

In [30]:

```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

In [8]:

```
df = pd.read_csv('sample abnormal temp table.csv')
```

In [9]:

```
df.head()
```

Out[9]:

	timestamp	temp	max	min	alert
0	23/4/2021 0800	10	10	3	True
1	23/4/2021 0815	11	11	3	True
2	23/4/2021 0830	12	12	3	True
3	23/4/2021 0845	13	13	3	True
4	23/4/2021 0900	14	14	3	True

In [10]:

```
df.tail()
```

Out[10]:

	timestamp	temp	max	min	alert
8	23/4/2021 1000	11	18	3	True
9	23/4/2021 1015	10	18	3	True
10	23/4/2021 1030	9	18	3	True
11	23/4/2021 1045	9	18	3	True
12	23/4/2021 1100	9	18	3	True

## Max Min Temperature Breach

In [15]:

```
# Check whether max temp or min temp has been breached

max_breached = False
min_breached = False

max_recorded = df['max'].max()
min_recorded = df['min'].min()

if max_recorded > 8: max_breached = True
if min_recorded < 2: min_breached = True

if max_breached:
    print('Maximum temperature limited of 8 degrees has been breached')
    print('Maximum temperature recorded is',max_recorded)
else:
    print('Minimum temperature limited of 2 degrees has been breached')
    print('Minimum temperature recorded is',min_recorded)
```

Maximum temperature limited of 8 degrees has been breached  
Maximum temperature recorded is 18

## Tabulation & Visualisation

In [12]:

```
df1 = df.groupby('temp').agg({'timestamp':'count'})
```

In [17]:

```
df1['time exposed (mins)'] = df1['timestamp']*15
```

In [21]:

df1

Out[21]:

	timestamp	time exposed (mins)
temp		
9	3	45
10	2	30
11	2	30
12	1	15
13	2	30
14	1	15
15	2	30

In [27]:

```
df1['time exposed (mins)']
```

Out[27]:

```
temp
9      45
10     30
11     30
12     15
13     30
14     15
15     30
Name: time exposed (mins), dtype: int64
```

In [25]:

```
df1.iloc[:,[1]]
```

Out[25]:

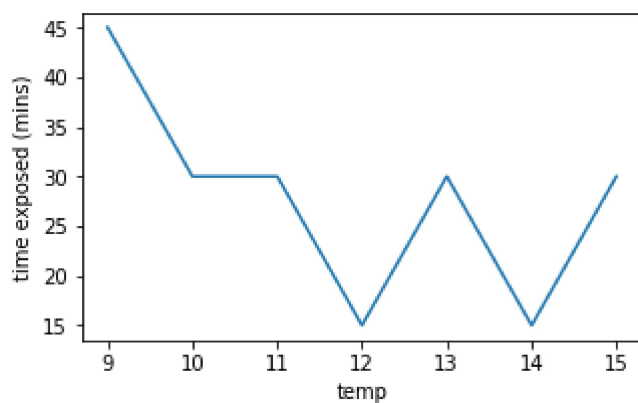
	time exposed (mins)
temp	
9	45
10	30
11	30
12	15
13	30
14	15
15	30

In [36]:

```
plt.figure(figsize=(5, 3))
sns.lineplot(data=df1, x='temp',y='time exposed (mins)')
```

Out[36]:

&lt;AxesSubplot:xlabel='temp', ylabel='time exposed (mins)'&gt;



In [ ]: