Reproducible Research: Peer Assessment 1

## Loading and preprocessing the data

library("ggplot2", lib.loc="~/R/win-library/3.2")

### Read in the dataset

rawsteps <- read.csv('activity.csv')

## What is mean total number of steps taken per day?

### Ignore rows with no step count for now

steps <- rawsteps[!is.na(rawsteps$steps),]

### Calculate total steps for each day

stepsadaysum <- tapply(stepsdate),FUN=sum)

### display a histogram of total steps per day

### (count of days for each range of steps)

qplot( stepsadaysum,bins=10,na.rm=TRUE,geom="histogram")

# print the mean number of steps a day

stepsadaymean <- mean(stepsadaysum,na.rm=TRUE) print(paste("Mean steps per day:",stepsadaymean))

# print the median number of steps a day

stepsadaymedian <- median(stepsadaysum,na.rm=TRUE) print(paste("Median steps per day:",stepsadaymedian))

## What is the average daily activity pattern?

# determine the mean number of steps for each time period

stepsaperiodmean <- tapply(stepsinterval),FUN=mean) # determine the median number of steps for each time period stepsaperiodmedian <- tapply(stepsinterval),FUN=median)

# draw line graph of the mean number of steps for each time interval in a day

qplot(y=stepsaperiodmean,x=1:length(stepsaperiodmean),geom="line")+ scale\_x\_discrete(labels=rownames(stepsaperiodmean)) + theme(axis.text.x = element\_text(angle=90,size=6))

## Imputing missing values

## Are there differences in activity patterns between weekdays and weekends?