

# Level 1 challenge: Year/Month

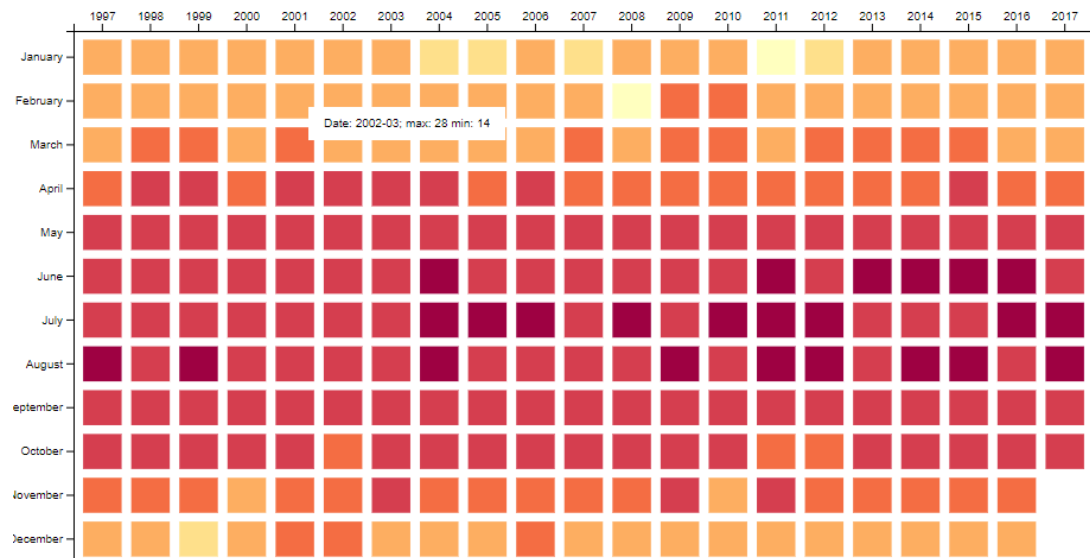
## Heatmap

In this task, you need to draw a **Matrix View** to visualize the **Monthly Temperature** of Hong Kong, where the color of each matrix cell encodes the temperature. You can find the data in [temperature\\_daily.csv](#).

Here are the basic requirements:

1. In the matrix, x direction indicates the year and y direction indicates the month (you can switch them if you like). Each cell indicates the corresponding month of a specific year.
2. You need to visualize the maximum and minimum temperature by month in some way (e.g. you can use click to switch max or min temperature).
3. When hovering mouse on each cell, a tip should appear to show the date and the temperature value.
4. A legend is needed to show the mapping between colors and values.

An example is like this:



## Level 2 Challenge: Improvement of the Year/Month Heatmap

In Level 1, we have visualized the temperature differences across months and years. However, even within a month, the temperatures may vary drastically. In this task, you need to improve the previous visualization by showing the daily changes of temperature as well. You only need to focus on the last 5 to 10 years of data.

1. Same as level 1, x direction indicates the year and y direction indicates the month (you can switch them if you like). Each cell indicates the corresponding month of a specific year.
2. Still same as level 1, you need to visualize the daily changes of the maximum and minimum temperature in each cell.

- An example is like this:

