Code Book

Jonathan Friedman

December 4, 2016

## Codebook

The tidy.txt table produced containes 68 variables. The first variable, Subject, refers to the subject that participated in the study. The second variable, Activity, refers to one of six activities (walking, walking upstairs, walking downstairs, sitting, standing, laying). The README file explains how these observations were made and the nature of the calculations.

The next 66 variables are interpreted as follows:

\* Each variable name begins with Time, referring to the time domain signals, or with Frequency, which refers to frequency domain signals.  
 \* The acceleration signal was separated into Body and Gravity acceleration signals, the next term.  
 \* The third element refers to the sensor signal: Accelerometer or Gryoscope.  
 \* The body linear acceleration and angular velocity were derived to obtain jerk signals, denoted by Jerk signals and Magnitude of three-dimensional signals \* The next element refers to the calculation, eiher Mean or STD, for standard deviation  
 \* For each, either the Mean or the STD was computed.  
 \* The final element is the axis along which the movement was made (X-axis, Y-axis, Z-axis)

Below is a list of the variable names.

## [1] "Subject"   
## [2] "Activity"   
## [3] "Time Body Accelerometer MeanX-axis"   
## [4] "Time Body Accelerometer MeanY-axis"   
## [5] "Time Body Accelerometer MeanZ-axis"   
## [6] "Time Body Accelerometer STDX-axis"   
## [7] "Time Body Accelerometer STDY-axis"   
## [8] "Time Body Accelerometer STDZ-axis"   
## [9] "Time Gravity Accelerometer MeanX-axis"   
## [10] "Time Gravity Accelerometer MeanY-axis"   
## [11] "Time Gravity Accelerometer MeanZ-axis"   
## [12] "Time Gravity Accelerometer STDX-axis"   
## [13] "Time Gravity Accelerometer STDY-axis"   
## [14] "Time Gravity Accelerometer STDZ-axis"   
## [15] "Time Body Accelerometer Jerk MeanX-axis"   
## [16] "Time Body Accelerometer Jerk MeanY-axis"   
## [17] "Time Body Accelerometer Jerk MeanZ-axis"   
## [18] "Time Body Accelerometer Jerk STDX-axis"   
## [19] "Time Body Accelerometer Jerk STDY-axis"   
## [20] "Time Body Accelerometer Jerk STDZ-axis"   
## [21] "Time Body GyroscopeMeanX-axis"   
## [22] "Time Body GyroscopeMeanY-axis"   
## [23] "Time Body GyroscopeMeanZ-axis"   
## [24] "Time Body GyroscopeSTDX-axis"   
## [25] "Time Body GyroscopeSTDY-axis"   
## [26] "Time Body GyroscopeSTDZ-axis"   
## [27] "Time Body Gyroscope Jerk MeanX-axis"   
## [28] "Time Body Gyroscope Jerk MeanY-axis"   
## [29] "Time Body Gyroscope Jerk MeanZ-axis"   
## [30] "Time Body Gyroscope Jerk STDX-axis"   
## [31] "Time Body Gyroscope Jerk STDY-axis"   
## [32] "Time Body Gyroscope Jerk STDZ-axis"   
## [33] "Time Body Accelerometer Magnitude Mean"   
## [34] "Time Body Accelerometer Magnitude STD"   
## [35] "Time Gravity Accelerometer Magnitude Mean"   
## [36] "Time Gravity Accelerometer Magnitude STD"   
## [37] "Time Body Accelerometer Jerk Magnitude Mean"   
## [38] "Time Body Accelerometer Jerk Magnitude STD"   
## [39] "Time Body Gyroscope Magnitude Mean"   
## [40] "Time Body Gyroscope Magnitude STD"   
## [41] "Time Body Gyroscope Jerk Magnitude Mean"   
## [42] "Time Body Gyroscope Jerk Magnitude STD"   
## [43] "Frequency Body Accelerometer MeanX-axis"   
## [44] "Frequency Body Accelerometer MeanY-axis"   
## [45] "Frequency Body Accelerometer MeanZ-axis"   
## [46] "Frequency Body Accelerometer STDX-axis"   
## [47] "Frequency Body Accelerometer STDY-axis"   
## [48] "Frequency Body Accelerometer STDZ-axis"   
## [49] "Frequency Body Accelerometer Jerk MeanX-axis"   
## [50] "Frequency Body Accelerometer Jerk MeanY-axis"   
## [51] "Frequency Body Accelerometer Jerk MeanZ-axis"   
## [52] "Frequency Body Accelerometer Jerk STDX-axis"   
## [53] "Frequency Body Accelerometer Jerk STDY-axis"   
## [54] "Frequency Body Accelerometer Jerk STDZ-axis"   
## [55] "Frequency Body GyroscopeMeanX-axis"   
## [56] "Frequency Body GyroscopeMeanY-axis"   
## [57] "Frequency Body GyroscopeMeanZ-axis"   
## [58] "Frequency Body GyroscopeSTDX-axis"   
## [59] "Frequency Body GyroscopeSTDY-axis"   
## [60] "Frequency Body GyroscopeSTDZ-axis"   
## [61] "Frequency Body Accelerometer Magnitude Mean"   
## [62] "Frequency Body Accelerometer Magnitude STD"   
## [63] "Frequency BodyBody Accelerometer Jerk Magnitude Mean"  
## [64] "Frequency BodyBody Accelerometer Jerk Magnitude STD"   
## [65] "Frequency BodyBody Gyroscope Magnitude Mean"   
## [66] "Frequency BodyBody Gyroscope Magnitude STD"   
## [67] "Frequency BodyBody Gyroscope Jerk Magnitude Mean"   
## [68] "Frequency BodyBody Gyroscope Jerk Magnitude STD"