DATA VISUALIZATION ASSIGNMENT

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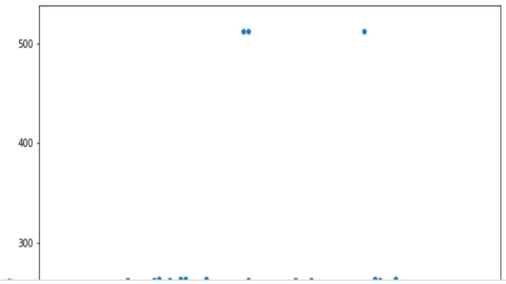
```
[4] import pandas as pd
    import seaborn as sns
    import matplotlib.pyplot as plt
    titan=pd.read_csv('/content/train_and_test2.csv')
```

Question 1

```
[5] fig, axes = plt.subplots(figsize=(10,10))
    sns.scatterplot(x='Age', y='Fare', data=titan, ax=axes)
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7ff9eb0bacd0>
```



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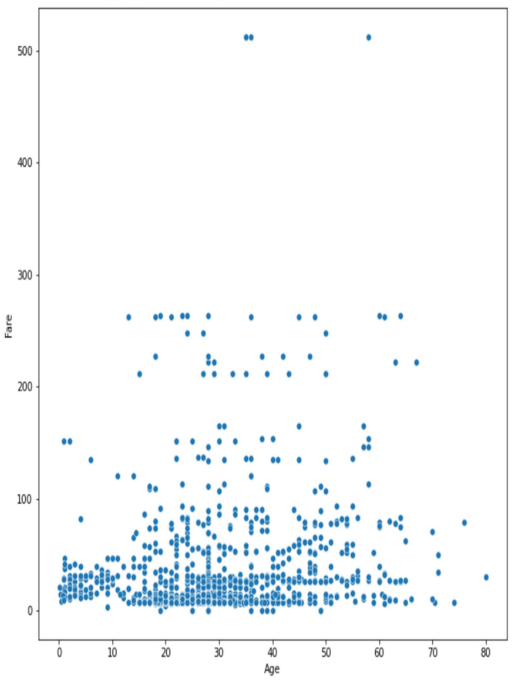
[5]

<matplotlib.axes._subplots.AxesSubplot at 0x7ff9eb0bacd0>



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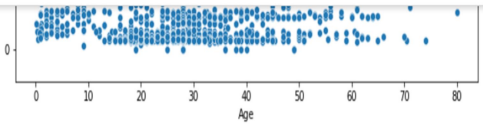
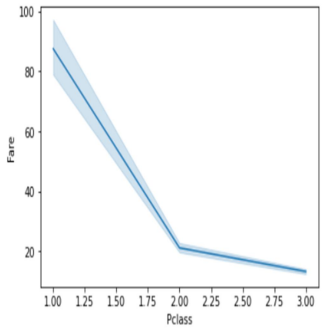
[5]



Question 2

[7]
```
sns.lineplot(x="Pclass",y="Fare",data=titan)
plt.show()
```



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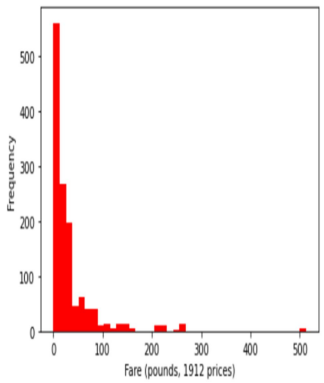
Question 3

[8]
```
titanic_hist = titan.Fare.plot.hist(bins = 40, color = 'red')
plt.xlabel('Fare (pounds, 1912 prices)')
plt.show(titanic_hist)
```



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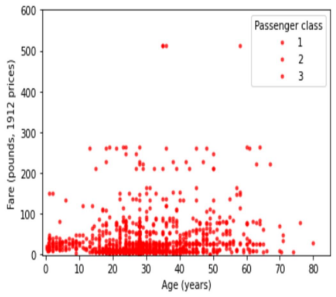
Question 4

```
titanic_pclass_fig, titanic_pclass_ax = plt.subplots()
color = ['red', 'green', 'blue']
count = 0
for name, group in titan.groupby('Pclass'):
  titanic_pclass_ax.plot(group.Age, group.Fare, '.',
label = name, alpha = 0.7,
c = color[count])
count += 1
titanic_pclass_ax.legend(numpoints=1, title = "Passenger class",
fontsize = 10)
plt.xlabel('Age (years)')
plt.ylabel('Fare (pounds, 1912 prices)')
titanic_pclass_ax.set_xlim(-1, 85)
titanic_pclass_ax.set_ylim(-1, 600)
plt.show(titanic_pclass_fig)
```



Question 5

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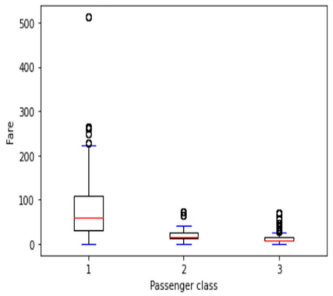
Question 5

```
[16] pclass_fare_titanic = titan[['Pclass', 'Fare']].pivot(columns =
     'Pclass', values = 'Fare')
     box_color = dict(boxes = 'black',
     whiskers = 'black',
     medians = 'red',
     caps = 'blue')
     titanic_pclass_boxplot = pclass_fare_titanic.plot.box(color =
     box_color)
     plt.xlabel('Passenger class')
     plt.ylabel('Fare')
     plt.show(titanic_pclass_boxplot)
```

```
/usr/local/lib/python3.7/dist-packages/matplotlib/cbook/__init__.py:1376: VisibleDeprecationWarning: Creating an ndarray from ragged nested sequences (which
  X = np.atleast_1d(X.T if isinstance(X, np.ndarray) else np.asarray(X))
```



Question 6

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Question 6

```
[21] contingency_titanic = titan.groupby(['Pclass','sibsp']).size().unstack()
     titanic_barplot = contingency_titanic.plot.bar(stacked=True,
     color = ["yellow","magenta"])
     plt.ylabel("Counts")
     plt.xlabel('Passenger class')
     plt.xticks(rotation=0)
     plt.show(titanic_barplot)
```