changed_temperatures_on_my_birthday

July 30, 2021

[ ]:
```
'''
next()           .
function       header     .
consumer       data  header     .

row[ , ,  (℃),  (℃),  (℃)]     -1  .

data : [] = list()  list    data  list()          .
,                  .        .
data : [] = None
def save_highest_temperatures(self):
     data = list()
  ,                 .        .
data : [] = list()
'''
```

[57]:
```
import csv
import matplotlib.pyplot as plt
import random
```

[29]:
```
data = csv.reader(open('data/seoul.csv', 'rt', encoding='UTF-8'))
```

[30]:
```
 next(data)
```

[30]:
```
[' ', ' ', '  (℃)', '  (℃)', '  (℃)']
```

[31]:
```
ls = list(data)
```

[51]:
```
print([i for i in ls])
```

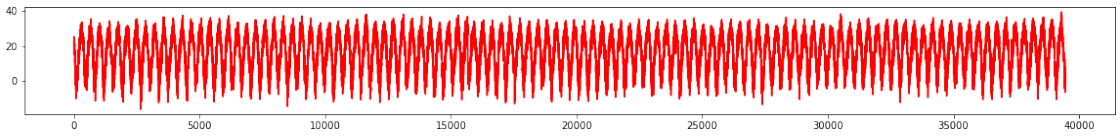
[52]:
```
print([i[-1] for i in ls]) # show_highest_temperature
```

[36]:
```
highest_temperatures = []
[highest_temperatures.append(float(i[-1])) for i in ls if i[-1] != '']
print(f' {len(highest_temperatures)} ')
```

```
39463
```

[41]:
```
plt.figure(figsize=(20,2))
plt.plot(highest_temperatures, 'r') # red
```

[41]: [<matplotlib.lines.Line2D at 0x7fdd90708100>]

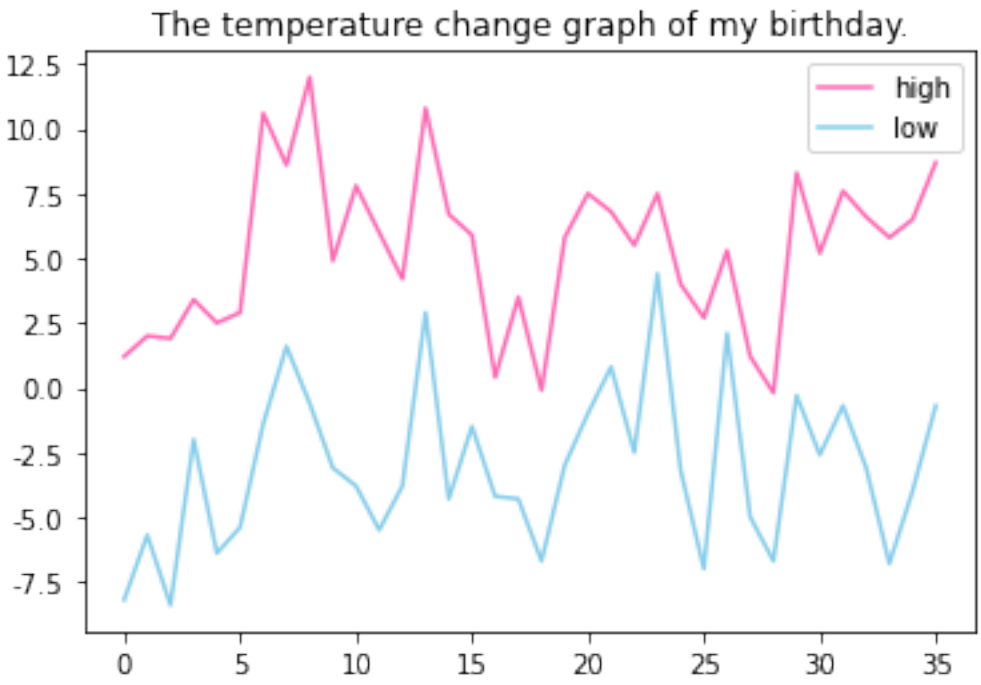


[42]:
```
high = [] #
low = [] #
```

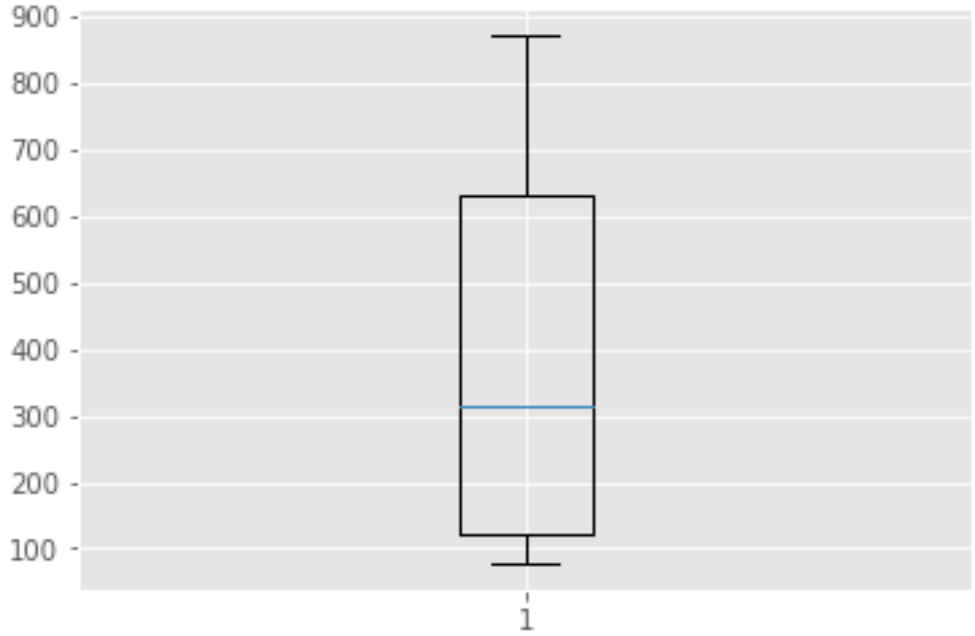
[44]:
```
for i in ls:
    if i[-1] != '' and i[-2] != '':
        if 1983 <= int(i[0].split('-')[0]):
            if i[0].split('-')[1]=='02' and i[0].split('-')[2] == '14':
                high.append(float(i[-1]))
                low.append(float(i[-2]))
```

[50]:
```
plt.rc('font')
plt.rcParams['axes.unicode_minus'] = False
plt.title('The temperature change graph of my birthday.')
plt.plot(high, 'hotpink', label='high')
plt.plot(low, 'skyblue', label='low')
plt.legend()
```

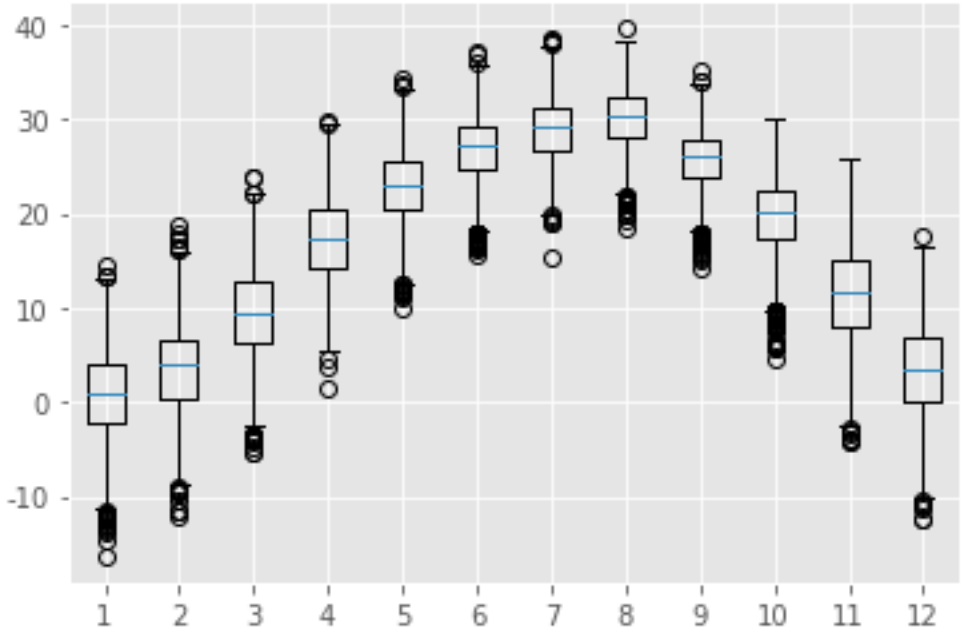
[50]: <matplotlib.legend.Legend at 0x7fdd931fbdf0>



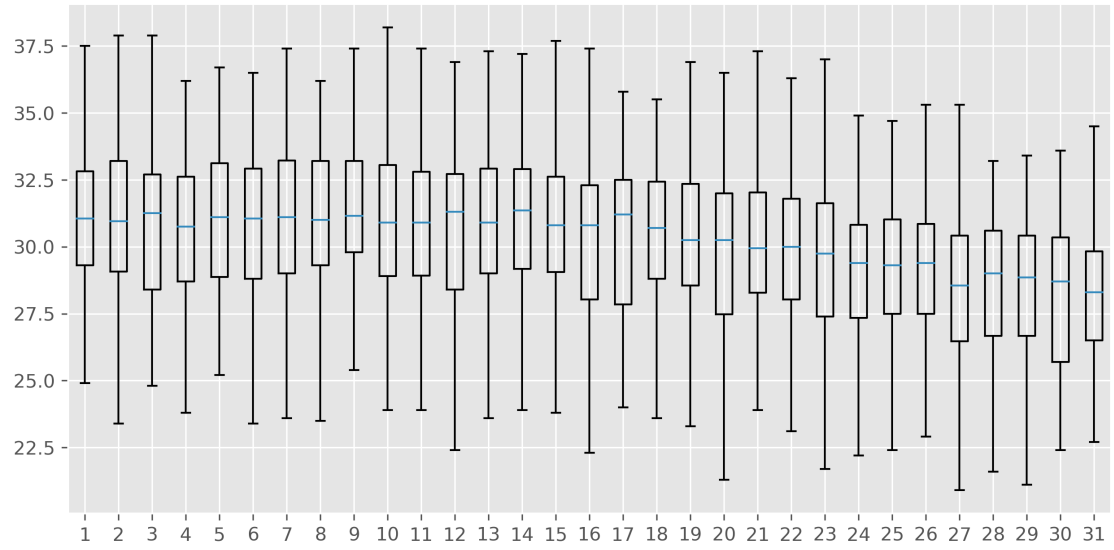
[59]:
```
arr = []
[arr.append(random.randint(1, 1000))for i in range(13)]
plt.boxplot(arr)
plt.show()
```



[56]:
```
month = [[], [], [], [], [], [], [], [], [], [], [], []]
# for i in arr:
#     if i[-1] != '':
#         month[int(i[0].split('-')[1])-1].append(float(i[-1]))
[month[int(i[0].split('-')[1]) - 1].append(float(i[-1])) for i in ls if i[-1] !
 ↪= '']
plt.boxplot(month)
plt.show()
```



[55]:
```
day = []
[day.append([]) for i in range(31)]
[day[int(i[0].split('-')[2]) -1].append(float(i[-1]))
     for i in ls
        if i[-1] != ''
            if i[0].split('-')[1] == '08']
plt.style.use('ggplot') # Graph Style
plt.figure(figsize=(10, 5), dpi=300) # Graph Size
plt.boxplot(day, showfliers=False) # Omit Outlier
plt.show()
```


37.5
35.0
32.5
30.0
27.5
25.0
22.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31