Lecture 3: Special Values, Dates, & Factors

In-Class Activities

Answer the following questions in an RMarkdown document and discuss it with the people around you (no need to write the problem down, just give it a header (## Problem 1, etc.):

1. Answer the following questions relating to dates/times
   (a) Write your birthday in a few different forms (month-day-year) and convert it to a date in R
   (b) Determine how many days you have been alive?
   (c) Determine the day that is exactly in the middle of the date of your birth and today
   (d) Determine the day in which you will be 10,000 days old
   (e) Determine the day in which you will be 500 months old
   (f) How many minutes has it been since January 1st, 2000?
2. Answer the following questions related to special values:
   (a) Create a sample consisting of the numbers -1, 0, 1 and the value NA. Have the sample contain 50 elements with the probability of -1 being 0.4, the probability of 0 being .2, the probability of 1 being .3, and the probability of NA being 0.1
   (b) Create a new vector that evaluates the log of each element
   (c) How many missing values are in this new vector?
   (d) How many infinite values are in this new vector?
   (e) Change all missing values to -100 and change all infinite values to 999
3. Answer the following questions relating to factors:
   (a) Create a vector using the sample function which consists of 20 random weekdays (Monday-Friday) and save it to a variable
   (b) Print out the variable you just created, what does it look like?
   (c) Convert the variable you created into a factor (create a new variable to save the factor to)
   (d) Print out the factor vector you just created, what does it look like?
   (e) Convert the first variable you created to a factor again, but this time specify for your levels to be in the correct order
   (f) Print out the factor vector you just created, what does it look like?