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#####
# Set Working Directory #
#####

# Get your current working directory #
getwd() # Re-check the path for the working directory

# Change your current working directory #
setwd("/Users/huangweiting/coding/INTRODUCTION TO SCIENTIFIC COMPUTING SOFTWARE
/C2_ClassData")
getwd() # Re-check the path for the working directory

#####
# Import an example dataset #
#####

dataset <- read.csv("C2_HW.csv")
#str(dataset)          #Check the variable format 看資料整體的data
#View(dataset)         #Check Dataset
#summary(dataset)      #Get the summary statistics about the object 給基礎統計數據（和資料
格式有關）

#Q1
#max
round(max(dataset$temperature, na.rm = TRUE), 2)
#min
round(min(dataset$temperature, na.rm = TRUE), 2)
#mean
round(mean(dataset$temperature, na.rm=TRUE), 2)
#Standard Deviation
round(sd(dataset$temperature, na.rm = TRUE), 2)
#quantile
round(quantile(dataset$temperature, 0.25, na.rm = TRUE), 2)
round(quantile(dataset$temperature, 0.50, na.rm = TRUE), 2)
round(quantile(dataset$temperature, 0.75, na.rm = TRUE), 2)

#Q2
#max
round(aggregate(dataset$temperature, by=list(type=dataset$year), FUN=max), 2)
#min
round(aggregate(dataset$temperature, by=list(type=dataset$year), FUN=min), 2)
#mean
round(aggregate(dataset$temperature, by=list(type=dataset$year), FUN=mean), 2)
#standard deviation
round(aggregate(dataset$temperature, by=list(type=dataset$year), FUN=sd), 2)
#quantile
round(aggregate(dataset$temperature,
by=list(type=dataset$year), FUN=quantile, probs=c(0.25, 0.50, 0.75)), 2)

#Q3
dataset_2 <- read.csv("Tainan_season.csv")
histogram(x= ~temperature|season, data = dataset_2, xlab = "temperature(Degree
Celsius)", ylab = "Count", type="count", layout=c(2,2), main='Histogram of temperature in
different seasons in Tainan during 2009-2011')

#Q4
dataset_2 <- read.csv("Tainan_season_2009.csv")
histogram(x= ~temperature|season, data = dataset_2, xlab = "temperature(Degree
Celsius)", ylab = "Count", type="count", layout=c(2,2), main='Histogram of temperature in
different seasons in Tainan in 2009')
dataset_2 <- read.csv("Tainan_season_2010.csv")
histogram(x= ~temperature|season, data = dataset_2, xlab = "temperature(Degree
Celsius)", ylab = "Count", type="count", layout=c(2,2), main='Histogram of temperature in
different seasons in Tainan in 2010')
dataset_2 <- read.csv("Tainan_season_2011.csv")
histogram(x= ~temperature|season, data = dataset_2, xlab = "temperature(Degree
```

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Celsius)",ylab = "Count",type="count",layout=c(2,2),main='Histogram of temperature in  
different seasons in Tainan in 2011')
```