> U.S..Presidentss <- read.csv("C:/Users/eagle/Downloads/U.S. Presidentss.csv")

> install.packages("lubridate")

> library("lubridate")

> View(U.S..Presidentss)

> U.S..Presidentss$DEATH.DATE <- as.Date(U.S..Presidentss$DEATH.DATE)

> U.S..Presidentss$BIRTH.DATE <- as.Date(U.S..Presidentss$BIRTH.DATE)

> U.S..Presidentss$year\_of\_birth <- format(U.S..Presidentss$BIRTH.DATE, format = "%Y")

> U.S..Presidentss$lived\_years <- time\_length(difftime(U.S..Presidentss$DEATH.DATE, U.S..Presidentss$BIRTH.DATE), "years")

> U.S..Presidentss$lived\_months <- time\_length(difftime(U.S..Presidentss$DEATH.DATE, U.S..Presidentss$BIRTH.DATE), "months")

> U.S..Presidentss$lived\_days <- time\_length(difftime(U.S..Presidentss$DEATH.DATE, U.S..Presidentss$BIRTH.DATE), "days")

> install.packages("tidyr")

> library(tidyr)

> Top10\_President\_Longestlived <- U.S..Presidentss[order(-U.S..Presidentss$lived\_days),][1:10,]

> Bottom10\_President\_Shortestlived <-U.S..Presidentss[order(U.S..Presidentss$lived\_days),][1:10,]

> mean(Top10\_President\_Longestlived$lived\_days)

[1] 32184.1

> weighted.mean(Top10\_President\_Longestlived$lived\_days)

[1] 32184.1

> median(Top10\_President\_Longestlived$lived\_days)

[1] 32658

> mode(Top10\_President\_Longestlived$lived\_days)

[1] "numeric"

> max(Top10\_President\_Longestlived$lived\_days)

[1] 34504

> min(Top10\_President\_Longestlived$lived\_days)

[1] 29446

> sd(Top10\_President\_Longestlived$lived\_days, na.rm = FALSE)

[1] 1893.892

> mean(Bottom10\_President\_Shortestlived$lived\_days)

[1] 20581.1

> weighted.mean(Bottom10\_President\_Shortestlived$lived\_days)

[1] 20581.1

> median(Bottom10\_President\_Shortestlived$lived\_days)

[1] 20977

> mode(Bottom10\_President\_Shortestlived$lived\_days)

[1] "numeric"

> max(Bottom10\_President\_Shortestlived$lived\_days)

[1] 23082

> min(Bottom10\_President\_Shortestlived$lived\_days)

[1] 16978

> sd(Bottom10\_President\_Shortestlived$lived\_days, na.rm = FALSE)

[1] 1861.964

> Top10\_President\_Longestlived <- U.S..Presidentss[order(-U.S..Presidentss$lived\_days),][1:10,]

> Bottom10\_President\_Shortestlived <-U.S..Presidentss[order(U.S..Presidentss$lived\_days),][1:10,]

> U.S\_Presidents <- rbind(Top10\_President\_Longestlived,Bottom10\_President\_Shortestlived)

> U.S\_Presidents

> U.S\_Presidents

PRESIDENT BIRTH.DATE BIRTH.PLACE DEATH.DATE LOCATION.OF.DEATH

40 George Bush 1924-06-12 Milton, Mass. 2018-11-30 Houston, Texas

37 Gerald Ford 1913-07-14 Omaha, Nebraska 2006-12-26 Rancho Mirage, Cal.

39 Ronald Reagan 1911-02-06 Tampico, Illinois 2004-06-05 Los Angeles, Cal.

2 John Adams 1735-10-30 Quincy, Mass. 1826-07-04 Quincy, Mass.

30 Herbert Hoover 1874-08-10 West Branch, Iowa 1964-10-20 New York, New York

32 Harry S. Truman 1884-05-08 Lamar, Missouri 1972-12-26 Kansas City, Missouri

4 James Madison 1751-03-16 Port Conway, Va. 1836-06-28 Orange Co., Va.

3 Thomas Jefferson 1743-04-13 Albemarle Co., Va. 1826-07-04 Albemarle Co., Va.

36 Richard Nixon 1913-01-09 Yorba Linda, Cal. 1994-04-22 New York, New York

6 John Quincy Adams 1767-07-11 Quincy, Mass. 1848-02-23 Washington, D.C.

34 John F. Kennedy 1917-05-29 Brookline, Mass. 1963-11-22 Dallas, Texas

20 James A. Garfield 1831-11-19 Cuyahoga Co., Ohio 1881-09-19 Elberon, New Jersey

11 James K. Polk 1795-11-02 Mecklenburg Co., N.C. 1849-06-15 Nashville, Tennessee

16 Abraham Lincoln 1809-02-12 LaRue Co., Kentucky 1865-04-15 Washington, D.C.

21 Chester Arthur 1829-10-05 Fairfield, Vermont 1886-11-18 New York, New York

28 Warren G. Harding 1865-11-02 Morrow County, Ohio 1923-08-02 San Francisco, Cal.

24 William McKinley 1843-01-29 Niles, Ohio 1901-09-14 Buffalo, New York

25 Theodore Roosevelt 1858-10-27 New York, New York 1919-01-06 Oyster Bay, New York

29 Calvin Coolidge 1872-07-04 Plymouth, Vermont 1933-01-05 Northampton, Mass.

31 Franklin Roosevelt 1882-01-30 Hyde Park, New York 1945-04-12 Warm Springs, Ga.

year\_of\_birth lived\_years lived\_months lived\_days

40 1924 94.46680 1133.6016 34504

37 1913 93.45106 1121.4127 34133

39 1911 93.32786 1119.9343 34088

2 1735 90.67488 1088.0986 33119

30 1874 90.19302 1082.3162 32943

32 1884 88.63244 1063.5893 32373

4 1751 85.28405 1023.4086 31150

3 1743 83.22245 998.6694 30397

36 1913 81.28131 975.3758 29688

6 1767 80.61875 967.4251 29446

34 1917 46.48323 557.7988 16978

20 1831 49.83436 598.0123 18202

11 1795 53.61533 643.3840 19583

16 1809 56.16975 674.0370 20516

21 1829 57.11978 685.4374 20863

28 1865 57.74401 692.9281 21091

24 1843 58.62286 703.4743 21412

25 1858 60.19165 722.2998 21985

29 1872 60.50376 726.0452 22099

31 1882 63.19507 758.3409 23082

> bplot <- boxplot(Top10\_President\_Longestlived$lived\_days,Bottom10\_President\_Shortestlived$lived\_days, main="President Life Span" )

> Top10\_President\_Longestlived

PRESIDENT BIRTH.DATE BIRTH.PLACE DEATH.DATE LOCATION.OF.DEATH

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4 1751 85.28405 1023.4086 31150

3 1743 83.22245 998.6694 30397

36 1913 81.28131 975.3758 29688

6 1767 80.61875 967.4251 29446

> Bottom10\_President\_Shortestlived

PRESIDENT BIRTH.DATE BIRTH.PLACE DEATH.DATE LOCATION.OF.DEATH

34 John F. Kennedy 1917-05-29 Brookline, Mass. 1963-11-22 Dallas, Texas

20 James A. Garfield 1831-11-19 Cuyahoga Co., Ohio 1881-09-19 Elberon, New Jersey

11 James K. Polk 1795-11-02 Mecklenburg Co., N.C. 1849-06-15 Nashville, Tennessee

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34 1917 46.48323 557.7988 16978

20 1831 49.83436 598.0123 18202

11 1795 53.61533 643.3840 19583

16 1809 56.16975 674.0370 20516

21 1829 57.11978 685.4374 20863

28 1865 57.74401 692.9281 21091

24 1843 58.62286 703.4743 21412

25 1858 60.19165 722.2998 21985

29 1872 60.50376 726.0452 22099

31 1882 63.19507 758.3409 23082