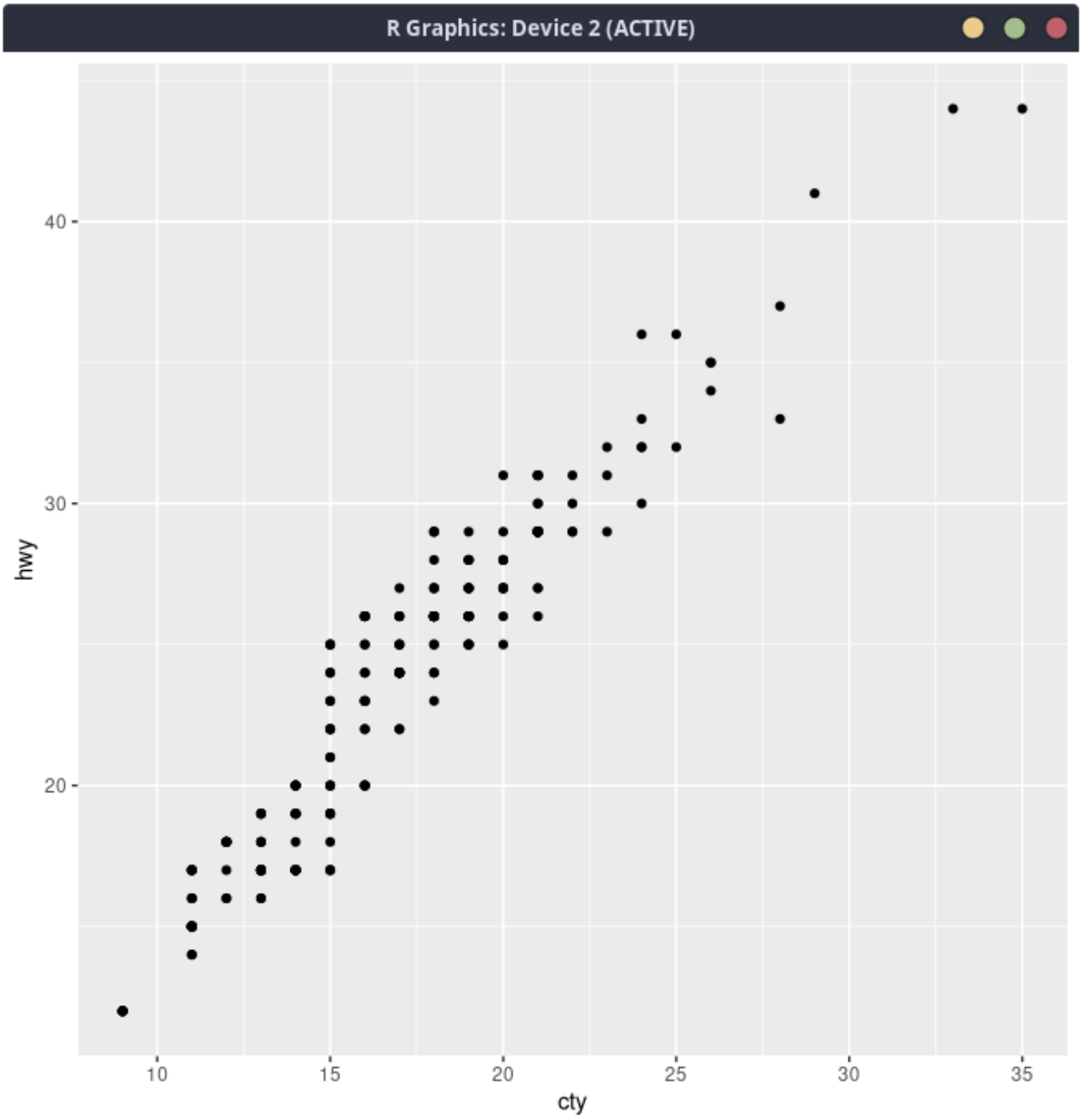
Section 28.2.1

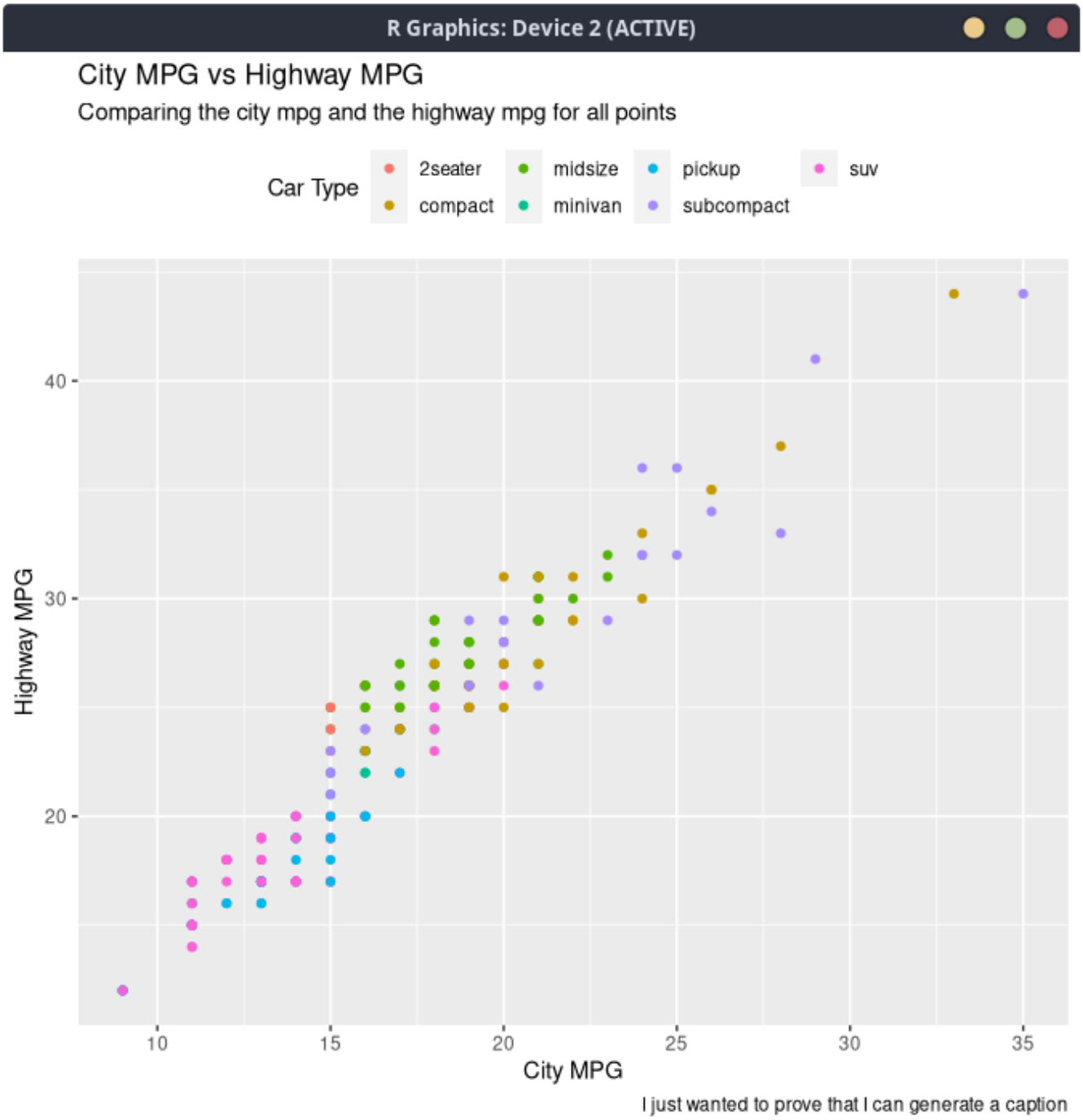
3. Take an exploratory graphic that you've created in the last month, and add informative titles to make it easier for others to understand.

```
I have chosen to do the first graph we have done in this class
```

```
ggplot(data = mpg) + geom_point(mapping = aes(x = manufacturer, y = hwy))
```




```
ggplot(data = mpg) +
geom_point(mapping = aes(x = cty, y = hwy, color=class)) +
labs(
    title = "City MPG vs Highway MPG",
    subtitle = "Comparing the city mpg and the highway mpg for all points",
    caption = "I just wanted to prove that I can generate a caption",
    x="City MPG",
    y="Highway MPG",
    color="Car Type"
) +
theme(
    legend.position = "top"
)
```

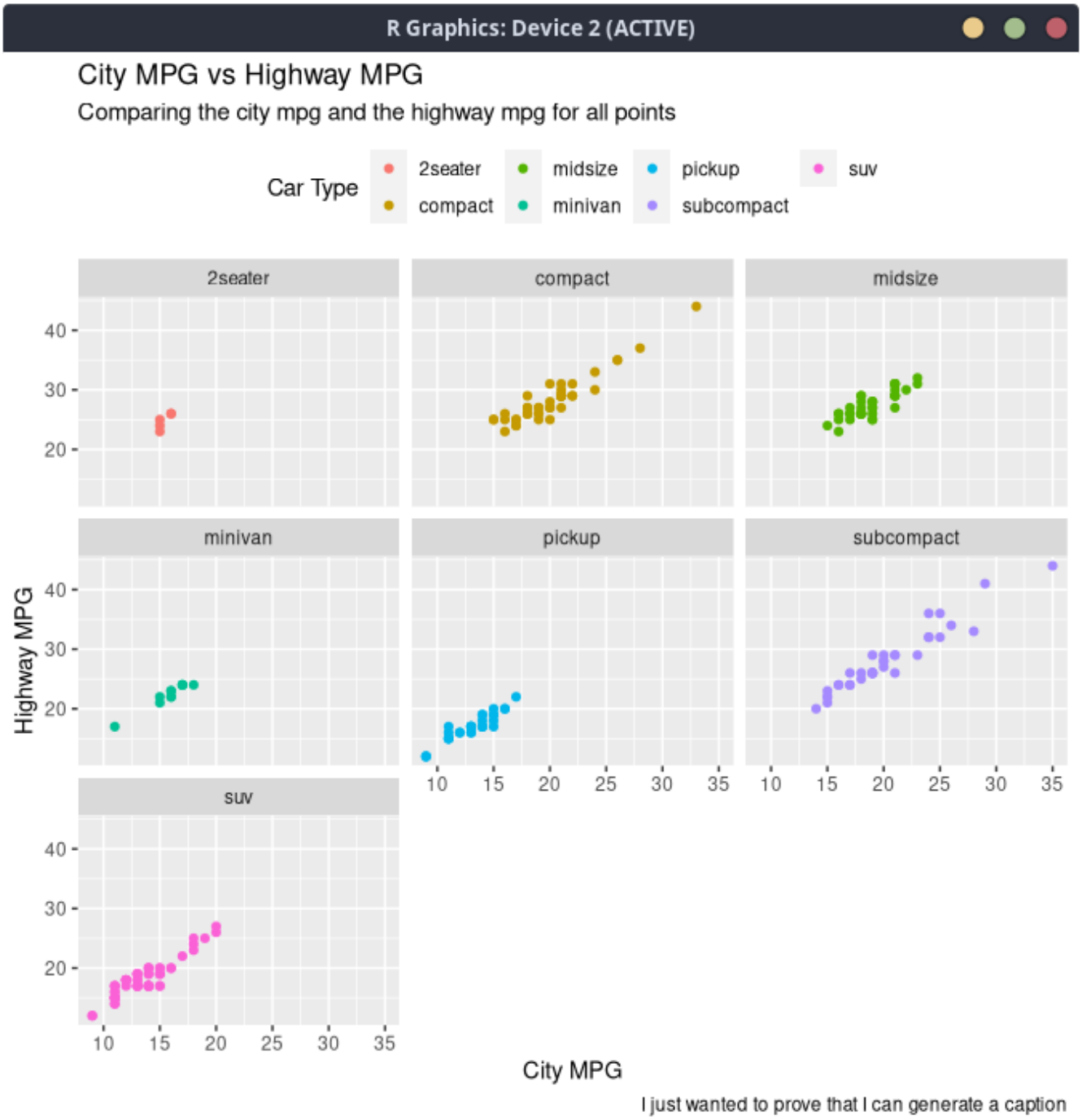

R Graphics: Device 2 (ACTIVE)
City MPG vs Highway MPG
Comparing the city mpg and the highway mpg for all points
Car Type
2seater
compact
midsize
minivan
pickup
subcompact
suv
Highway MPG
40
30
20
10
15
20
25
30
35
City MPG
I just wanted to prove that I can generate a caption

Section 28.3.1

3. How do labels with geom_text() interact with faceting? How can you add a label to a single facet? How can you put a different label in each facet? (Hint: think about the underlying data.)

```
I decided to facet the above graph
```

```
ggplot(data = mpg) +
geom_point(mapping = aes(x = cty, y = hwy, color=class)) +
labs( title = "City MPG vs Highway MPG", subtitle = "Comparing the city mpg
and the highway mpg for all points", caption = "I just wanted to prove that
I can generate a caption", x="City MPG",y="Highway MPG", color="Car Type")
+
theme(legend.position = "top") +
facet_wrap(~class)
```




```
If I add text it will impact the entire graph
```

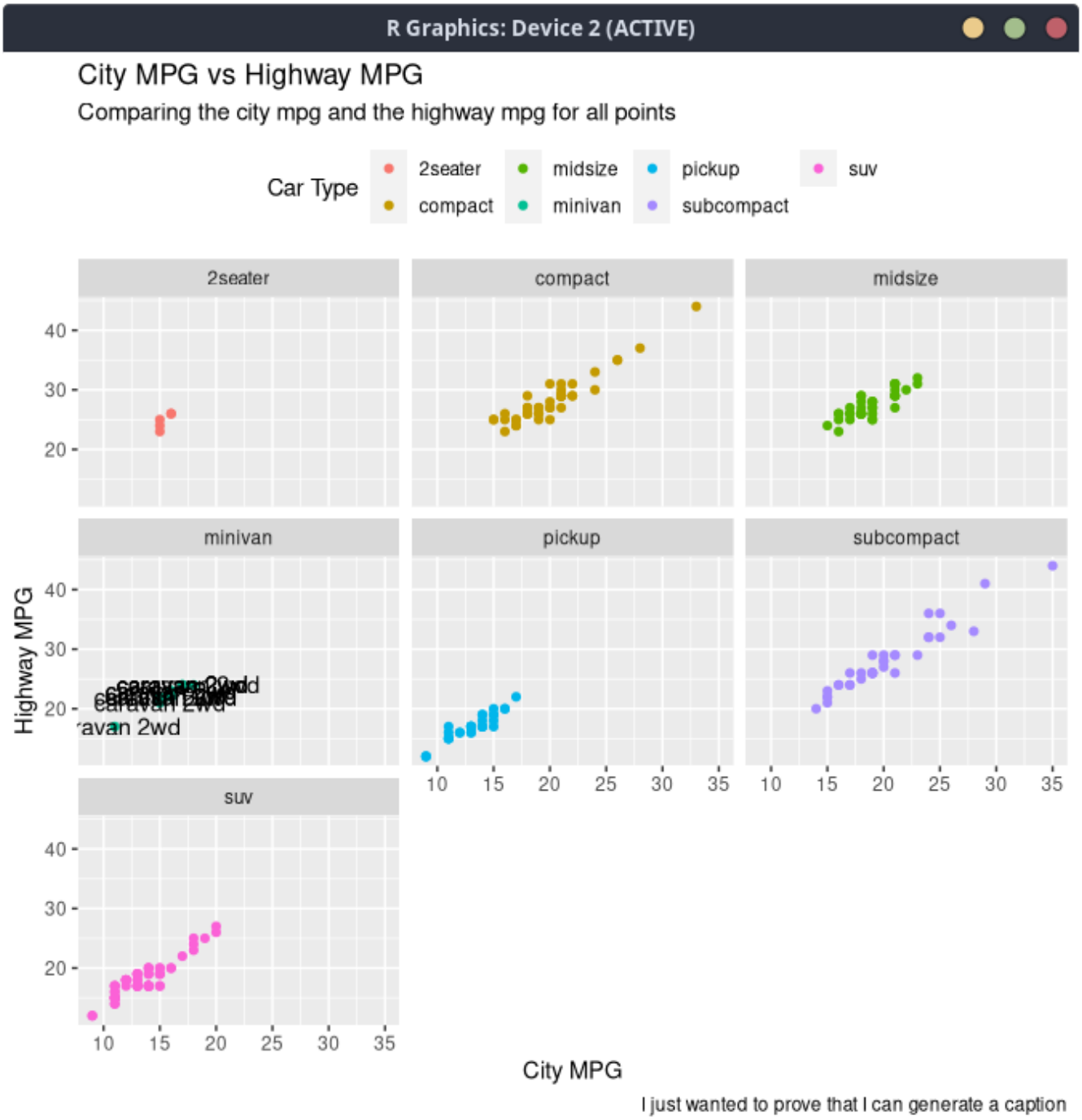
```
ggplot(data = mpg) +
geom_point(mapping = aes(x = cty, y = hwy, color=class)) +
labs(
    title = "City MPG vs Highway MPG",
    subtitle = "Comparing the city mpg and the highway mpg for all points",
    caption = "I just wanted to prove that I can generate a caption",
    x="City MPG",
    y="Highway MPG",
    color="Car Type"
) +
```

```
theme(
    legend.position = "top"
) +
geom_text(data=mpg, mapping=aes(x = cty, y = hwy, label=model))+
facet_wrap(~class)
```

so if I want to make sure it only impacts one facet we will simply trim the data and overwrite my data in the geom_text

```
yehaw <- mpg %>%
filter(class=="minivan")
```

```
ggplot(data = mpg) +
geom_point(mapping = aes(x = cty, y = hwy, color=class)) +
labs(
    title = "City MPG vs Highway MPG",
    subtitle = "Comparing the city mpg and the highway mpg for all points",
    caption = "I just wanted to prove that I can generate a caption",
    x="City MPG",
    y="Highway MPG",
    color="Car Type"
) +
theme(
    legend.position = "top"
) +
geom_text(data=yehaw, mapping=aes(x = cty, y = hwy, label=model))+
facet_wrap(~class)
```


R Graphics: Device 2 (ACTIVE)
City MPG vs Highway MPG
Comparing the city mpg and the highway mpg for all points
Car Type
2seater
compact
midsize
minivan
pickup
subcompact
suv
2seater
compact
midsize
minivan
pickup
subcompact
suv
Highway MPG
City MPG
I just wanted to prove that I can generate a caption

Section 28.4.4

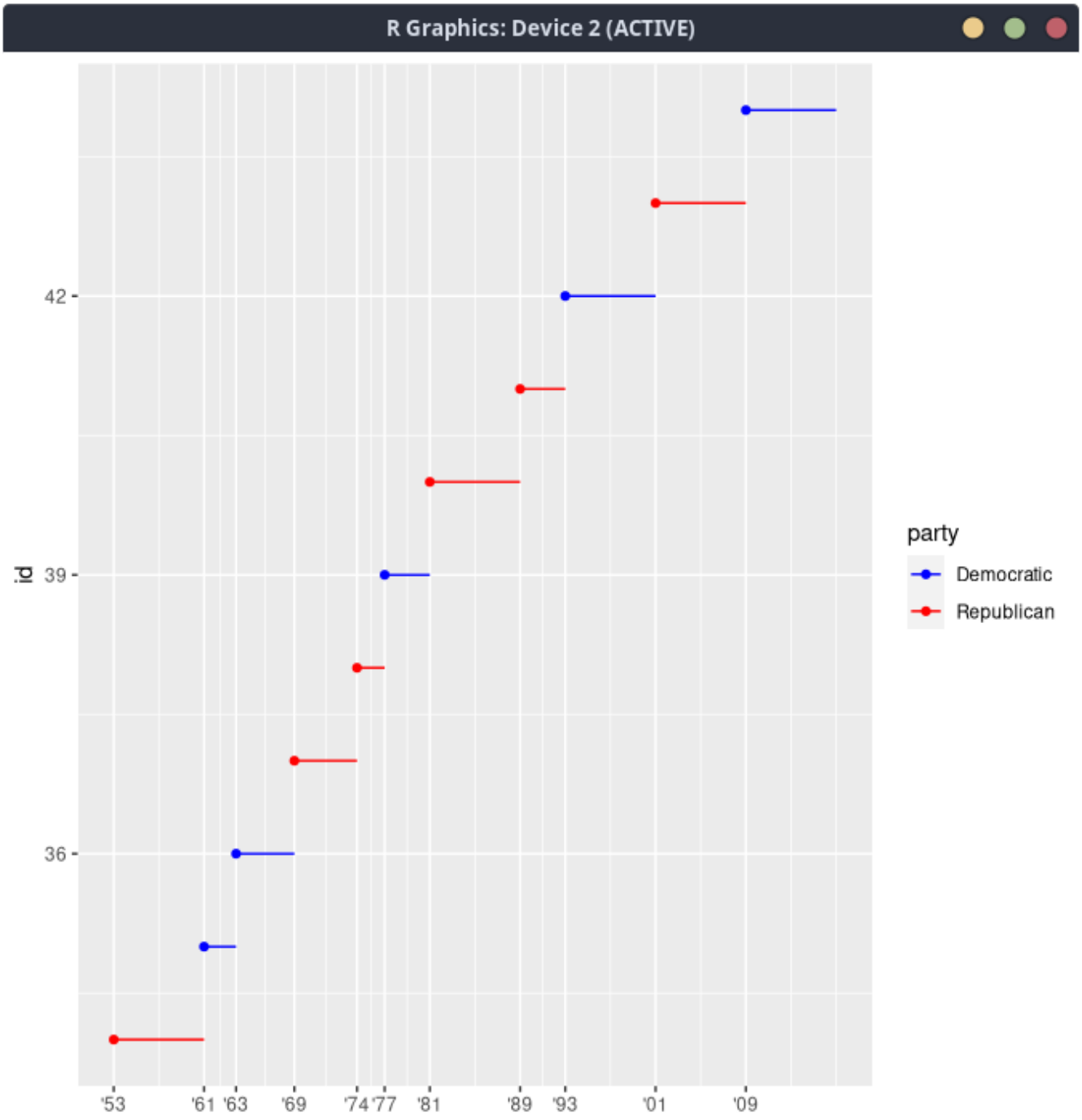
3. Change the display of the presidential terms by:

```
presidential %>%
  mutate(id = 33 + row_number()) %>%
  ggplot(aes(start, id)) +
    geom_point() +
    geom_segment(aes(xend = end, yend = id)) +
    scale_x_date(NULL, breaks = presidential$start, date_labels = "'%y")


presidential %>%
  mutate(id = 33 + row_number()) %>%
  ggplot(aes(start, id, colour = party)) +
    geom_point() +
    geom_segment(aes(xend = end, yend = id)) +
    scale_colour_manual(values = c(Republican = "red", Democratic =
"blue"))
```

1. Combining the two variants shown above.

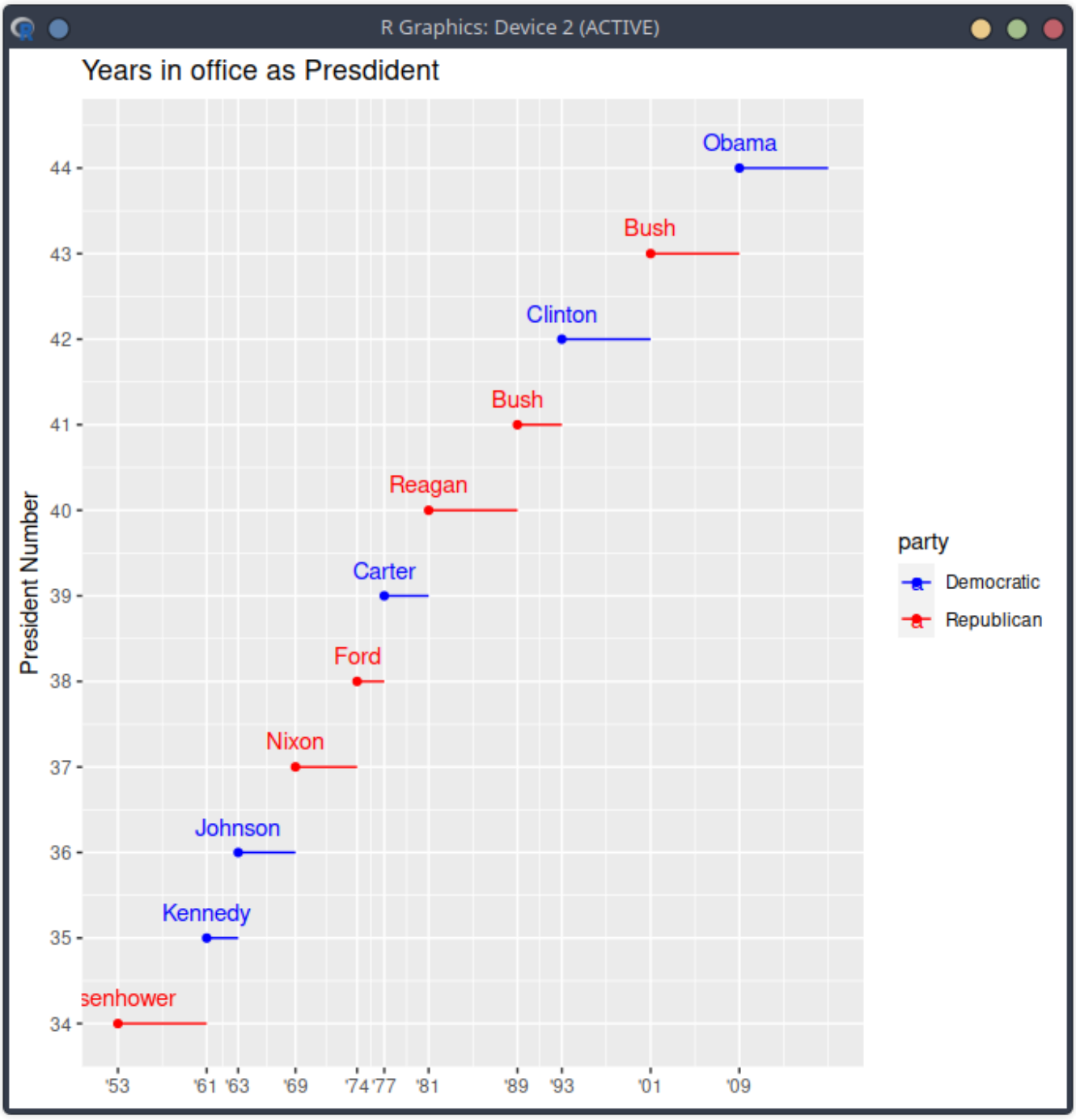
```
presidential %>%
  mutate(id = 33 + row_number()) %>%
  ggplot(aes(start, id, colour = party)) +
    geom_point() +
    geom_segment(aes(xend = end, yend = id)) +
    scale_x_date(NULL, breaks = presidential$start, date_labels = "'%y") +
    scale_colour_manual(values = c(Republican = "red", Democratic =
"blue"))
```



2. Improving the display of the y axis.

```
presidential %>%
  mutate(id = 33 + row_number()) %>%
  ggplot(aes(start, id, colour = party)) +
    geom_point() +
    geom_segment(aes(xend = end, yend = id)) +
    geom_text(aes(x = start, y = id, label=name), position =
position_nudge(y = 0.3)) +
    scale_x_date(NULL, breaks = presidential$start, date_labels = "'%y") +
    scale_colour_manual(values = c(Republican = "red", Democratic =
"blue")) +
    scale_y_continuous(breaks=seq(33, 44)) +
    labs(
```

```
    title="Years in office as Presdident",
    y = "President Number"
  )
```

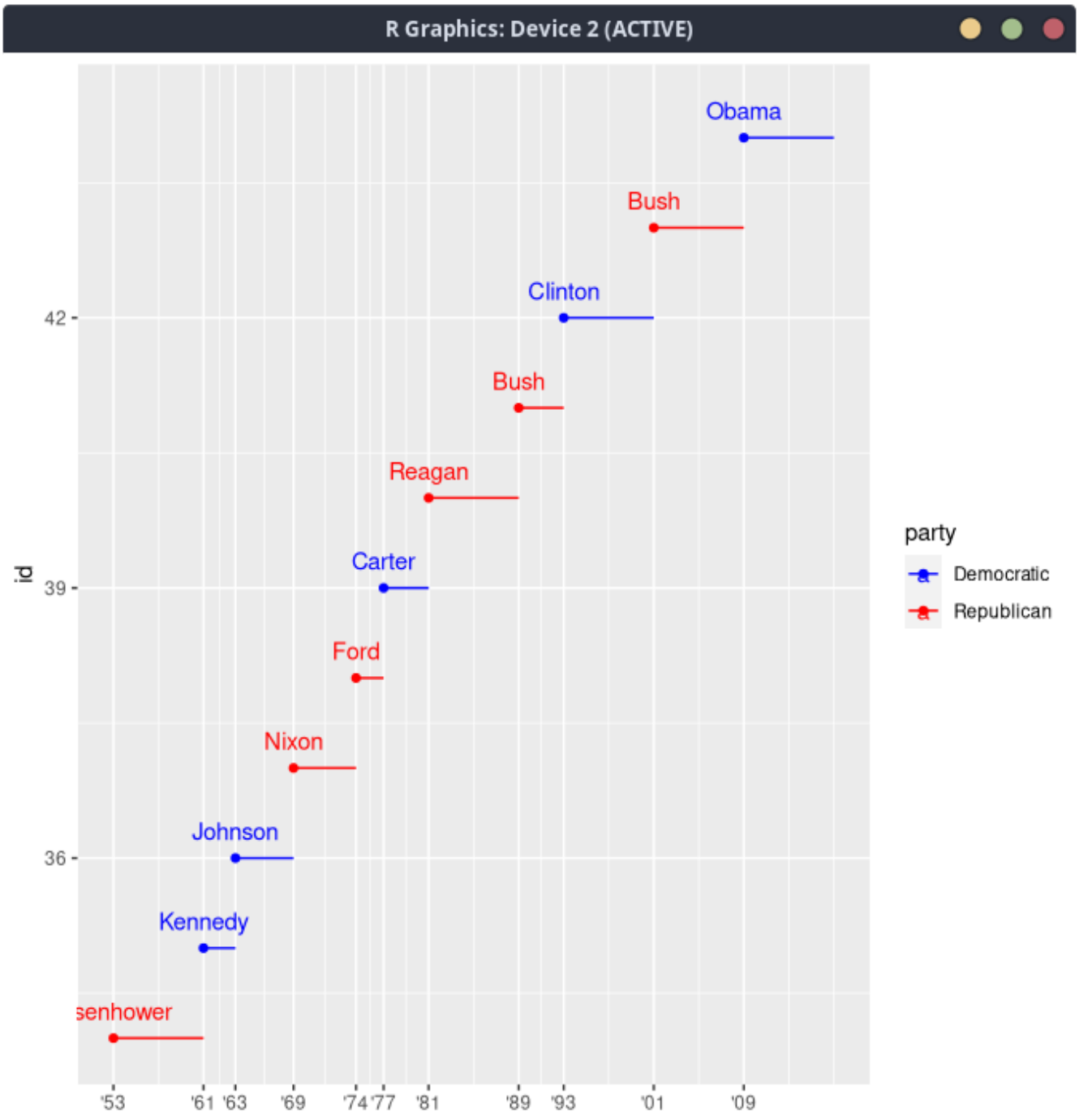



```
Note I technically did this one last because I was confused by the wording
```

3 Labelling each term with the name of the president.

```
presidential %>%
  mutate(id = 33 + row_number()) %>%
  ggplot(aes(start, id, colour = party)) +
```

```
    geom_point() +
    geom_segment(aes(xend = end, yend = id)) +
    geom_text(aes(x = start, y = id, label=name), position =
position_nudge(y = 0.3)) +
    scale_x_date(NULL, breaks = presidential$start, date_labels = "'%y") +
    scale_colour_manual(values = c(Republican = "red", Democratic =
"blue"))
```



Section 11.2.2:

2. Apart from file, skip, and comment, what other arguments do read_csv() and read_tsv() have in common?

```
read_csv(file, col_names = TRUE, col_types = NULL,
  locale = default_locale(), na = c("", "NA"), quoted_na = TRUE,
  quote = "\"", comment = "", trim_ws = TRUE, skip = 0,
  n_max = Inf, guess_max = min(1000, n_max),
  progress = show_progress(), skip_empty_rows = TRUE)
```

```
read_tsv(file, col_names = TRUE, col_types = NULL,
  locale = default_locale(), na = c("", "NA"), quoted_na = TRUE,
  quote = "\"", comment = "", trim_ws = TRUE, skip = 0,
  n_max = Inf, guess_max = min(1000, n_max),
  progress = show_progress(), skip_empty_rows = TRUE)
```

to save you a long reading its all of them taken from the readr documentation

Section 11.3.5:

2.

1. What happens if you try and set `decimal_mark` and `grouping_mark` to the same character?

```
> parse_number("100.300.45", locale=locale(decimal_mark=".",
grouping_mark="."))
Error: `decimal_mark` and `grouping_mark` must be different
```

```
It just errors out
```

2. What happens to the default value of `grouping_mark` when you set `decimal_mark` to ","?

```
> parse_number("100.300,45", locale=locale(decimal_mark=","))
[1] 100300.4
```

as we can see the dot automatically becomes the new grouping marker

3. What happens to the default value of `decimal_mark` when you set the `grouping_mark` to "."?

```
> parse_number("100.300,45", locale=locale(grouping_mark="."))
[1] 100300.4
```

Decimal gets overridden to become the ','

7. Generate the correct format string to parse each of the following dates and times:

```
#example
parse_date("04/15/99", "%m/%d/%y")

d1 <- parse_date("January 1, 2010", "%B %d, %Y")

d2 <- parse_date("2015-Mar-07", "%Y-%b-%d")

d3 <- parse_date("06-Jun-2017", "%d-%b-%Y")

d4 <- parse_date(c("August 19 (2015)", "July 1 (2015)"), "%B %d (%Y)")

d5 <- parse_date("12/30/14", "%m/%d/%y") # Dec 30, 2014
```