Assignment_3

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```
library('tidyverse')
library('ggthemes')
library('forcats')

df <- read_csv('https://raw.githubusercontent.com/fivethirtyeight/data/master/bob-ross/elements-by-epis
```

```
df.long <- df %>%
        pivot_longer(names_to = 'element', values_to = 'value',
                     cols = -one_of('EPISODE', 'TITLE')) %>%
        group_by(element) %>%
        summarize(N = sum(value)) %>%
        arrange(desc(N)) %>%
        print
```

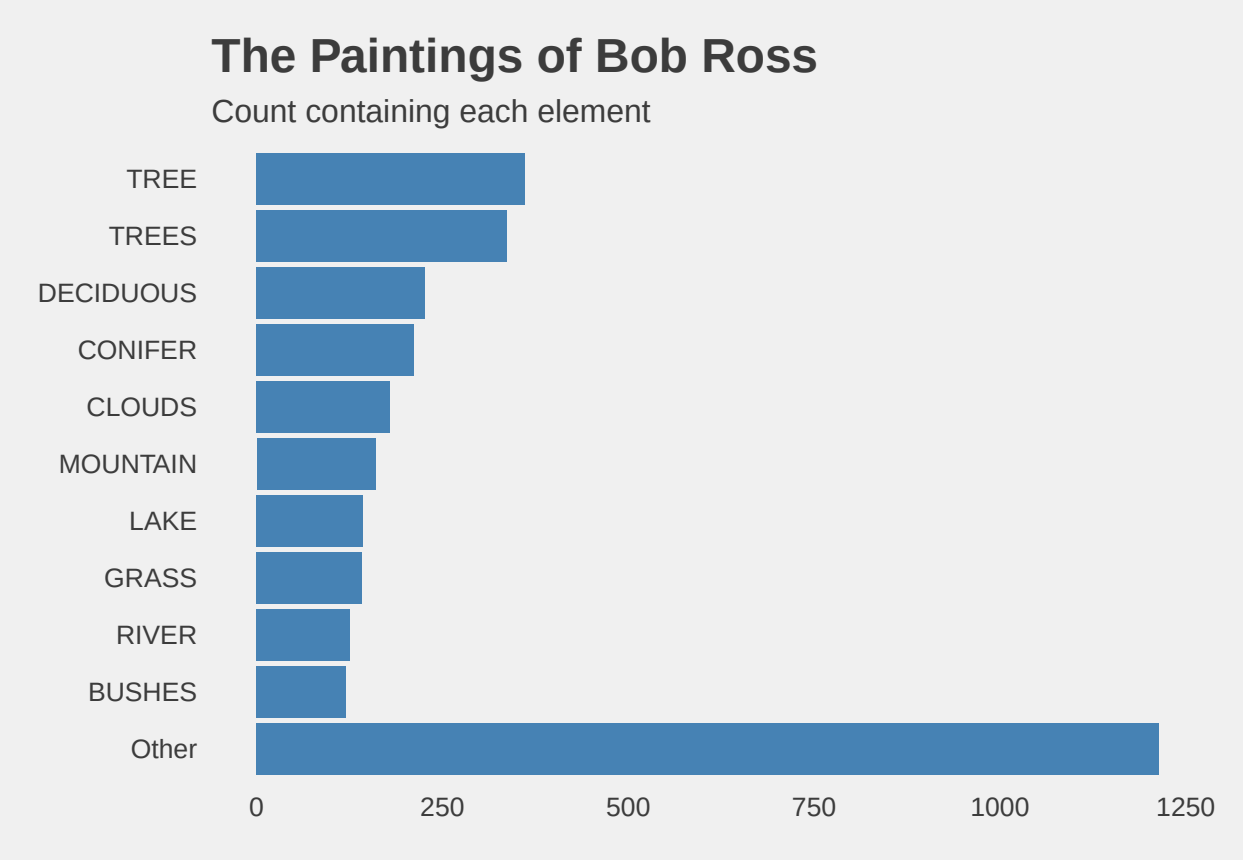
```
## # A tibble: 67 x 2
##    element       N
##    <chr>     <dbl>
##  1 TREE        361
##  2 TREES       337
##  3 DECIDUOUS   227
##  4 CONIFER     212
##  5 CLOUDS      179
##  6 MOUNTAIN    160
##  7 LAKE        143
##  8 GRASS       142
##  9 RIVER       126
## 10 BUSHES      120
## # ... with 57 more rows
```

```
df.simple <- df.long %>%
        group_by(element.simple = fct_lump(element, n = 10, w = N)) %>%
        summarize(N = sum(N)) %>%
        arrange(N) %>%
        mutate(element.simple = fct_inorder(element.simple)) %>%
        mutate(element.factor = factor(element.simple, levels(element.simple)[c(11,1:10)])) %>%
        print
```

```
## # A tibble: 11 x 3
##    element.simple     N element.factor
##    <fct>          <dbl> <fct>
##  1 BUSHES           120 BUSHES
##  2 RIVER            126 RIVER
##  3 GRASS            142 GRASS
##  4 LAKE             143 LAKE
##  5 MOUNTAIN         160 MOUNTAIN
```

```
##  6 CLOUDS            179 CLOUDS
##  7 CONIFER           212 CONIFER
##  8 DECIDUOUS         227 DECIDUOUS
##  9 TREES             337 TREES
## 10 TREE              361 TREE
## 11 Other            1214 Other
```

```
ggplot(df.simple, aes(x = element.factor, y = N)) +
        geom_bar(stat = "identity", fill = "steelblue") +
        coord_flip() +
        ylab('Count') + xlab('') +
        ggtitle("The Paintings of Bob Ross", subtitle = "Count containing each element") +
        theme_fivethirtyeight() +
        theme(plot.title = element_text(face = "bold"), panel.grid = element_blank())
```



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