Coursera Data Science

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# R-Programming

## Week 1 Quiz

### **11.** Use the [Week 1 Quiz Data Set](https://d396qusza40orc.cloudfront.net/rprog/data/quiz1_data.zip) to answer questions 11-20. In the dataset provided for this Quiz, what are the column names of the dataset?

hw1\_data <- read.csv("C:/Users/Hola/coursera/tasks/course2/hw1\_data.csv")

colnames(hw1\_data)

## [1] "Ozone" "Solar.R" "Wind" "Temp" "Month" "Day"

### **12.** Extract the first 2 rows of the data frame and print them to the console. What does the output look like?

head(hw1\_data,2)

## Ozone Solar.R Wind Temp Month Day  
## 1 41 190 7.4 67 5 1  
## 2 36 118 8.0 72 5 2

### **13.** How many observations (i.e. rows) are in this data frame?

nrow(hw1\_data)

## [1] 153

Or using the “str” function

str(hw1\_data)

## 'data.frame': 153 obs. of 6 variables:  
## $ Ozone : int 41 36 12 18 NA 28 23 19 8 NA ...  
## $ Solar.R: int 190 118 149 313 NA NA 299 99 19 194 ...  
## $ Wind : num 7.4 8 12.6 11.5 14.3 14.9 8.6 13.8 20.1 8.6 ...  
## $ Temp : int 67 72 74 62 56 66 65 59 61 69 ...  
## $ Month : int 5 5 5 5 5 5 5 5 5 5 ...  
## $ Day : int 1 2 3 4 5 6 7 8 9 10 ...

### **14.** Extract the last 2 rows of the data frame and print them to the console. What does the output look like?

tail(hw1\_data,2)

## Ozone Solar.R Wind Temp Month Day  
## 152 18 131 8.0 76 9 29  
## 153 20 223 11.5 68 9 30

### **15.** What is the value of Ozone in the 47th row?

hw1\_data[47,"Ozone"]

## [1] 21

### **16.** How many missing values are in the Ozone column of this data frame?

sum(is.na(hw1\_data$Ozone))

## [1] 37

### **17.** What is the mean of the Ozone column in this dataset? Exclude missing values (coded as NA) from this calculation.

mean(hw1\_data$Ozone, na.rm=TRUE)

## [1] 42.12931

### **18.** Extract the subset of rows of the data frame where Ozone values are above 31 and Temp values are above 90. What is the mean of Solar.R in this subset?

sub1<- subset(hw1\_data,Ozone>31&Temp>90)  
mean(sub1$Solar.R)

## [1] 212.8

### **19.** What is the mean of “Temp” when “Month” is equal to 6?

sub2<-subset(hw1\_data,Month==6)  
mean(sub2$Temp)

## [1] 79.1

### **20.** What was the maximum ozone value in the month of May (i.e. Month is equal to 5)?

sub3<-subset(hw1\_data,Month==5)  
max(sub3$Ozone, na.rm = TRUE)

## [1] 115