22 "WALKING_DOWNSTAIRS" 0.284458963861111 -0.0197999371686389 -0.1074157796 0.921820641944444 -0.222
 ## 22 "WALKING_UPSTAIRS" 0.248391534566667 -0.0268622561133333 -0.117550861738095 0.889454382857143 -0.3
 ## 23 "LAYING" 0.274038007986111 -0.0216553835833333 -0.104256776291667 -0.391564962777778 0.4384340673
 ## 23 "SITTING" 0.273351251617647 -0.0133945015676471 -0.103808679294118 0.936509242941176 0.1217510625
 ## 23 "STANDING" 0.277899323235294 -0.0177475547867647 -0.1105970177575 0.919857125882353 -0.1174013596
 ## 23 "WALKING" 0.273211884237288 -0.0183618711932203 -0.113382994084746 0.939809688644068 -0.16176137
 ## 23 "WALKING_DOWNSTAIRS" 0.289897411148148 -0.0162111457238889 -0.0988123712574074 0.923711401296296
 ## 23 "WALKING_UPSTAIRS" 0.249995171031373 -0.0323844029237255 -0.126890616782353 0.843438810196078 -0.3
 ## 24 "LAYING" 0.272850494930556 -0.0173555210111111 -0.107236237236111 -0.359292534027778 0.7384306993
 ## 24 "SITTING" 0.273475690147059 -0.0131255097938235 -0.103041061426471 0.919637604411765 0.1822546519
 ## 24 "STANDING" 0.280348883913043 -0.0144785340348986 -0.108222553855072 0.96644228 -0.145201300942029
 ## 24 "WALKING" 0.276980816034483 -0.0225446400534483 -0.110595952913793 0.95970108137931 -0.1151162418
 ## 24 "WALKING_DOWNSTAIRS" 0.288631208909091 -0.0145730348310909 -0.104818820272727 0.950883416727273 -0.3
 ## 24 "WALKING_UPSTAIRS" 0.269881106779661 -0.0251979434569492 -0.114248610966102 0.906369500508475 -0.3
 ## 25 "LAYING" 0.250791828613699 -0.0188943663671233 -0.100428830260274 -0.461102531369863 0.6206589199
 ## 25 "SITTING" 0.278541482461538 -0.0147696808030769 -0.109160440476923 0.865686078153846 0.2082871422
 ## 25 "STANDING" 0.278013701621622 -0.0163569730274324 -0.107352957594595 0.929794733108108 -0.15931678
 ## 25 "WALKING" 0.278992759054054 -0.0186477624716216 -0.108737636297297 0.937483114459459 -0.127315870
 ## 25 "WALKING_DOWNSTAIRS" 0.291329666206897 -0.0210170522987931 -0.107192376965517 0.929627532241379 -0.3
 ## 25 "WALKING_UPSTAIRS" 0.277995411384615 -0.0269863524264615 -0.126210440292308 0.927693239538462 -0.3
 ## 26 "LAYING" 0.271645864540789 -0.0191895728026316 -0.105002540289474 -0.621309715263158 0.8030150115
 ## 26 "SITTING" 0.258243530166667 -0.00713364541358974 -0.0974448692333333 0.782955611794872 0.22310556
 ## 26 "STANDING" 0.281127035405405 -0.0166608306652703 -0.110237796416216 0.965460891621622 -0.14031542
 ## 26 "WALKING" 0.279264443728814 -0.0154259586949153 -0.108927011474576 0.960647754576271 -0.133922185
 ## 26 "WALKING_DOWNSTAIRS" 0.2792845828 -0.01262580966778 -0.1064396194 0.9467972718 -0.0799003729 0.153
 ## 26 "WALKING_UPSTAIRS" 0.272691394545455 -0.0281633797398182 -0.121943461236364 0.942095257090909 -0.3
 ## 27 "LAYING" 0.274102492432432 -0.0179867611216216 -0.107699732837838 -0.530434604864865 0.5678794940
 ## 27 "SITTING" 0.273941302571429 -0.0155269799285714 -0.105521912588571 0.839464714 0.212947021371429
 ## 27 "STANDING" 0.279566921625 -0.016593236445 -0.107835818025 0.965351492 -0.188504847375 -0.00557416
 ## 27 "WALKING" 0.276849485438596 -0.0166478783221912 -0.112822289263158 0.944759287368421 -0.187497034
 ## 27 "WALKING_DOWNSTAIRS" 0.2975441875 -0.0135564467159091 -0.112837694688636 0.931380178636364 -0.166

```
## 27 "WALKING_UPSTAIRS" 0.265770253921569 -0.0200953324078431 -0.123530438196078 0.868000278627451 -0.123530438196078 0.868000278627451 -0.123530438196078
## 28 "LAYING" 0.2759134825 -0.0167537858225 -0.1083448529625 -0.490334541875 0.1440732745 0.0157570025 -0.0157570025
## 28 "SITTING" 0.276977629444444 -0.0185404441258333 -0.111517939555556 0.907331309166667 -0.1125967281 -0.1125967281 -0.1125967281
## 28 "STANDING" 0.277795069113924 -0.0172635124672152 -0.106579385202532 0.948514848481013 -0.2476561616 -0.2476561616 -0.2476561616
## 28 "WALKING" 0.281228223888889 -0.0156759722981481 -0.103714705396296 0.942930275555556 -0.2293161516 -0.2293161516 -0.2293161516
## 28 "WALKING_DOWNSTAIRS" 0.293642076521739 -0.0220230465913043 -0.10858897408913 0.929291680434783 -0.0760967741 -0.0760967741 -0.0760967741
## 28 "WALKING_UPSTAIRS" 0.262005841764706 -0.0279443943478431 -0.121514025692157 0.854508231764706 -0.0760967741 -0.0760967741 -0.0760967741
## 29 "LAYING" 0.287295196811594 -0.0171965484202899 -0.109462068173913 -0.346789842753623 0.8075353734 -0.8075353734 -0.8075353734
## 29 "SITTING" 0.2771799775 -0.016630680375 -0.1104118192 0.891563755166667 0.1556594569 0.286256063666 -0.286256063666
## 29 "STANDING" 0.277965065846154 -0.0172605869061538 -0.108659067476923 0.974508732 -0.05848715356 -0.05848715356 -0.05848715356
## 29 "WALKING" 0.271999916792453 -0.0162915600588679 -0.106632427301887 0.96237438509434 -0.1273180786 -0.1273180786 -0.1273180786
## 29 "WALKING_DOWNSTAIRS" 0.293140441083333 -0.01494121505625 -0.0981339984895833 0.948486215 -0.0760967741 -0.0760967741 -0.0760967741
## 29 "WALKING_UPSTAIRS" 0.265423066877551 -0.0299465312326531 -0.118000587840816 0.929258953877551 -0.0760967741 -0.0760967741 -0.0760967741
## 30 "LAYING" 0.281033900571429 -0.0194494098614286 -0.1036581505 -0.344737755285714 0.732661247714286 -0.732661247714286 -0.732661247714286
## 30 "SITTING" 0.268336081379032 -0.00804731295322581 -0.099515446133871 0.825473836935484 0.1145883920 -0.1145883920 -0.1145883920
## 30 "STANDING" 0.277112699152542 -0.0170163887813559 -0.108756209835593 0.968556705084746 -0.100296804 -0.100296804 -0.100296804
## 30 "WALKING" 0.276406758 -0.0175880385730769 -0.0986247068969231 0.965217551076923 -0.157673823846154 -0.157673823846154 -0.157673823846154
## 30 "WALKING_DOWNSTAIRS" 0.283190646967742 -0.0174383900204839 -0.0999781422322581 0.958000491451613 -0.0760967741 -0.0760967741 -0.0760967741
## 30 "WALKING_UPSTAIRS" 0.271415642261538 -0.0253311698786154 -0.124697493775385 0.93182983 -0.22664722 -0.22664722 -0.22664722
```

```
## File Created
```

in the script part we gone take filename from User and then check for its existance and create it,if the file exists the block will prompt the user to enter new name with file extension. i.e “.txt”

to create CSV file formate of the tidy data

if you want to save a copy of the tidy data set has a CSV file run following line:

```
write.csv(ResultTidy,"ResultTidy.csv")
```