Level 1 challenge: Year/Month

添加转换按钮

```
<div id="option">
  <input name="updateButton"
         type="button"
         value="Switch to Min temperature"
         onclick="Click()" />
</div>
```

读取横纵坐标数据

```
  var myGroups = d3.map(data, function(d){return d.year;}).keys()
  var myVars = d3.map(data, function(d){return d.month;}).keys()
```

设置颜色

```
// Build color scale
  var myColor = d3.scaleSequential()
    .interpolator(d3.interpolateInferno)
    .domain([0,40])
```

分组绘制热力图

```
svg.selectAll()
    .data(data, function(d) {return d.year+':'+d.month;})
    .enter()
    .append("rect")
      .attr("x", function(d) { return x(d.year) })
      .attr("y", function(d) { return y(d.month) })
      .attr("rx", 4)
      .attr("ry", 4)
      .attr("width", x.bandwidth() )
      .attr("height", y.bandwidth() )
      .style("fill", function(d) { return myColor(d.max_temperature)} )
      .style("stroke-width", 4)
      .style("stroke", "none")
      .style("opacity", 0.8)
    .on("mouseover", mouseover)
    .on("mousemove", mousemove)
    .on("mouseleave", mouseleave)
```

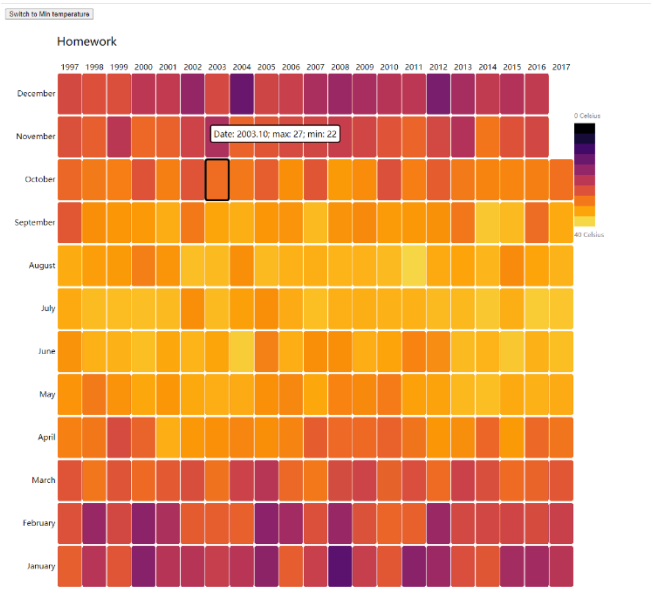
加上图例

```
for(var i=0; i<10; i++)
  {
    svg.append("rect")
        .attr("x", 1000)
        .attr("y", 100+i*20)
        .attr("width", 40)
        .attr("height", 20)
```

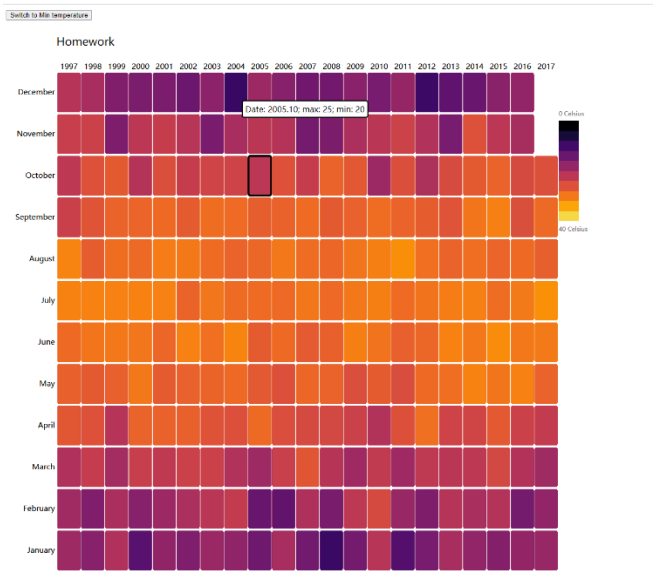
```
        .style("fill", function(d) { return myColor(i*4)} )
}
svg.append("text")
        .attr("x", 1000)
        .attr("y", 90)
        .attr("text-anchor", "left")
        .style("font-size", "12px")
        .style("fill", "grey")
        .text("0 Celsius");

svg.append("text")
        .attr("x", 1000)
        .attr("y", 320)
        .attr("text-anchor", "left")
        .style("font-size", "12px")
        .style("fill", "grey")
        .text("40 Celsius");
```

得到最高温热力图



转换得到最低温热力图



Level 2 Challenge: Improvement of the Year/Month Heatmap

按照年和月分组

```
// group the data: I want to draw one line per group
  var sumstat = d3.nest() // nest function allows to group the calculat
ion per level of a factor
    .key(function(d) { return d.year_month;})
    .entries(data);

  // What is the list of groups?
  allKeys = sumstat.map(function(d){return d.key})
```

画出高温折线图

```
svg
    .append("path")
      .attr("fill", "none")
      .attr("stroke", "black")
      .attr("stroke-width", 1.9)
      .attr("d", function(d){
        return d3.line()
          .x(function(d) { return x(d.index); })
          .y(function(d) { return y(+d.max_temperature); })
          (d.values)
      })
```

效果

同样的我们得到低温折线图

但是真的对不起老师呜呜呜，我没有办法把热力图和折线图拼接起来，我很努力地尝试了但是还是没有做到，老师真的抱歉！