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BIOSTAT 203A LAB 1A
Professor Hilary Aralis
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<center>Lab 3</center>

Exercise 1
```
justices <- read.csv("supreme_court_justices.csv",
          stringsAsFactors = F,
          na.strings = c("777. JUSTICE OR NOMINEE STILL ALIVE",
                  "999. JUSTICE STILL ON COURT",
                  "999. UNKNOWN"))

justices$birdate <- as.Date(justices$birdate, "%m/%d/%Y")

justices$deathd <- as.Date(justices$deathd, "%m/%d/%Y")

justices$deathage <- justices$deathd - justices$birdate

justices$deathage <- as.numeric(round((justices$deathd - justices$birdate)/365.25))

mean(justices$deathage, na.rm = TRUE)
```

The mean age among Supreme Court Justice nominees at the time of death is 74.2 years.

Exercise 2
```
justices[50, 1]

justices[175, -(2:15)]

justices[100, c("birdate")]

justices$name[125]
```

Exercise 3

1.

mean(justices[justices$posit == 0, "nomage"], na.rm = TRUE)
median(justices[justices$posit == 0, "nomage"], na.rm = TRUE)

The mean age at the time of nomination among those who were nominated to Chief Justice is 58.3 years.
The median age at the time of nomination among those who were nominated to Chief Justice is 58 years.

2.

mean(justices[justices$posit == 1, "nomage"], na.rm = TRUE)
median(justices[justices$posit == 1, "nomage"], na.rm = TRUE)

The mean age at the time of nomination among those who were nominated to Associate Justice is 52.6 years.
The median age at the time of nomination among those who were nominated to Associate Justice is 54 years.

3.

mean(justices[justices$yrnom < 1900, "nomage"], na.rm = TRUE)
median(justices[justices$yrnom < 1900, "nomage"], na.rm = TRUE)

The mean age at the time of nomination among those who received nominations prior to 1900 is 52.0 years.
The median age at the time of nomination among those who received nominations prior to 1900 is 53.5 years.

4.

mean(justices[justices$yrnom >= 1900, "nomage"], na.rm = TRUE)
median(justices[justices$yrnom >= 1900, "nomage"], na.rm = TRUE)

The mean age at the time of nomination among those who received nominations during 1900 or later is 55.2 years.
The median age at the time of nomination among those who received nominations during 1900 or later is 55 years.

Exercise 4

    1.
min(just$nomage, na.rm = TRUE)
just[which.min(just$nomage), "name"]

The name and age of the youngest Justice or Chief Justice to ever be successfully appointed is "Story, Joseph" at 32 years.

    2.
max(just$nomage, na.rm = TRUE)
just[which.max(just$nomage), "name"]

The name and age of the oldest Justice or Chief Justice to ever be successfully appointed is "Stone, Harlan Fiske" at 69 years.

    3.
just[just$birthst == 5, "name"]

There were three successfully appointed Justices or Chief Justices born in California (birthst equal to 5), and their names are "Warren, Earl", "Kennedy, Anthony McLeod", and "Breyer, Stephen G."

Exercise 5

  1.
table(justices$race)
prop.table(table(justices$race))

Of the total 175 nominations, 172 belonged to individuals who identified as White, and this constitutes 98.3% of the nominations.

  2.
nonwhite <- justices[justices$race == 1 | justices$race == 2,]
min(nonwhite$yrnom)
nonwhite[which.min(nonwhite$yrnom), "name"]

The first individual nominated who did not identify as White was "Marshall, Thurgood", and this occurred during 1967.

  3.
table(justices$gender)
prop.table(table(justices$gender))

Of the total 175 nominations, 5 belonged to female nominees, and this constitutes 2.9% of the nominations.

  4.
female <- justices[justices$gender == 1,]
min(female$yrnom)
female[which.min(female$yrnom), "name"]

The first female nominated was "O'Connor, Sandra Day", and this occurred during 1981.

  5.
sum(justices$famses == 1 | justices$famses == 2)/nrow(justices)

The percentage of nominees with family economic status in the 'Lower' or 'Lower-middle' Categories is 20.6%.

Exercise 6

```
table(justices$birthst)
states <- table(justices$birthst)
max(states)
which.max(states)
)
```

The birth state that has produced the most Supreme Court nominees in our data set is New York with 25 nominees.