DSCI401 - Homework 7

Due: November 24, 2024
Homework should be submitted as an html file with links to Google colab notes where necessary. Homework should be turned in on Sakai. Due to the size of this file it might need to be put into a zipped folder on Sakai.

1. Using the data whately_2015 from the macleish package, create an interactive plot using plotly (or ggplotly) displaying time (in days) on the x-axis and temperature on the y-axis with three lines: one for the high temperature of the day, one for the average temperature of the day, and one for the low temperature of the day. A csv version of the file can be found here: https://www.dropbox.com/s/m2nt50qanpijp0m/whately2015.csv?dl=0

```
#The data can also be loaded directly into R.
library(mdsr)
library(macleish)

head(whately_2015)

## # A tibble: 6 x 8
##   when                temperature wind_speed wind_dir rel_humidity pressure
##   <dttm>                    <dbl>      <dbl>    <dbl>        <dbl>    <int>
## 1 2015-01-01 00:00:00       -9.32       1.40     225.         54.6      985
## 2 2015-01-01 00:10:00       -9.46       1.51     248.         55.4      985
## 3 2015-01-01 00:20:00       -9.44       1.62     258.         56.2      985
## 4 2015-01-01 00:30:00       -9.3        1.14     244.         56.4      985
## 5 2015-01-01 00:40:00       -9.32       1.22     238.         56.9      984
## 6 2015-01-01 00:50:00       -9.34       1.09     242.         57.2      984
## # i 2 more variables: solar_radiation <dbl>, rainfall <dbl>
```

2. Only in R. Use either gganimate or shiny to make an app using the whately_2015 dataset. I would recommend looking at temperature and wind speed with rainfall as a size aesthetic.If using animation push through time (hour of day 00-24, month, season, etc) and if using a shiny app have a least one widget like a slider for time.