

# Birthdays

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```
##
## Adjuntando el paquete: 'dplyr'

## The following objects are masked from 'package:stats':
##
##   filter, lag

## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union

##
## Adjuntando el paquete: 'lubridate'

## The following objects are masked from 'package:base':
##
##   date, intersect, setdiff, union

birthdays = read.csv('birthdaysExample.csv')
summary(birthdays)

##      dates
## Length:1033
## Class :character
## Mode :character

birthdays$mdy = mdy(birthdays$date)
birthdays$day = day(birthdays$mdy)
birthdays$month = month(birthdays$mdy,label=TRUE)
birthdays$year = year(birthdays$mdy)
birthdays$yday = yday(birthdays$mdy)
birthdays$wday = wday(birthdays$mdy, week_start = 1, label=TRUE) # Monday = 1st day of the week
```

How many people have the same birthday as you?

```
exactly_same = subset(birthdays, birthdays$mdy == "2000-1-9")

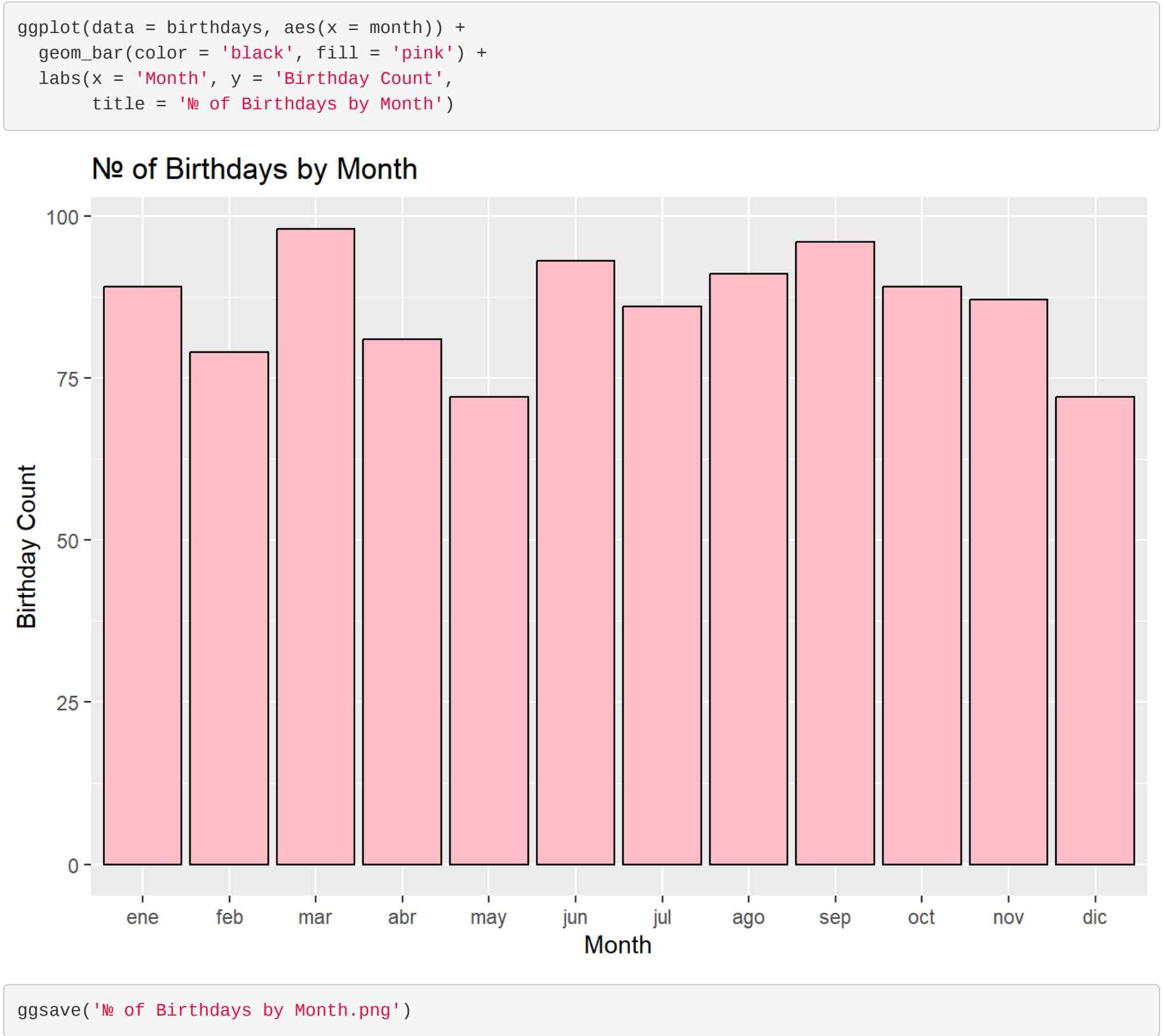
same = subset(birthdays, birthdays$yday == "9")

filter(birthdays, day==9 & month=='ene')

##      dates      mdy day month year yday  wday
## 1 1/9/14 2014-01-09    9   ene 2014    9 ju\\
## 2 1/9/14 2014-01-09    9   ene 2014    9 ju\\
## 3 1/9/14 2014-01-09    9   ene 2014    9 ju\\
## 4 1/9/14 2014-01-09    9   ene 2014    9 ju\\
## 5 1/9/14 2014-01-09    9   ene 2014    9 ju\\
## 6 1/9/14 2014-01-09    9   ene 2014    9 ju\\
```

Six people have the same birthday as I do. But, we weren't born on the same year.

Which month contains the most number of birthdays?



```
ggsave('Ñ of Birthdays by Month.png')

## Saving 7 x 5 in image

months <- factor(birthdays$month, levels = c("ene", "feb", "mar", "abr", "may",
                                              "jun", "jul", "ago", "sep", "oct", "nov", "dic"))

month_counts <- birthdays %>%
  group_by(month) %>%
  summarise(birthday_count = n()) %>%
  arrange(desc(birthday_count))

print(month_counts)

## # A tibble: 12 x 2
##   month birthday_count
##   <ord>         <int>
## 1 mar             98
## 2 sep             96
## 3 jun             93
## 4 ago             91
## 5 ene             89
## 6 oct             89
## 7 nov             87
## 8 jul             86
## 9 abr             81
## 10 feb            79
## 11 may            72
## 12 dic            72
```

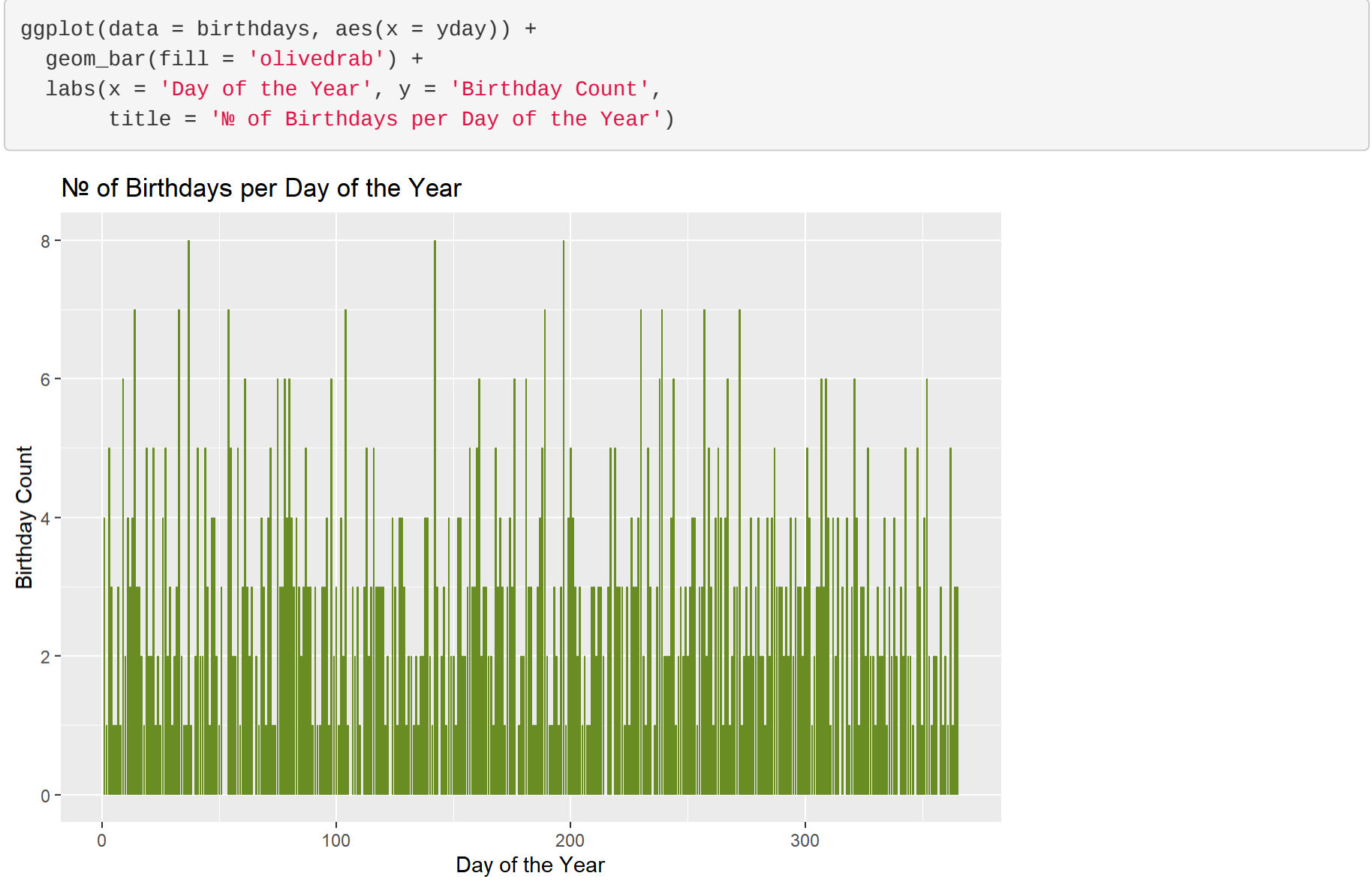
The month with the most birthdays is March at 98 birthdays, which is consistent with the bar graph.

How many birthdays are in each month?

```
print(month_counts)

## # A tibble: 12 x 2
##   month birthday_count
##   <ord>         <int>
## 1 mar             98
## 2 sep             96
## 3 jun             93
## 4 ago             91
## 5 ene             89
## 6 oct             89
## 7 nov             87
## 8 jul             86
## 9 abr             81
## 10 feb            79
## 11 may            72
## 12 dic            72
```

Which day of the year has the most number of birthdays?



```
ggsave('Ñ of Birthdays per Day of the Year.png')

## Saving 7 x 5 in image

day_counts <- factor(birthdays$yday, levels = c(1, 365))

day_counts <- birthdays %>%
  group_by(yday) %>%
  summarise(birthday_count = n()) %>%
  arrange(desc(birthday_count))

print(day_counts)

## # A tibble: 348 x 2
##   yday birthday_count
##   <dbl>         <int>
## 1    37             8
## 2   142             8
## 3   197             8
## 4    14             7
## 5    33             7
## 6    54             7
## 7   104             7
## 8   189             7
## 9   230             7
## 10  239             7
## # i 338 more rows
```

Day 37, 142 and 197 have all the most number of birthdays, exactly 8.

Do you have at least 365 friends that have birthdays on everyday of the year?

```
## [1] "There are days without birthdays."
## [1] 16109 16122 16123 16135 16176 16181 16193 16214 16247 16285 16288 16305
## [13] 16385 16387 16410 16417 16427
```

No. Despite having more than 365 friends, there is not one birthday to celebrate at least everyday of the year.