

## SciPy

In [8]:

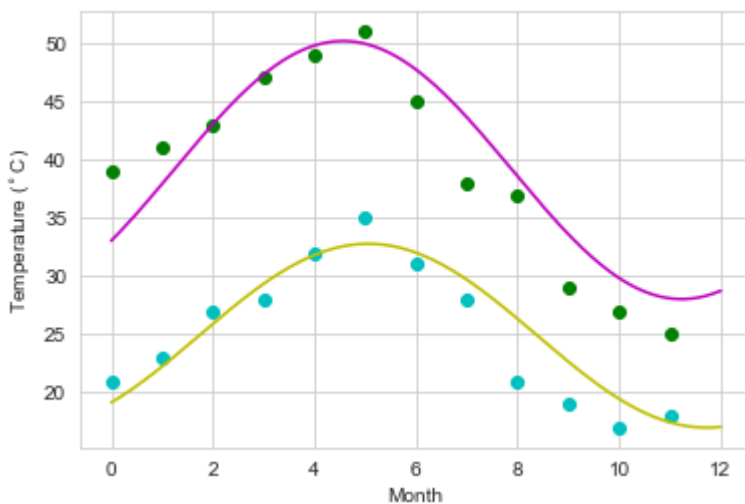
```
import numpy as np
from scipy import optimize
import matplotlib.pyplot as plt

tmax = np.array([39,41,43,47,49,51,45,38,37,29,27,25])
tmin = np.array([21,23,27,28,32,35,31,28,21,19,17,18])

def yearly_temps(times, avg, ampl, time_offset):
    return (avg + ampl * np.cos((times + time_offset) * 1.8 * np.pi / times.max
    ()))
months = np.arange(12)
res_max, cov_max = optimize.curve_fit(yearly_temps, months,tmax, [40, 20, 0])
res_min, cov_min = optimize.curve_fit(yearly_temps, months,tmin, [-40, 20, 0])
days = np.linspace(0, 12, num=365)

plt.figure()
plt.plot(months, tmax, 'go')
plt.plot(days, yearly_temps(days, *res_max), 'm-')
plt.plot(months, tmin, 'co')
plt.plot(days, yearly_temps(days, *res_min), 'y-')
plt.xlabel('Month')
plt.ylabel('Temperature ($^\circ$C)')

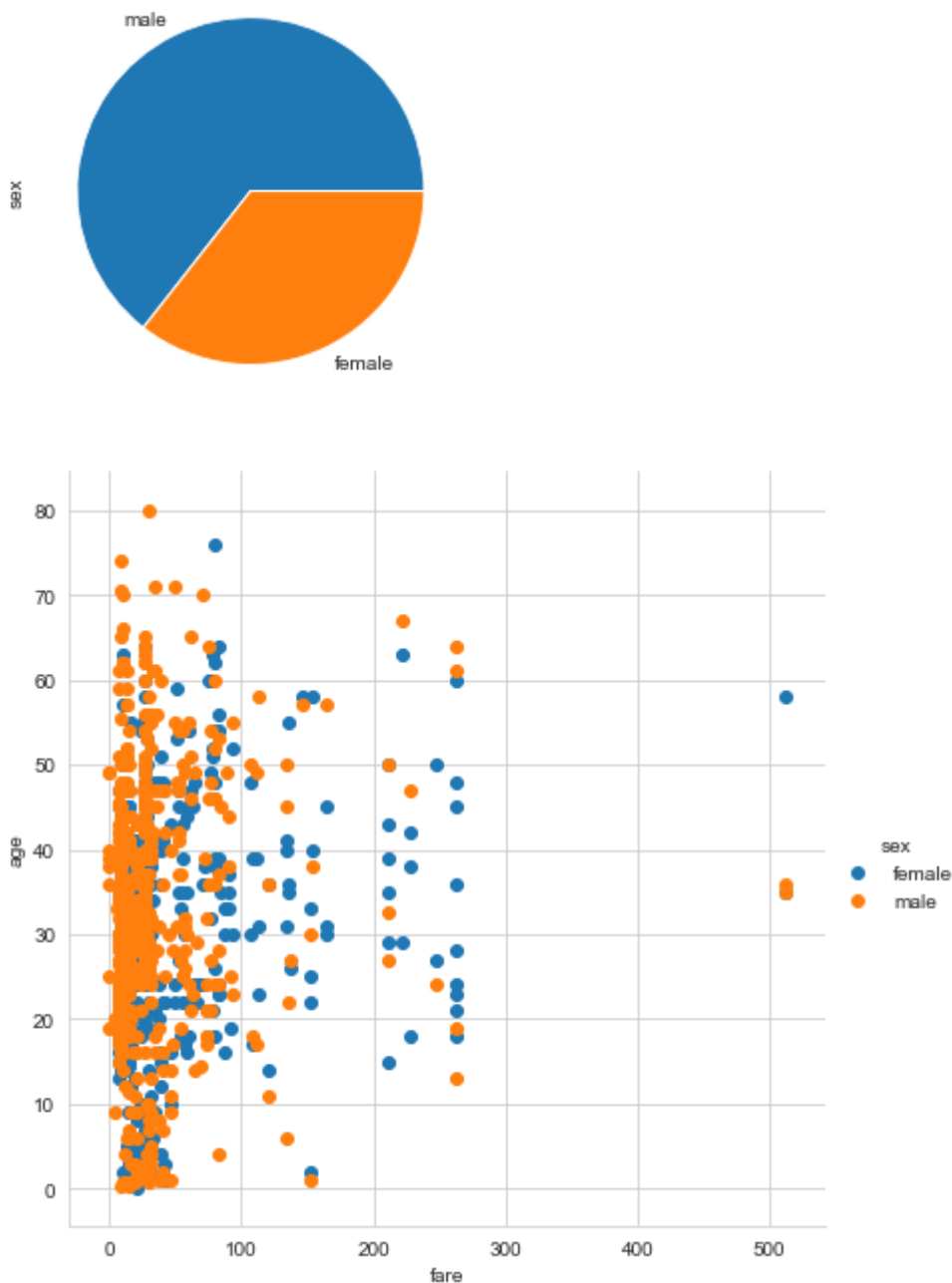
plt.show()
```



## Matplotlib

In [7]:

```
import pandas as pd
import seaborn as sns
titanic = pd.read_csv("https://raw.githubusercontent.com/Geoyi/Cleaning-Titanic-Data/master/titanic_original.csv")
titanic['sex'].value_counts().plot.pie()
plt.gca().set_aspect("equal")
#titanic.plot(kind='scatter', x='Fare paid', y='age') ;
#plt.show()
sns.set_style("whitegrid");
sns.FacetGrid(titanic, hue="sex", height=6).map(plt.scatter, "fare", "age").add_
legend();
```



In [ ]: