

Practical No :09

Data Visualization II

1. Use the inbuilt dataset 'titanic' as used in the above problem. Plot a box plot for distribution of age with respect to each gender along with the information about whether they survived or not. (Column names : 'sex' and 'age')
2. Write observations on the inference from the above statistics.

```
In [1]: 1 import seaborn as sns
        2 titanic = sns.load_dataset("titanic")
```

```
In [2]: 1 titanic
```

```
Out[2]:
```

	survived	pclass	sex	age	sibsp	parch	fare	embarked	class	who	adult_male
0	0	3	male	22.0	1	0	7.2500	S	Third	man	True
1	1	1	female	38.0	1	0	71.2833	C	First	woman	False
2	1	3	female	26.0	0	0	7.9250	S	Third	woman	False
3	1	1	female	35.0	1	0	53.1000	S	First	woman	False
4	0	3	male	35.0	0	0	8.0500	S	Third	man	True
...
886	0	2	male	27.0	0	0	13.0000	S	Second	man	True
887	1	1	female	19.0	0	0	30.0000	S	First	woman	False
888	0	3	female	NaN	1	2	23.4500	S	Third	woman	False
889	1	1	male	26.0	0	0	30.0000	C	First	man	True
890	0	3	male	32.0	0	0	7.7500	Q	Third	man	True

891 rows × 12 columns



In [3]: 1 titanic.head(10)

Out[3]:

	survived	pclass	sex	age	sibsp	parch	fare	embarked	class	who	adult_male	deck
0	0	3	male	22.0	1	0	7.2500	S	Third	man	True	N
1	1	1	female	38.0	1	0	71.2833	C	First	woman	False	
2	1	3	female	26.0	0	0	7.9250	S	Third	woman	False	N
3	1	1	female	35.0	1	0	53.1000	S	First	woman	False	
4	0	3	male	35.0	0	0	8.0500	S	Third	man	True	N
5	0	3	male	NaN	0	0	8.4583	Q	Third	man	True	N
6	0	1	male	54.0	0	0	51.8625	S	First	man	True	
7	0	3	male	2.0	3	1	21.0750	S	Third	child	False	N
8	1	3	female	27.0	0	2	11.1333	S	Third	woman	False	N
9	1	2	female	14.0	1	0	30.0708	C	Second	child	False	N

In [4]: 1 titanic.info

Out[4]:

```
<bound method DataFrame.info of
ch      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
..      ...      ...    ...    ...    ...    ...    ...    ...    ...
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
..      ...      ...    ...      ...      ...      ...
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 [5]: 1 titanic.loc[:,["survived","alive"]]
```

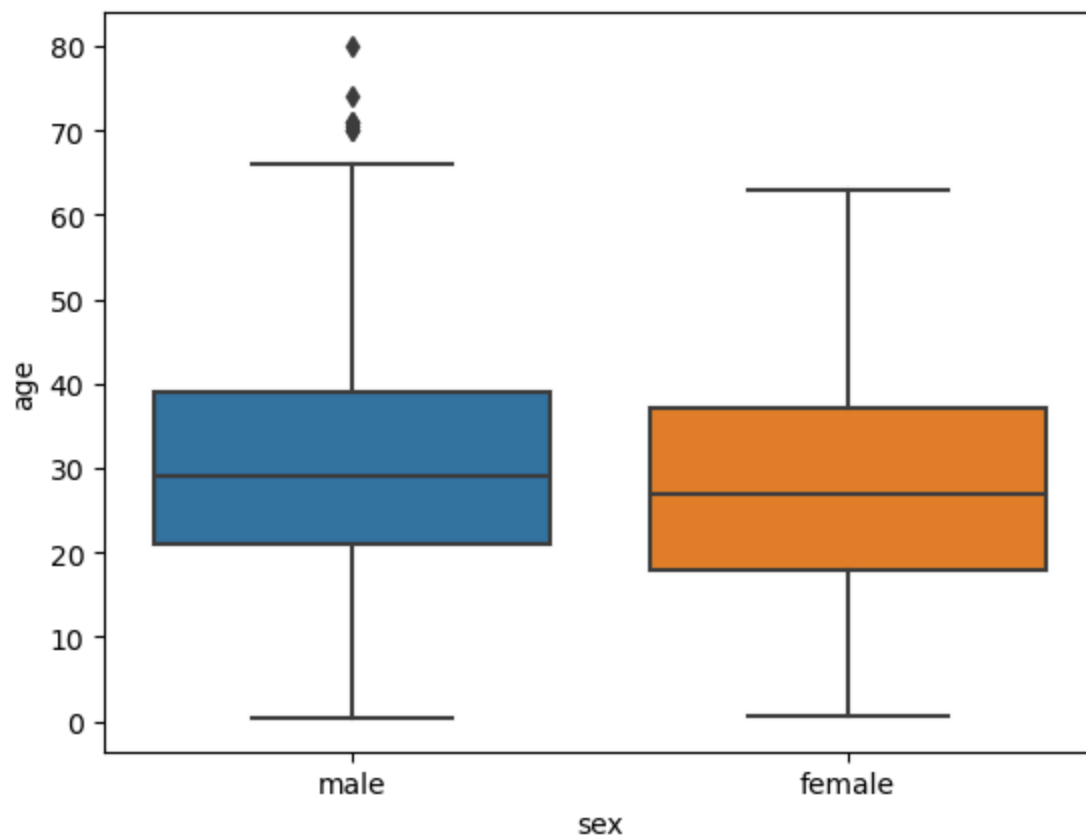
```
Out[5]:
```

	survived	alive
0	0	no
1	1	yes
2	1	yes
3	1	yes
4	0	no
...
886	0	no
887	1	yes
888	0	no
889	1	yes
890	0	no

891 rows × 2 columns

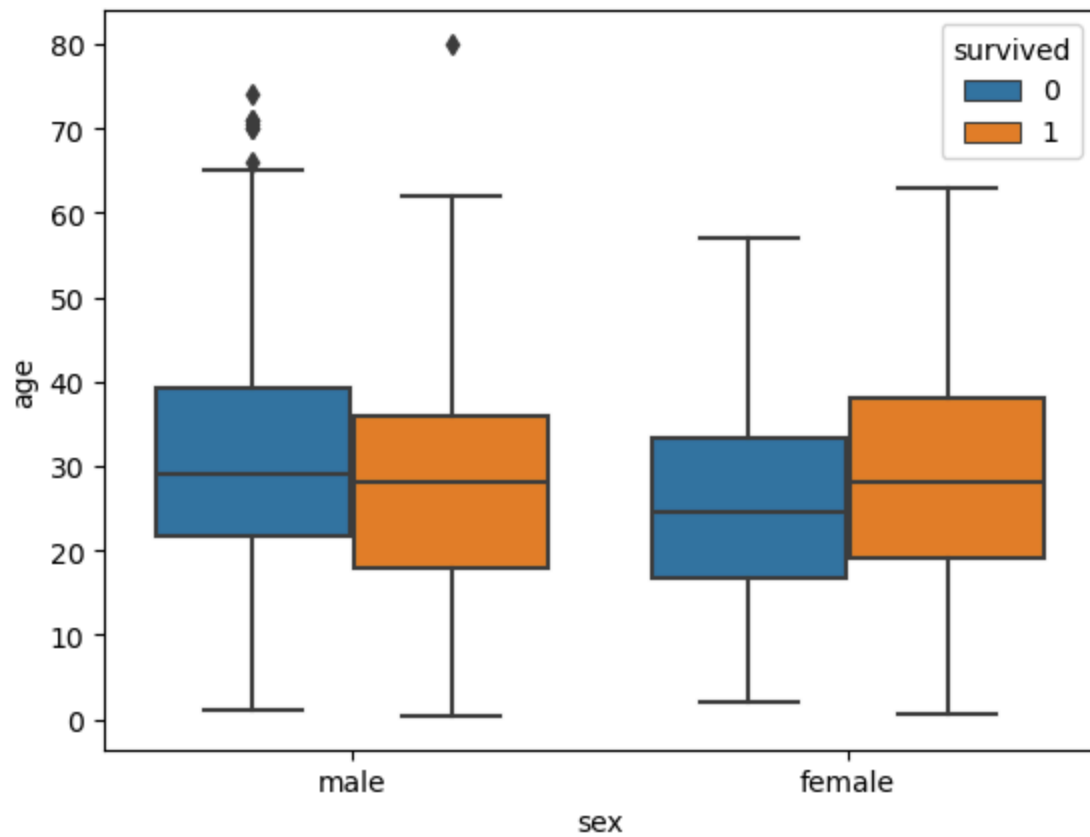
```
In [6]: 1 sns.boxplot(x="sex",y="age",data=titanic)
```

```
Out[6]: <Axes: xlabel='sex', ylabel='age'>
```



```
In [7]: 1 sns.boxplot(x="sex",y="age",data=titanic,hue="survived")
```

```
Out[7]: <Axes: xlabel='sex', ylabel='age'>
```



Name : Pratik Pate

Roll No: 13258