Quantile Functions

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```r
# create quantile of a data frame
# Create a data frame
data <- data.frame( name = c("Alina", "ABia", "Danial", "Alisha"),
                    age = c(13, 25, 42, 66),
                    ht = c(76, NA, NA, 89),
                    school = c("yes", "yes", "no", "no") )

# Calling quantile() Function
quantile(data$age)
```

```
##    0%   25%   50%   75%  100%
## 13.0  22.0  33.5  48.0  66.0
```

```r
# create quantile of a data set

# Calling built-in data set
mtcars
```

```
##                      mpg cyl  disp  hp drat    wt  qsec vs am gear carb
## Mazda RX4           21.0   6 160.0 110 3.90 2.620 16.46  0  1    4    4
## Mazda RX4 Wag       21.0   6 160.0 110 3.90 2.875 17.02  0  1    4    4
## Datsun 710          22.8   4 108.0  93 3.85 2.320 18.61  1  1    4    1
## Hornet 4 Drive      21.4   6 258.0 110 3.08 3.215 19.44  1  0    3    1
## Hornet Sportabout   18.7   8 360.0 175 3.15 3.440 17.02  0  0    3    2
## Valiant             18.1   6 225.0 105 2.76 3.460 20.22  1  0    3    1
## Duster 360          14.3   8 360.0 245 3.21 3.570 15.84  0  0    3    4
## Merc 240D           24.4   4 146.7  62 3.69 3.190 20.00  1  0    4    2
## Merc 230            22.8   4 140.8  95 3.92 3.150 22.90  1  0    4    2
## Merc 280            19.2   6 167.6 123 3.92 3.440 18.30  1  0    4    4
## Merc 280C           17.8   6 167.6 123 3.92 3.440 18.90  1  0    4    4
## Merc 450SE          16.4   8 275.8 180 3.07 4.070 17.40  0  0    3    3
## Merc 450SL          17.3   8 275.8 180 3.07 3.730 17.60  0  0    3    3
## Merc 450SLC         15.2   8 275.8 180 3.07 3.780 18.00  0  0    3    3
## Cadillac Fleetwood  10.4   8 472.0 205 2.93 5.250 17.98  0  0    3    4
## Lincoln Continental 10.4   8 460.0 215 3.00 5.424 17.82  0  0    3    4
## Chrysler Imperial   14.7   8 440.0 230 3.23 5.345 17.42  0  0    3    4
## Fiat 128            32.4   4  78.7  66 4.08 2.200 19.47  1  1    4    1
## Honda Civic         30.4   4  75.7  52 4.93 1.615 18.52  1  1    4    2
## Toyota Corolla      33.9   4  71.1  65 4.22 1.835 19.90  1  1    4    1
## Toyota Corona       21.5   4 120.1  97 3.70 2.465 20.01  1  0    3    1
## Dodge Challenger    15.5   8 318.0 150 2.76 3.520 16.87  0  0    3    2
```

```
## AMC Javelin           15.2   8 304.0 150 3.15 3.435 17.30  0  0    3    2
## Camaro Z28            13.3   8 350.0 245 3.73 3.840 15.41  0  0    3    4
## Pontiac Firebird      19.2   8 400.0 175 3.08 3.845 17.05  0  0    3    2
## Fiat X1-9             27.3   4  79.0  66 4.08 1.935 18.90  1  1    4    1
## Porsche 914-2         26.0   4 120.3  91 4.43 2.140 16.70  0  1    5    2
## Lotus Europa          30.4   4  95.1 113 3.77 1.513 16.90  1  1    5    2
## Ford Pantera L        15.8   8 351.0 264 4.22 3.170 14.50  0  1    5    4
## Ferrari Dino          19.7   6 145.0 175 3.62 2.770 15.50  0  1    5    6
## Maserati Bora         15.0   8 301.0 335 3.54 3.570 14.60  0  1    5    8
## Volvo 142E            21.4   4 121.0 109 4.11 2.780 18.60  1  1    4    2
```

```r
# Calling quantile() Function
quantile(mtcars$hp)
```

```
##    0%   25%   50%   75%  100%
##  52.0  96.5 123.0 180.0 335.0
```

```r
quantile(mtcars$wt)
```

```
##      0%     25%     50%     75%    100%
## 1.51300 2.58125 3.32500 3.61000 5.42400
```

```r
# create quantile of a vector
data1 <- c(13, 25, 42, 66,55,67,43,92,11)
quantile(data1)
```

```
##   0%  25%  50%  75% 100%
##   11   25   43   66   92
```

```r
# create quantile of a vector with probabilities
data2 <- c(13, 25, 42, 66,55,67,43,92,11)
quantile(data2, probs = c(0.79,0.29))
```

```
##    79%    29%
## 66.32 30.44
```

```r
# create quantile of a vetor with NA values
data3 <- c(13, 25, 42, 66,55,67,43,92,11,NA,NA)
quantile(data3,na.rm = T)
```

```
##   0%  25%  50%  75% 100%
##   11   25   43   66   92
```

```r
# create quantile of a vector
boxplot(mtcars$hp,main='The boxplot',col='Green',ylab='Values',xlab='Gross horsepower',border = 'Black'
```

The boxplot

Gross horsepower

Values