In [1]:
```
#this chunk lets you have multiple outputs from a single chunk; run it first!
from IPython.core.interactiveshell import InteractiveShell
InteractiveShell.ast_node_interactivity = "all"
```

In [2]:
```
import matplotlib.pyplot as plt
import seaborn as sns
import numpy as np
import pandas as pd
df = sns.load_dataset('titanic')
```

In [13]:
```
print(df)
```

	survived	pclass	sex	age	sibsp	parch	fare	embarked	class
0	0	3	male	22.0	1	0	7.2500	S	Third
1	1	1	female	38.0	1	0	71.2833	C	First
2	1	3	female	26.0	0	0	7.9250	S	Third
3	1	1	female	35.0	1	0	53.1000	S	First
4	0	3	male	35.0	0	0	8.0500	S	Third
5	0	3	male	NaN	0	0	8.4583	Q	Third
6	0	1	male	54.0	0	0	51.8625	S	First
7	0	3	male	2.0	3	1	21.0750	S	Third
8	1	3	female	27.0	0	2	11.1333	S	Third
9	1	2	female	14.0	1	0	30.0708	C	Second
10	1	3	female	4.0	1	1	16.7000	S	Third
11	1	1	female	58.0	0	0	26.5500	S	First
12	0	3	male	20.0	0	0	8.0500	S	Third
13	0	3	male	39.0	1	5	31.2750	S	Third
14	0	3	female	14.0	0	0	7.8542	S	Third
15	1	2	female	55.0	0	0	16.0000	S	Second
16	0	3	male	2.0	4	1	29.1250	Q	Third
17	1	2	male	NaN	0	0	13.0000	S	Second
18	0	3	female	31.0	1	0	18.0000	S	Third
19	1	3	female	NaN	0	0	7.2250	C	Third
20	0	2	male	35.0	0	0	26.0000	S	Second
21	1	2	male	34.0	0	0	13.0000	S	Second
22	1	3	female	15.0	0	0	8.0292	Q	Third
23	1	1	male	28.0	0	0	35.5000	S	First
24	0	3	female	8.0	3	1	21.0750	S	Third
25	1	3	female	38.0	1	5	31.3875	S	Third
26	0	3	male	NaN	0	0	7.2250	C	Third
27	0	1	male	19.0	3	2	263.0000	S	First
28	1	3	female	NaN	0	0	7.8792	Q	Third
29	0	3	male	NaN	0	0	7.8958	S	Third
..	...	...	...	...	...	...	...	...	...
861	0	2	male	21.0	1	0	11.5000	S	Second
862	1	1	female	48.0	0	0	25.9292	S	First
863	0	3	female	NaN	8	2	69.5500	S	Third
864	0	2	male	24.0	0	0	13.0000	S	Second
865	1	2	female	42.0	0	0	13.0000	S	Second
866	1	2	female	27.0	1	0	13.8583	C	Second
867	0	1	male	31.0	0	0	50.4958	S	First
868	0	3	male	NaN	0	0	9.5000	S	Third
869	1	3	male	4.0	1	1	11.1333	S	Third
870	0	3	male	26.0	0	0	7.8958	S	Third
871	1	1	female	47.0	1	1	52.5542	S	First
872	0	1	male	33.0	0	0	5.0000	S	First
873	0	3	male	47.0	0	0	9.0000	S	Third
874	1	2	female	28.0	1	0	24.0000	C	Second
875	1	3	female	15.0	0	0	7.2250	C	Third
876	0	3	male	20.0	0	0	9.8458	S	Third
877	0	3	male	19.0	0	0	7.8958	S	Third
878	0	3	male	NaN	0	0	7.8958	S	Third
879	1	1	female	56.0	0	1	83.1583	C	First
880	1	2	female	25.0	0	1	26.0000	S	Second
881	0	3	male	33.0	0	0	7.8958	S	Third
882	0	3	female	22.0	0	0	10.5167	S	Third
883	0	2	male	28.0	0	0	10.5000	S	Second
884	0	3	male	25.0	0	0	7.0500	S	Third

```
     885         0       3  female  39.0      0      5   29.1250        Q   Third
     886         0       2    male  27.0      0      0   13.0000        S  Second
     887         1       1  female  19.0      0      0   30.0000        S   First
     888         0       3  female   NaN      1      2   23.4500        S   Third
     889         1       1    male  26.0      0      0   30.0000        C   First
     890         0       3    male  32.0      0      0    7.7500        Q   Third

           who  adult_male deck  embark_town alive  alone
0         man        True  NaN  Southampton    no  False
1       woman       False    C    Cherbourg   yes  False
2       woman       False  NaN  Southampton   yes   True
3       woman       False    C  Southampton   yes  False
4         man        True  NaN  Southampton    no   True
5         man        True  NaN   Queenstown    no   True
6         man        True    E  Southampton    no   True
7       child       False  NaN  Southampton    no  False
8       woman       False  NaN  Southampton   yes  False
9       child       False  NaN    Cherbourg   yes  False
10      child       False    G  Southampton   yes  False
11      woman       False    C  Southampton   yes   True
12        man        True  NaN  Southampton    no   True
13        man        True  NaN  Southampton    no  False
14      child       False  NaN  Southampton    no   True
15      woman       False  NaN  Southampton   yes   True
16      child       False  NaN   Queenstown    no  False
17        man        True  NaN  Southampton   yes   True
18      woman       False  NaN  Southampton    no  False
19      woman       False  NaN    Cherbourg   yes   True
20        man        True  NaN  Southampton    no   True
21        man        True    D  Southampton   yes   True
22      child       False  NaN   Queenstown   yes   True
23        man        True    A  Southampton   yes   True
24      child       False  NaN  Southampton    no  False
25      woman       False  NaN  Southampton   yes  False
26        man        True  NaN    Cherbourg    no   True
27        man        True    C  Southampton    no  False
28      woman       False  NaN   Queenstown   yes   True
29        man        True  NaN  Southampton    no   True
..        ...         ...  ...          ...   ...    ...
861       man        True  NaN  Southampton    no  False
862     woman       False    D  Southampton   yes   True
863     woman       False  NaN  Southampton    no  False
864       man        True  NaN  Southampton    no   True
865     woman       False  NaN  Southampton   yes   True
866     woman       False  NaN    Cherbourg   yes  False
867       man        True    A  Southampton    no   True
868       man        True  NaN  Southampton    no   True
869     child       False  NaN  Southampton   yes  False
870       man        True  NaN  Southampton    no   True
871     woman       False    D  Southampton   yes  False
872       man        True    B  Southampton    no   True
873       man        True  NaN  Southampton    no   True
874     woman       False  NaN    Cherbourg   yes  False
875     child       False  NaN    Cherbourg   yes   True
876       man        True  NaN  Southampton    no   True
877       man        True  NaN  Southampton    no   True
878       man        True  NaN  Southampton    no   True
```

```
879  woman       False    C    Cherbourg   yes  False
880  woman       False  NaN  Southampton   yes  False
881    man        True  NaN  Southampton    no   True
882  woman       False  NaN  Southampton    no   True
883    man        True  NaN  Southampton    no   True
884    man        True  NaN  Southampton    no   True
885  woman       False  NaN   Queenstown    no  False
886    man        True  NaN  Southampton    no   True
887  woman       False    B  Southampton   yes   True
888  woman       False  NaN  Southampton    no  False
889    man        True    C    Cherbourg   yes   True
890    man        True  NaN   Queenstown    no   True

[891 rows x 15 columns]
```

In [9]:
```
(df.filter(['age', 'sex']).query('sex == "male"').head())
```

Out[9]:

	age	sex
0	22.0	male
4	35.0	male
5	NaN	male
6	54.0	male
7	2.0	male

In [6]:
```
df[['class','age','sex']].head()
```

Out[6]:

	class	age	sex
0	Third	22.0	male
1	First	38.0	female
2	Third	26.0	female
3	First	35.0	female
4	Third	35.0	male

In [7]:
```
import matplotlib.pyplot as plt
```

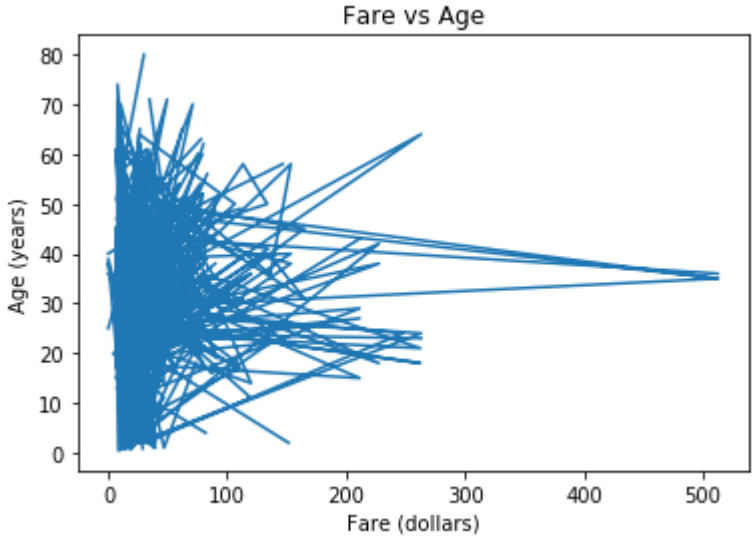
In [8]:
```
plt.plot('fare', 'age', data=df)
plt.xlabel('Fare (dollars)')
plt.ylabel('Age (years)')
plt.title('Fare vs Age')
plt.show()
```

Out[8]: [<matplotlib.lines.Line2D at 0x7f499c846b38>]

Out[8]: Text(0.5,0,'Fare (dollars)')

Out[8]: Text(0,0.5,'Age (years)')

Out[8]: Text(0.5,1,'Fare vs Age')



In [ ]: