#Code Book

##Getting and Cleaning Data Assignment

Initially we have downloaded the zip file containing the datasets and unzipped it into our Working Directory which is linked to the GitHub Repository

```
xtrain<-read.table("./UCI HAR Dataset/train/X_train.txt")
ytrain<-read.table("./UCI HAR Dataset/train/Y_train.txt")
subtrain<-read.table("./UCI HAR Dataset/train/subject_train.txt")
xtest<-read.table("./UCI HAR Dataset/test/X_test.txt")
ytest<-read.table("./UCI HAR Dataset/test/Y_test.txt")
subtest<-read.table("./UCI HAR Dataset/test/subject_test.txt")
features<-read.table("./UCI HAR Dataset/features.txt")
actlabels<-read.table("./UCI HAR Dataset/activity_labels.txt")
```

###Variables **xtrain** : Dataset containing Training Set

ytrain : Dataset containing Training Labels

subtrain : Dataset in which Each row identifies the subject who performed the activity for each window sample

xtest : Dataset containing Test Set

ytest : Dataset containing Test Labels

subtest : Dataset in which Each row identifies the subject who performed the activity for each window sample

features : Dataset containing list of all features

actlabels : Dataset containing label and it's corresponding activity name

```
train<-cbind(subtrain,ytrain,xtrain)
test<-cbind(subtest,ytest,xtest)
##features
xtname<-c('subid','actid',features[,2])
##xtname
colnames(train)<-xtname
colnames(test)<-xtname
##actlabels
colnames(actlabels)<-c('actid','activityname')
combined<-rbind(train,test)
```

train and test : These are the datasets containing all the data regarding training and test sets

xtname : Contains the name of all variable names (column names) of the data set

combined : The merged dataset containaing all the test and training data with activity names

comb : Subset dataset of Combined which has the Acitivity Id, Subject Id, Columns having means and standard deviations

```
{r, eval=FALSE} checkname<-grepl("subid",colnames(combined))|grepl("actid",colnames(combined))|grepl("m
comb<-combined[,checkname] finaldf<-merge(actlabels,comb,by="actid",all.x = TRUE) tidydataset
<- aggregate(. ~actid+subid+activityname,finaldf, mean) tidydataset<-tidydataset[order(tidydataset$actio
write.table(tidydataset, "tidydataset.txt")
```

tidydataset : Output data set having a independent tidy data set with the average of each variable for each activity and each subject.