# How the code works

The code is broken down to 8 steps to prepare a final tidy data set.

1. Load and unzip the dataset

* Loads libraries required to use specific functions
* Downloads the zip file from the URL
* Unzips files on your machine

2. Reading activity and features data

* Reads activity labels data to a variable “activityLabels”
* Changes the datatype of column 2 for “activityLabels” to a character
* Adds column names to “activityLabels”
* Reads features data to a variable “features”
* Changes the datatype of column 2 for “features” to a character

3. Extract only mean and standard deviation from features data

* Matches the feature names with mean/std dev and stores the first column as an integer vector in the variable “featuresreq”
* Stores only the features names where the pattern matched in a separate variable called “featuresreq.names”
* Format feature names using gsub

4. Load the training datasets

* Load X\_train data set
* Select only columns where the indices matched with indices in “featuresreq” as these are the columns containing mean and std dev measurements
* Load Y\_train data set
* Load subject\_train data set
* Column bind all above datasets in “train”

5. Load the test data sets

* Load X\_test data set
* Select only columns where the indices matched with indices in “featuresreq” as these are the columns containing mean and std dev measurements
* Load Y\_test data set
* Load subject\_test data set
* Column bind all above datasets in “test”

6. Merge and add labels data

* Row bind test and train data set into one variable “consol\_data”
* Add labels to all columns

7. Fetching activity description from activity labels and ordering columns

* Left join with “activityLabels” to fetch activity\_description
* Order columns using “select”
* Convert activity\_description as a factor

8. Create independent tidy data set

* Group data by subject and activity\_description
* Summarize all columns to calculate mean () for the grouped data set above
* Export grouped and summarized data set to “tidy” text file.