2.2-Sorting

Igor Luciano de Paula

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In [ ]: > data(murders)
        > sort(murders$total)
         [1]    2    4    5    5    7    8   11   12   12   16   19   21   22   27   32
        [16]   36   38   53   63   65   67   84   93   93   97   97   99  111  116  118
        [31]  120  135  142  207  219  232  246  250  286  293  310  321  351  364  376
        [46]  413  457  517  669  805 1257
        > x <- c(31, 4, 15, 92, 65)
        > x
        [1] 31  4 15 92 65
        > sort(x)
        [1]  4 15 31 65 92
        > x
        [1] 31  4 15 92 65
        > index <- order(x)
        > index
        [1] 2 3 1 5 4
        > x[index]
        [1]  4 15 31 65 92
        > murders$state[1:10]
         [1] "Alabama"            "Alaska"             "Arizona"
         [4] "Arkansas"           "California"         "Colorado"
         [7] "Connecticut"        "Delaware"           "District of Columbia"
        [10] "Florida"
        > murders$abb[1:10]
         [1] "AL" "AK" "AZ" "AR" "CA" "CO" "CT" "DE" "DC" "FL"
        > index2 <- order(murders$total)
        > murders$abb[index2]
         [1] "VT" "ND" "NH" "WY" "HI" "SD" "ME" "ID" "MT" "RI" "AK" "IA" "UT" "WV" "NE"
        [16] "OR" "DE" "MN" "KS" "CO" "NM" "NV" "AR" "WA" "CT" "WI" "DC" "OK" "KY" "MA"
        [31] "MS" "AL" "IN" "SC" "TN" "AZ" "NJ" "VA" "NC" "MD" "OH" "MO" "LA" "IL" "GA"
        [46] "MI" "PA" "NY" "FL" "TX" "CA"
        > length(murders)
        [1] 5
        > max(murders$total)
        [1] 1257
        > i_max <- which.max(murders$total)
        > i_max
```

```
[1] 5
> murders$state[i_max]
[1] "California"
> min(murders$total)
[1] 2
> i_min = which.min(murders$total)
> i_min
[1] 46
> murders$state[i_min]
[1] "Vermont"
> x
[1] 31  4 15 92 65
> rank(x)
[1] 3 1 2 5 4
```