Untitled

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Load Libraries

```
if(!require('readxl')) {
  install.packages('readxl')
  library('readxl')
}
```

```
## Loading required package: readxl
```

```
library(tidyr)
```

```
## Warning: package 'tidyr' was built under R version 4.2.1
```

```
library(ggplot2)
```

```
## Warning: package 'ggplot2' was built under R version 4.2.1
```

```
setwd("C:/Users/chris/DSC640-T302")
```

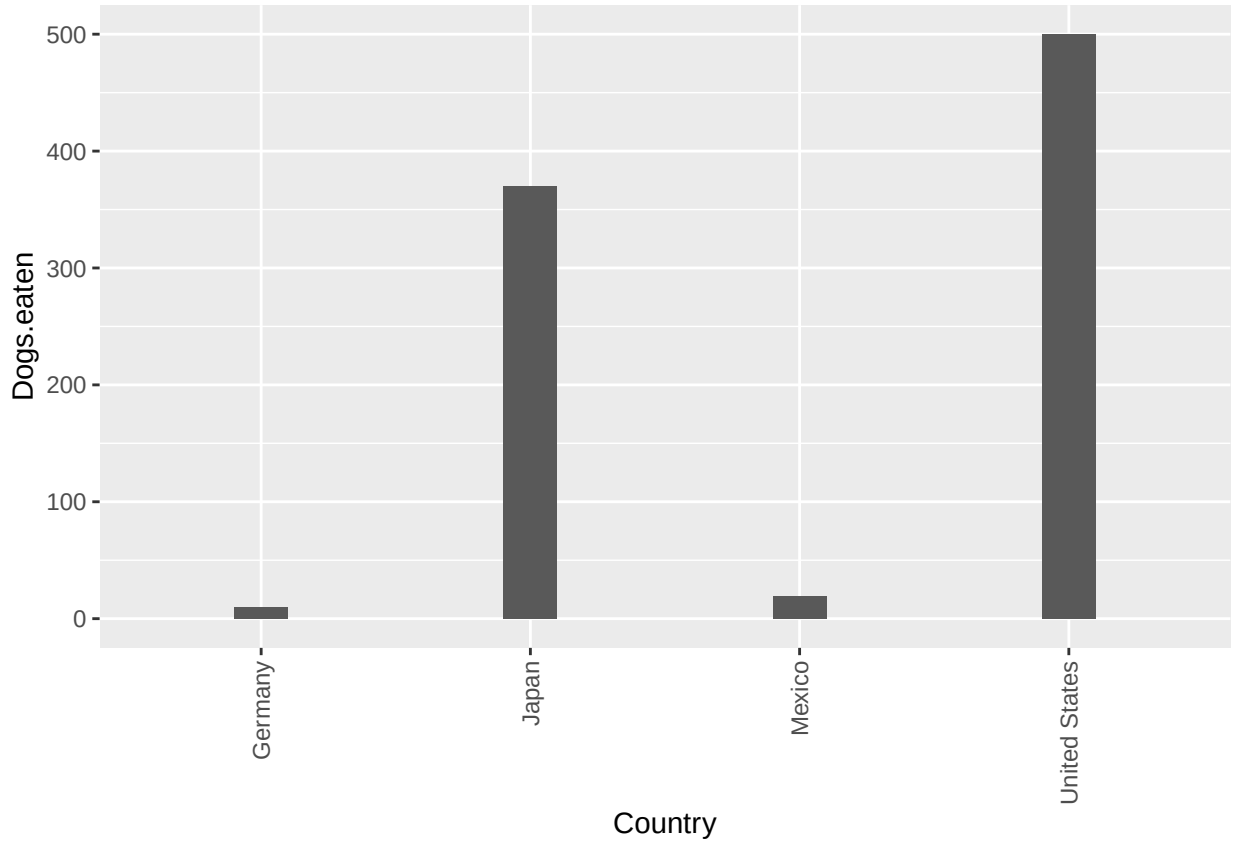
```
data <- read_excel("C:/Users/chris/DSC640-T302/hotdog-contest-winners.xlsm")
names(data) <- make.names(names(data), unique=TRUE)
data
```

```
## # A tibble: 31 x 5
##     Year Winner                       Dogs.eaten Country       New.record
##    <dbl> <chr>                             <dbl> <chr>              <dbl>
##  1  1980 Paul Siederman & Joe Baldini        9.1 United States          0
##  2  1981 Thomas DeBerry                     11   United States          0
##  3  1982 Steven Abrams                      11   United States          0
##  4  1983 Luis Llamas                        19.5 Mexico                 0
##  5  1984 Birgit Felden                       9.5 Germany                0
##  6  1985 Oscar Rodriguez                    11.8 United States          0
##  7  1986 Mark Heller                        15.5 United States          0
##  8  1987 Don Wolfman                        12   United States          0
##  9  1988 Jay Green                          14   United States          0
## 10  1989 Jay Green                          13   United States          0
## # ... with 21 more rows
## # i Use 'print(n = ...)' to see more rows
```

```
head(data)
```

```
## # A tibble: 6 x 5
##    Year Winner                        Dogs.eaten Country       New.record
##   <dbl> <chr>                              <dbl> <chr>              <dbl>
## 1  1980 Paul Siederman & Joe Baldini        9.1 United States          0
## 2  1981 Thomas DeBerry                     11   United States          0
## 3  1982 Steven Abrams                      11   United States          0
## 4  1983 Luis Llamas                        19.5 Mexico                 0
## 5  1984 Birgit Felden                       9.5 Germany                0
## 6  1985 Oscar Rodriguez                    11.8 United States          0
```

```
# Barplot
ggplot(data, aes(x=Country, y=Dogs.eaten)) +
  geom_bar(stat = "identity", width=0.2)  + theme(axis.text.x = element_text(angle = 90, vjust = 0.5, h
```

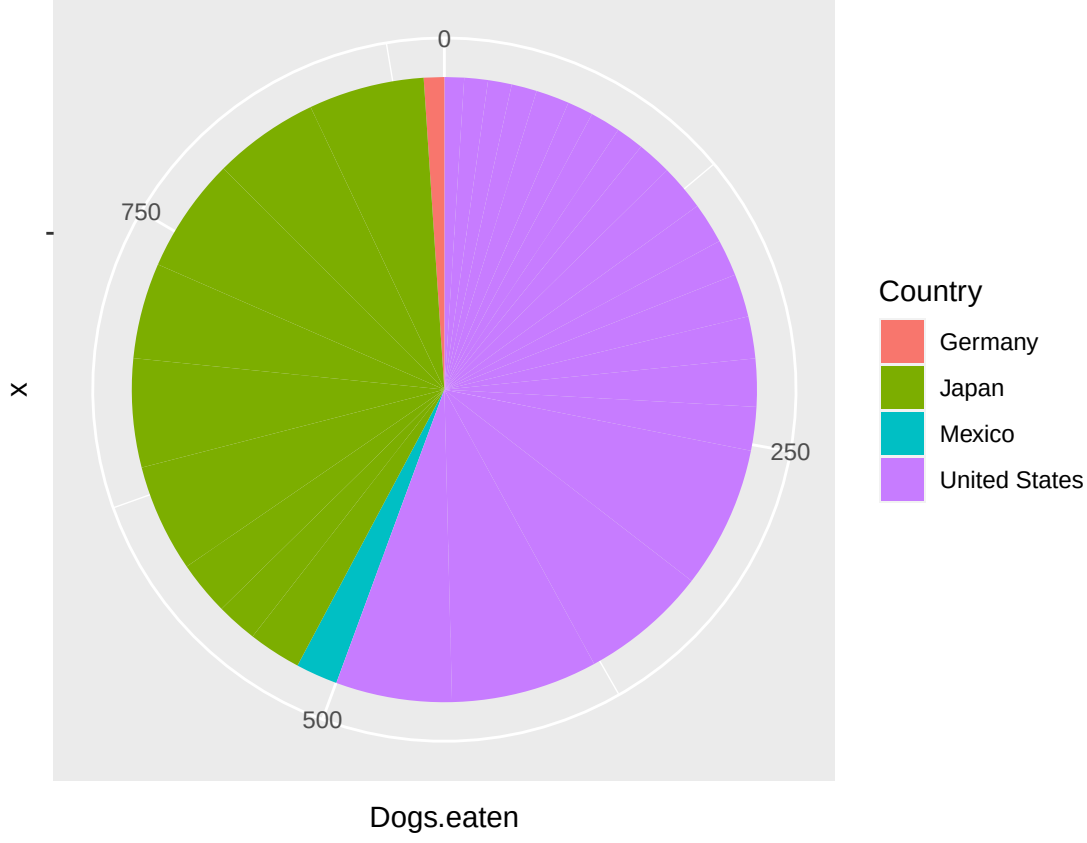



```
# Barplot
data
```

```
## # A tibble: 31 x 5
##     Year Winner                       Dogs.eaten Country       New.record
##    <dbl> <chr>                             <dbl> <chr>              <dbl>
##  1  1980 Paul Siederman & Joe Baldini        9.1 United States          0
##  2  1981 Thomas DeBerry                     11   United States          0
```

```
##  3  1982 Steven Abrams                    11   United States          0
##  4  1983 Luis Llamas                      19.5 Mexico                 0
##  5  1984 Birgit Felden                     9.5 Germany                0
##  6  1985 Oscar Rodriguez                  11.8 United States          0
##  7  1986 Mark Heller                      15.5 United States          0
##  8  1987 Don Wolfman                      12   United States          0
##  9  1988 Jay Green                        14   United States          0
## 10  1989 Jay Green                        13   United States          0
## # ... with 21 more rows
## # i Use 'print(n = ...)' to see more rows
```

```r
# Basic piechart
ggplot(data, aes(x="", y=Dogs.eaten, fill=Country)) +
  geom_bar(stat="identity", width=1) +
  coord_polar("y", start=0)
```




```r
# Donut Chart


# Compute percentages
data$fraction = data$Dogs.eaten / sum(data$Dogs.eaten)

# Compute the cumulative percentages (top of each rectangle)
data$ymax = cumsum(data$fraction)
```

```r
# Compute the bottom of each rectangle
data$ymin = c(0, head(data$ymax, n=-1))

# Make the plot
ggplot(data, aes(ymax=ymax, ymin=ymin, xmax=4, xmin=3, fill=Country)) +
     geom_rect() +
     coord_polar(theta="y") + # Try to remove that to understand how the chart is built initially
     xlim(c(2, 4)) # Try to remove that to see how to make a pie chart
```