**Code Book**

**Variables (units)**

Time-BodyAcc-mean-X – Mean body acceleration along x-axis (time)

Time-BodyAcc-mean-Y – Mean body acceleration along y-axis (time)

Time-BodyAcc-mean-Z – Mean body acceleration along z-axis (time)

Time-GravityAcc-mean-X – Mean gravity acceleration along x-axis (time)

Time-GravityAcc-mean-Y – Mean gravity acceleration along y-axis (time)

Time-GravityAcc-mean-Z – Mean gravity acceleration along z-axis (time)

Time-BodyAccJerk-mean-X – Mean body acceleration jerk signal along x-axis (time)

Time-BodyAccJerk-mean-Y – Mean body acceleration jerk signal along y-axis (time)

Time-BodyAccJerk-mean-Z – Mean body acceleration jerk signal along z-axis (time)

Time-BodyGyro-mean-X – Mean body angular velocity along x-axis (time)

Time-BodyGyro-mean-Y – Mean body angular velocity along y-axis (time)

Time-BodyGyro-mean-Z – Mean body angular velocity along z-axis (time)

Time-BodyGyroJerk-mean-X – Mean body angular velocity jerk signal along x-axis (time)

Time-BodyGyroJerk-mean-Y – Mean body angular velocity jerk signal along y-axis (time)

Time-BodyGyroJerk-mean-Z – Mean body angular velocity jerk signal along z-axis (time)

Time-BodyAccMag-mean – Mean body acceleration magnitude (time)

Time-GravityAccMag-mean – Mean gravity acceleration magnitude (time)

Time-BodyAccJerkMag-mean – Mean body acceleration jerk signal magnitude (time)

Time-BodyGyroMag-mean – Mean body angular velocity magnitude (time)

Time-BodyGyroJerkMag-mean – Mean body angular velocity jerk signal magnitude (time)

Freq-BodyAcc-mean-X – Mean body acceleration along x-axis (frequency)

Freq-BodyAcc-mean-Y – Mean body acceleration along y-axis (frequency)

Freq-BodyAcc-mean-Z – Mean body acceleration along z-axis (frequency)

Freq-BodyAcc-meanFreq-X – Mean frequency of body acceleration along x-axis (frequency)

Freq-BodyAcc-meanFreq-Y – Mean frequency of body acceleration along y-axis (frequency)

Freq-BodyAcc-meanFreq-Z – Mean frequency of body acceleration along z-axis (frequency)

Freq-BodyAccJerk-mean-X – Mean body acceleration jerk signal along x-axis (frequency)

Freq-BodyAccJerk-mean-Y – Mean body acceleration jerk signal along y-axis (frequency)

Freq-BodyAccJerk-mean-Z – Mean body acceleration jerk signal along z-axis (frequency)

Freq-BodyAccJerk-meanFreq-X – Mean frequency of body acceleration jerk signal along x-axis (frequency)

Freq-BodyAccJerk-meanFreq-Y-X – Mean frequency of body acceleration jerk signal along y-axis (frequency)

Freq-BodyAccJerk-meanFreq-Z-X – Mean frequency of body acceleration jerk signal along z-axis (frequency)

Freq-BodyGyro-mean-X – Mean body angular velocity along x-axis (frequency)

Freq-BodyGyro-mean-Y – Mean body angular velocity along y-axis (frequency)

Freq-BodyGyro-mean-Z – Mean body angular velocity along z-axis (frequency)

Freq-BodyGyro-meanFreq-X – Mean frequency of body angular velocity along x-axis (frequency)

Freq-BodyGyro-meanFreq-Y – Mean frequency of body angular velocity along y-axis (frequency)

Freq-BodyGyro-meanFreq-Z – Mean frequency of body angular velocity along z-axis (frequency)

Freq-BodyAccMag-mean – Mean body acceleration magnitude (frequency)

Freq-BodyAccMag-meanFreq – Mean frequency of body acceleration magnitude (frequency)

Freq-BodyAccJerkMag-mean – Mean body acceleration jerk signal magnitude (frequency)

Freq-BodyAccJerkMag-meanFreq – Mean frequency of body acceleration jerk signal magnitude (frequency)

Freq-BodyGyroMag-mean – Mean body angular velocity magnitude (frequency)

Freq-BodyGyroMag-meanFreq – Mean frequency of body angular velocity magnitude (frequency)

Freq-BodyGyroJerkMag-mean – Mean body angular velocity jerk signal magnitude (frequency)

Freq-BodyGyroJerkMag-meanFreq – Mean frequency of body angular velocity jerk signal magnitude (frequency)

Time-BodyAcc-std-X – Standard deviation of body acceleration along x-axis (time)

Time-BodyAcc-std-Y – Standard deviation of body acceleration along y-axis (time)

Time-BodyAcc-std-Z – Standard deviation of body acceleration along z-axis (time)

Time-GravityAcc-std-X – Standard deviation of gravity acceleration along x-axis (time)

Time-GravityAcc-std-Y – Standard deviation of gravity acceleration along y-axis (time)

Time-GravityAcc-std-Z – Standard deviation of gravity acceleration along z-axis (time)

Time-BodyAccJerk-std-X – Standard deviation of body acceleration jerk signal along x-axis (time)

Time-BodyAccJerk-std-Y – Standard deviation of body acceleration jerk signal along y-axis (time)

Time-BodyAccJerk-std-Z – Standard deviation of body acceleration jerk signal along z-axis (time)

Time-BodyGyro-std-X – Standard deviation of body angular velocity along x-axis (time)

Time-BodyGyro-std-Y – Standard deviation of body angular velocity along y-axis (time)

Time-BodyGyro-std-Z – Standard deviation of body angular velocity along z-axis (time)

Time-BodyGyroJerk-std-X – Standard deviation of body angular velocity jerk signal along x-axis (time)

Time-BodyGyroJerk-std-Y – Standard deviation of body angular velocity jerk signal along y-axis (time)

Time-BodyGyroJerk-std-Z – Standard deviation of body angular velocity jerk signal along z-axis (time)

Time-BodyAccMag-std – Standard deviation of body acceleration magnitude (time)

Time-GravityAccMag-std – Standard deviation of gravity acceleration magnitude (time)

Time-BodyAccJerkMag-std – Standard deviation of body acceleration jerk signal magnitude (time)

Time-BodyGyroMag-std – Standard deviation of body angular velocity magnitude (time)

Time-BodyGyroJerkMag-std – Standard deviation of body angular velocity jerk signal magnitude (time)

Freq-BodyAcc-std-X – Standard deviation of body acceleration along x-axis (frequency)

Freq-BodyAcc-std-Y – Standard deviation of body acceleration along y-axis (frequency)

Freq-BodyAcc-std-Z – Standard deviation of body acceleration along z-axis (frequency)

Freq-BodyAccJerk-std-X – Standard deviation of body acceleration jerk signal along x-axis (frequency)

Freq-BodyAccJerk-std-Y – Standard deviation of body acceleration jerk signal along y-axis (frequency)

Freq-BodyAccJerk-std-Z – Standard deviation of body acceleration jerk signal along z-axis (frequency)

Freq-BodyGyro-std-X – Standard deviation of body angular velocity along x-axis (frequency)

Freq-BodyGyro-std-Y – Standard deviation of body angular velocity along y-axis (frequency)

Freq-BodyGyro-std-Z – Standard deviation of body angular velocity along z-axis (frequency)

Freq-BodyAccMag-std – Standard deviation of body acceleration magnitude (frequency)

Freq-BodyAccJerkMag-std– Standard deviation of body acceleration jerk signal magnitude (frequency)

Freq-BodyGyroMag-std– Standard deviation of body angular velocity magnitude (frequency)

Freq-BodyGyroJerkMag-std– Standard deviation of body angular velocity jerk signal magnitude (frequency)

**Summaries calculated**

Means were calculated for all the above variables for each subject (1:30) and each activity.

**Activities**

1. WALKING
2. WALKING\_UPSTAIRS
3. WALKING\_DOWNSTAIRS
4. SITTING
5. STANDING
6. LAYING