Project 4 Solutions

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Collaborators: N/A

TA help: Hilda Ibriga and Katie Brinkers guided with problems 1-5, explained new concepts

Online resources used: Stat 190 Example Book (All problems)

Question 1

```
splash_mountain <- read.csv("/class/datamine/data/disney/splash_mountain.csv")

total <- 0
length_notna_not99 <- 0
for (i in splash_mountain$SPOSTMIN) {
  #Testing whether value in SPOSTMIN is na or -999
  if ((!is.na(i)) & (i != -999)) {
  #Updating total with values of SPOSTMIN that met conditions above
    total <- total + i
  #Counting many elements are not na or -999
  length_notna_not99 <- length_notna_not99 + 1
  }
}
total
```

```
[1] 8503980
```

```
mean = total/length_notna_not99
mean
```

```
[1] 43.3892
```

```
#Number of values that are not na or -999
```

The mean posted wait time is 43.38925

Question 2

```
splash_mountain <- read.csv("/class/datamine/data/disney/splash_mountain.csv")

status <- c()
for (i in 1: nrow(splash_mountain)) {
  #Takes values applies of closed to each row that does not meet its criteria
  if(any(splash_mountain[i, c("SPOSTMIN", "SACTMIN")] == -999, na.rm=T)) {
    status[i] <- "closed"
  }
  #Takes values applies of open to each row that meet its criteria
  else {
```

```
    status[i] <- "open"

  }
}
#Making a new column by converting status to a factor
splash_mountain$status <- factor(status)
head(splash_mountain)
```

```
        date            datetime SACTMIN SPOSTMIN status
1 01/01/2015 2015-01-01 07:51:12      NA        5   open
2 01/01/2015 2015-01-01 08:02:13      NA        5   open
3 01/01/2015 2015-01-01 08:09:12      NA        5   open
4 01/01/2015 2015-01-01 08:16:12      NA        5   open
5 01/01/2015 2015-01-01 08:23:12      NA        5   open
6 01/01/2015 2015-01-01 08:29:12      NA        5   open
```

```
head(splash_mountain$status)
```

```
[1] open open open open open open
Levels: closed open
```

```
table(splash_mountain$status)
```

```
closed   open
 24326 199610
```

```
str(splash_mountain)
```

```
'data.frame':   223936 obs. of  5 variables:
 $ date    : chr  "01/01/2015" "01/01/2015" "01/01/2015" "01/01/2015" ...
 $ datetime: chr  "2015-01-01 07:51:12" "2015-01-01 08:02:13" "2015-01-01 08:09:12" "2015-01-01 08:16:1
 $ SACTMIN : int  NA NA NA NA NA NA NA NA NA 4 ...
 $ SPOSTMIN: int  5 5 5 5 5 5 5 5 5 NA ...
 $ status  : Factor w/ 2 levels "closed","open": 2 2 2 2 2 2 2 2 2 2 ...
```

The output for closed is 24326 and the open one is 199610.

Question 3

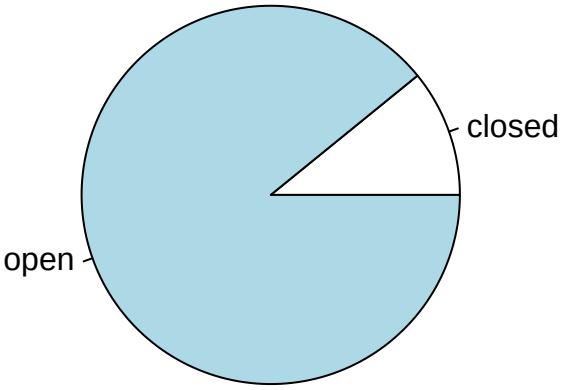
```
splash_mountain <- read.csv("/class/datamine/data/disney/splash_mountain.csv")
#Creating a new column called status and assigning new values to open
splash_mountain$status <- "open"

#Change values that are open to closed if they do not meet the criteria
splash_mountain$status[which(splash_mountain$SPOSTMIN == -999 | splash_mountain$SACTMIN == -999)] <- "C
#Make a new column called status
splash_mountain$status <- factor(status)
str(splash_mountain)
```

```
'data.frame':   223936 obs. of  5 variables:
 $ date    : chr  "01/01/2015" "01/01/2015" "01/01/2015" "01/01/2015" ...
 $ datetime: chr  "2015-01-01 07:51:12" "2015-01-01 08:02:13" "2015-01-01 08:09:12" "2015-01-01 08:16:1
 $ SACTMIN : int  NA NA NA NA NA NA NA NA NA 4 ...
 $ SPOSTMIN: int  5 5 5 5 5 5 5 5 5 NA ...
 $ status  : Factor w/ 2 levels "closed","open": 2 2 2 2 2 2 2 2 2 2 ...
```

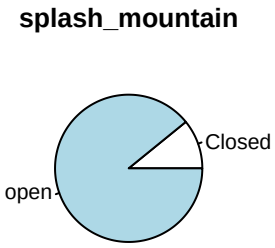
Question 4

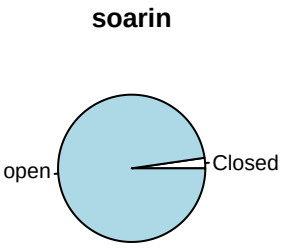
```
#Tabulating status (table of count) then made pie function
splash_mountain_open_closed_pie_chart <- pie(table(splash_mountain$status))
```

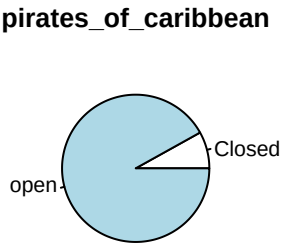


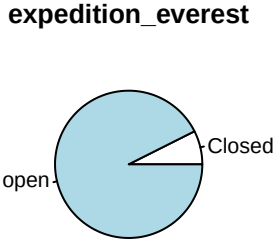
Question 5

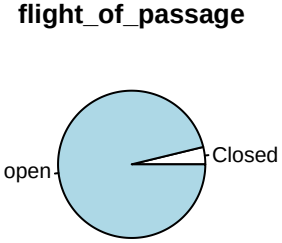
```
#New vector with ride names
ride_names <- c("splash_mountain", "soarin", "pirates_of_caribbean", "expedition_everest", "flight_of_pa
#Pasting vector and attaching .csv
ride_files <- paste0(c("/class/datamine/data/disney/"), ride_names, ".csv")
par(mfrow=c(2,3))
for (i in 1:length(ride_names)) {
  #Store files into dataframe
  ride_dataframe <- read.csv(ride_files[i])
  ride_dataframe$status <- "open"
  #Change values that are open to closed if they do not meet the criteria
  ride_dataframe$status[which(ride_dataframe$SPOSTMIN == -999 | ride_dataframe$SACTMIN == -999)] <- "Cl
  #Make a new column called status
  ride_dataframe$status <- factor(ride_dataframe$status)
  #Made Pie function
  pie(table(ride_dataframe$status), main = ride_names[i])
}
```

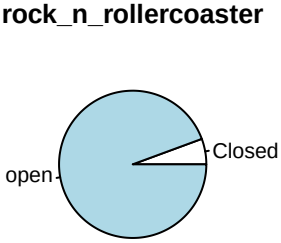












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