```
In [9]:  import matplotlib.pyplot as plt
         import pandas as pd
         import numpy as np
         %matplotlib inline

         titanic = pd.read_csv('train.csv', sep=',',header=0)
```
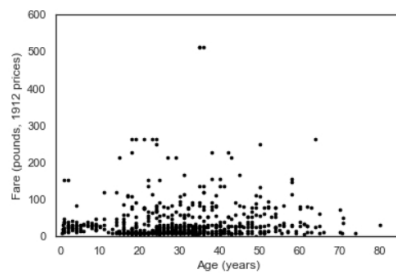
```
In [10]:  print(titanic.shape)
          titanic.head(n=3)
```

(891, 12)

Out[10]:

	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked
0	1	0	3	Braund, Mr. Owen Harris	male	22.0	1	0	A/5 21171	7.2500	NaN	S
1	2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th...	female	38.0	1	0	PC 17599	71.2833	C85	C
2	3	1	3	Heikkinen, Miss. Laina	female	26.0	0	0	STON/O2. 3101282	7.9250	NaN	S

```
In [12]:  titanic_scatter = titanic.plot.scatter('Age', 'Fare', c = "black", s = 7)
          plt.xlabel('Age (years)')
          plt.ylabel('Fare (pounds, 1912 prices)')
          titanic_scatter.set_xlim(-1, 85)
          titanic_scatter.set_ylim(-1, 600)
          plt.show(titanic_scatter)
```



```
In [15]:  titanic_pcalss_fig, titanic_pcalss_ax = plt.subplots()

          # choose 3 colors for points:
          color = ['black', 'magenta', 'blue']

          # loop over pclass groups to plot on same access
          count = 0
          for name, group in titanic.groupby('Pclass'):
              titanic_pcalss_ax.plot(group.Age, group.Fare, '.',
                                     label = name, alpha = 0.6,
                                     c = color[count])
              count += 1

          # set legend
          titanic_pcalss_ax.legend(numpoints=1, title = "Passenger class", fontsize = 10)

          # set axis labels and limits
          plt.xlabel('Age (years)')
          plt.ylabel('Fare (pounds, 1912 prices)')
          titanic_pcalss_ax.set_xlim(-1, 85)
          titanic_pcalss_ax.set_ylim(-1, 600)

          plt.show(titanic_pcalss_fig)
```
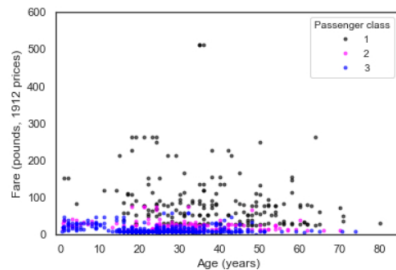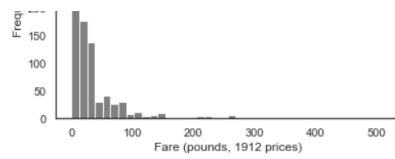


```
In [ ]:  # set axis labels and limits
         plt.xlabel('Year')
         plt.ylabel('Population')
         gap_slovac_line.set_xlim(1950, 2010)

         plt.show(gap_slovac_line)
```

```
In [17]:  titanic_hist = titanic.Fare.plot.hist(bins = 40, color = 'grey')
          plt.xlabel('Fare (pounds, 1912 prices)')

          plt.show(titanic_hist)
```
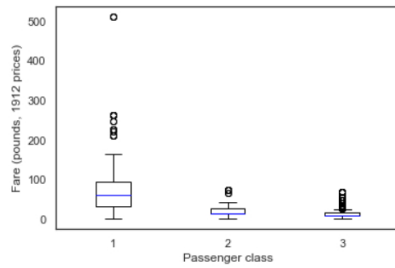
In [19]:
```python
pclass_fare_titanic = titanic[['Pclass', 'Fare']].pivot(columns = 'Pclass', values = 'Fare')

box_color = dict(boxes = 'black',
                 whiskers = 'black',
                 medians = 'blue',
                 caps = 'black')

titanic_pclass_boxplot = pclass_fare_titanic.plot.box(color = box_color)
plt.xlabel('Passenger class')
plt.ylabel('Fare (pounds, 1912 prices)')

plt.show(titanic_pclass_boxplot)
```
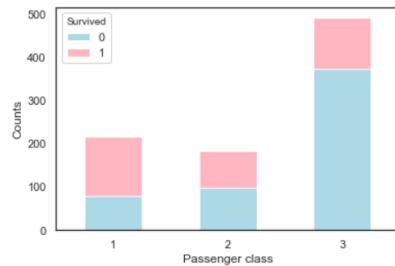

In [20]:
```python
# bar plot
contingency_titanic = titanic.groupby(['Pclass', 'Survived']).size().unstack()
titanic_barplot = contingency_titanic.plot.bar(stacked=True,
                                               color = ["lightblue", "lightpink"])
plt.ylabel("Counts")
plt.xlabel('Passenger class')
plt.xticks(rotation=0)
plt.show(titanic_barplot)
```


In [ ]: